

# Ingesting text

This is from Section 15.3 of the Modern Data Science with R book.

## Using *rvest*

Take a look at the Wikipedia List of songs recorded by the Beatles.

In the book the second list of Other songs is used. I have used the Main Songs list.

A great reference for regex (commands like gsub) is the r4ds book, see Chapter 14 about strings

```
library(rvest)
```

```
## Loading required package: xml2
```

```
library(tidyr)
library(methods)
library(mdsr)
```

```
## Loading required package: dplyr
```

```
##
```

```
## Attaching package: 'dplyr'
```

```
## The following objects are masked from 'package:stats':
```

```
##
```

```
##   filter, lag
```

```
## The following objects are masked from 'package:base':
```

```
##
```

```
##   intersect, setdiff, setequal, union
```

```
## Loading required package: lattice
```

```
## Loading required package: ggformula
```

```
## Loading required package: ggplot2
```

```
## Loading required package: ggstance
```

```
##
```

```
## Attaching package: 'ggstance'
```

```
## The following objects are masked from 'package:ggplot2':
```

```
##
```

```
##   geom_errorbarh, GeomErrorbarh
```

```
##
```

```
## New to ggformula? Try the tutorials:
```

```
##   learnr::run_tutorial("introduction", package = "ggformula")
```

```
##   learnr::run_tutorial("refining", package = "ggformula")
```

```
## Loading required package: mosaicData
```

```
## Loading required package: Matrix
```

```
##
```

```
## Attaching package: 'Matrix'
```

```
## The following object is masked from 'package:tidyr':
##
##   expand
##
## The 'mosaic' package masks several functions from core packages in order to add
## additional features. The original behavior of these functions should not be affected by this.
##
## Note: If you use the Matrix package, be sure to load it BEFORE loading mosaic.
##
## In accordance with CRAN policy, the 'mdsr' package
##   no longer attaches
## the 'tidyverse' package automatically.
## You may need to 'library(tidyverse)' in order to
##   use certain functions.
```

```
library(tm)
```

```
## Loading required package: NLP
##
## Attaching package: 'NLP'
## The following object is masked from 'package:ggplot2':
##
##   annotate
##
## Attaching package: 'tm'
## The following object is masked from 'package:mosaic':
##
##   inspect
```

```
url <- "http://en.wikipedia.org/wiki/List_of_songs_recorded_by_the_Beatles"
tables <- url %>%
  read_html() %>%
  html_nodes(css = "table")
tables
```

```
## {xml_nodeset (7)}
## [1] <table class="nowraplinks navbar-inner" style="border-spacing:0;back ...
## [2] <table id="toc" class="toc" summary="Class" align="center" style="te ...
## [3] <table class="wikitable" style="font-size:90%;>\n<caption>Key\n</ca ...
## [4] <table class="wikitable sortable plainrowheaders" style="text-align: ...
## [5] <table class="wikitable sortable plainrowheaders" style="text-align: ...
## [6] <table class="wikitable sortable plainrowheaders" style="text-align: ...
## [7] <table class="nowraplinks vcard hlist collapsible autocollapse navbo ...
```

```
songs <- html_table(tables[[4]])
glimpse(songs)
```

```
## Observations: 213
## Variables: 6
## $ Song <chr> "\"Across the Universe\"[b]", "\"Act ...
## $ `Core catalogue release` <chr> "Let It Be", "Help!", "With the Beatl...
## $ `Songwriter(s)` <chr> "LennonMcCartney", "Johnny RussellVon...
## $ `Lead vocal(s)[a]` <chr> "Lennon", "Starr", "Lennon", "McCartn..."
```

```
## $ Year <int> 1969, 1965, 1963, 1963, 1969, 1967, 1...
## $ `Ref(s)` <chr> "[6]", "[7]", "[8]", "[8]", "[9]", "[...]
```

songs

```
## Song
## 1 "Across the Universe"[b]
## 2 "Act Naturally"
## 3 "All I've Got to Do"
## 4 "All My Loving"
## 5 "All Together Now"
## 6 "All You Need Is Love"[c]
## 7 "And I Love Her"
## 8 "And Your Bird Can Sing"
## 9 "Anna (Go to Him)"
## 10 "Another Girl"
## 11 "Any Time at All"
## 12 "Ask Me Why"
## 13 "Baby It's You"
## 14 "Baby, You're a Rich Man"
## 15 "Baby's in Black"
## 16 "Back in the U.S.S.R."
## 17 "Bad Boy"
## 18 "The Ballad of John and Yoko"
## 19 "Because"
## 20 "Being for the Benefit of Mr. Kite!"
## 21 "Birthday"
## 22 "Blackbird"
## 23 "Blue Jay Way"
## 24 "Boys"
## 25 "Can't Buy Me Love"
## 26 "Carry That Weight"
## 27 "Chains"
## 28 "Come Together"
## 29 "The Continuing Story of Bungalow Bill"
## 30 "Cry Baby Cry"
## 31 "A Day in the Life"
## 32 "Day Tripper"
## 33 "Dear Prudence"
## 34 "Devil in Her Heart"
## 35 "Dig a Pony"
## 36 "Dig It"
## 37 "Dizzy, Miss Lizzy"
## 38 "Do You Want to Know a Secret"
## 39 "Doctor Robert"
## 40 "Don't Bother Me"
## 41 "Don't Let Me Down"
## 42 "Don't Pass Me By"
## 43 "Drive My Car"
## 44 "Eight Days a Week"
## 45 "Eleanor Rigby"
## 46 "The End"
## 47 "Every Little Thing"
## 48 "Everybody's Got Something to Hide Except Me and My Monkey"
## 49 "Everybody's Trying to Be My Baby"
```

|        |                                    |
|--------|------------------------------------|
| ## 50  | "Fixing a Hole"                    |
| ## 51  | "Flying"                           |
| ## 52  | "The Fool on the Hill"             |
| ## 53  | "For No One"                       |
| ## 54  | "For You Blue"                     |
| ## 55  | "From Me to You"                   |
| ## 56  | "Get Back"[d]                      |
| ## 57  | "Getting Better"                   |
| ## 58  | "Girl"                             |
| ## 59  | "Glass Onion"                      |
| ## 60  | "Golden Slumbers"                  |
| ## 61  | "Good Day Sunshine"                |
| ## 62  | "Good Morning Good Morning"        |
| ## 63  | "Good Night"                       |
| ## 64  | "Got to Get You into My Life"      |
| ## 65  | "Happiness Is a Warm Gun"          |
| ## 66  | "A Hard Day's Night"               |
| ## 67  | "Hello, Goodbye"                   |
| ## 68  | "Help!"                            |
| ## 69  | "Helter Skelter"                   |
| ## 70  | "Her Majesty"                      |
| ## 71  | "Here Comes the Sun"               |
| ## 72  | "Here, There and Everywhere"       |
| ## 73  | "Hey Bulldog"                      |
| ## 74  | "Hey Jude"                         |
| ## 75  | "Hold Me Tight"                    |
| ## 76  | "Honey Don't"                      |
| ## 77  | "Honey Pie"                        |
| ## 78  | "I Am the Walrus"                  |
| ## 79  | "I Call Your Name"[e]              |
| ## 80  | "I Don't Want to Spoil the Party"  |
| ## 81  | "I Feel Fine"                      |
| ## 82  | "I Me Mine"                        |
| ## 83  | "I Need You"                       |
| ## 84  | "I Saw Her Standing There"         |
| ## 85  | "I Should Have Known Better"       |
| ## 86  | "I Wanna Be Your Man"              |
| ## 87  | "I Want to Hold Your Hand"         |
| ## 88  | "I Want to Tell You"               |
| ## 89  | "I Want You (She's So Heavy)"      |
| ## 90  | "I Will"                           |
| ## 91  | "If I Fell"                        |
| ## 92  | "If I Needed Someone"              |
| ## 93  | "I'll Be Back"                     |
| ## 94  | "I'll Cry Instead"                 |
| ## 95  | "I'll Follow the Sun"              |
| ## 96  | "I'll Get You"                     |
| ## 97  | "I'm a Loser"                      |
| ## 98  | "I'm Down"                         |
| ## 99  | "I'm Happy Just to Dance with You" |
| ## 100 | "I'm Looking Through You"          |
| ## 101 | "I'm Only Sleeping"                |
| ## 102 | "I'm So Tired"                     |
| ## 103 | "I've Got a Feeling"               |

## 104 "I've Just Seen a Face"  
 ## 105 "In My Life"  
 ## 106 "The Inner Light"  
 ## 107 "It Won't Be Long"  
 ## 108 "It's All Too Much"  
 ## 109 "It's Only Love"  
 ## 110 "Julia"  
 ## 111 "Kansas City/Hey-Hey-Hey-Hey!"  
 ## 112 "Komm, gib mir deine Hand" (German version of "I Want to Hold Your Hand")  
 ## 113 "Lady Madonna"  
 ## 114 "Let It Be"[f]  
 ## 115 "Little Child"  
 ## 116 "The Long and Winding Road"  
 ## 117 "Long Tall Sally"  
 ## 118 "Long, Long, Long"  
 ## 119 "Love Me Do"[g]  
 ## 120 "Love You To"  
 ## 121 "Lovely Rita"  
 ## 122 "Lucy in the Sky with Diamonds"  
 ## 123 "Maggie Mae"  
 ## 124 "Magical Mystery Tour"  
 ## 125 "Martha My Dear"  
 ## 126 "Matchbox"  
 ## 127 "Maxwell's Silver Hammer"  
 ## 128 "Mean Mr. Mustard"  
 ## 129 "Michelle"  
 ## 130 "Misery"  
 ## 131 "Money (That's What I Want)"  
 ## 132 "Mother Nature's Son"  
 ## 133 "Mr. Moonlight"  
 ## 134 "The Night Before"  
 ## 135 "No Reply"  
 ## 136 "Norwegian Wood (This Bird Has Flown)"  
 ## 137 "Not a Second Time"  
 ## 138 "Nowhere Man"  
 ## 139 "Ob-La-Di, Ob-La-Da"  
 ## 140 "Octopus's Garden"  
 ## 141 "Oh! Darling"  
 ## 142 "Old Brown Shoe"  
 ## 143 "One After 909"  
 ## 144 "Only a Northern Song"  
 ## 145 "Paperback Writer"  
 ## 146 "Penny Lane"  
 ## 147 "Piggies"  
 ## 148 "Please Mr. Postman"  
 ## 149 "Please Please Me"  
 ## 150 "Polythene Pam"  
 ## 151 "P.S. I Love You"  
 ## 152 "Rain"  
 ## 153 "Revolution"  
 ## 154 "Revolution 1"  
 ## 155 "Revolution 9"  
 ## 156 "Rock and Roll Music"  
 ## 157 "Rocky Raccoon"

## 158 "Roll Over Beethoven"  
 ## 159 "Run for Your Life"  
 ## 160 "Savoy Truffle"  
 ## 161 "Sexy Sadie"  
 ## 162 "Sgt. Pepper's Lonely Hearts Club Band"  
 ## 163 "Sgt. Pepper's Lonely Hearts Club Band (Reprise)"  
 ## 164 "She Came In Through the Bathroom Window"  
 ## 165 "She Loves You"  
 ## 166 "She Said She Said"  
 ## 167 "She's a Woman"  
 ## 168 "She's Leaving Home"  
 ## 169 "Sie liebt dich" (German version of "She Loves You")  
 ## 170 "Slow Down"  
 ## 171 "Something"  
 ## 172 "Strawberry Fields Forever"  
 ## 173 "Sun King"  
 ## 174 "A Taste of Honey"  
 ## 175 "Taxman"  
 ## 176 "Tell Me What You See"  
 ## 177 "Tell Me Why"  
 ## 178 "Thank You Girl"  
 ## 179 "There's a Place"  
 ## 180 "Things We Said Today"  
 ## 181 "Think for Yourself"  
 ## 182 "This Boy"  
 ## 183 "Ticket to Ride"  
 ## 184 "Till There Was You"  
 ## 185 "Tomorrow Never Knows"  
 ## 186 "Twist and Shout"  
 ## 187 "Two of Us"  
 ## 188 "Wait"  
 ## 189 "We Can Work It Out"  
 ## 190 "What Goes On"  
 ## 191 "What You're Doing"  
 ## 192 "When I Get Home"  
 ## 193 "When I'm Sixty-Four"  
 ## 194 "While My Guitar Gently Weeps"  
 ## 195 "Why Don't We Do It in the Road?"  
 ## 196 "Wild Honey Pie"  
 ## 197 "With a Little Help from My Friends"  
 ## 198 "Within You Without You"  
 ## 199 "The Word"  
 ## 200 "Words of Love"  
 ## 201 "Yellow Submarine"[c]  
 ## 202 "Yer Blues"  
 ## 203 "Yes It Is"  
 ## 204 "Yesterday"  
 ## 205 "You Can't Do That"  
 ## 206 "You Know My Name (Look Up the Number)"  
 ## 207 "You Like Me Too Much"  
 ## 208 "You Never Give Me Your Money"  
 ## 209 "You Won't See Me"  
 ## 210 "Your Mother Should Know"  
 ## 211 "You're Going to Lose That Girl"

## 212 "You've Got to Hide Your Love Away"  
 ## 213 "You've Really Got a Hold on Me"  
 ## Core catalogue release  
 ## 1 Let It Be  
 ## 2 Help!  
 ## 3 With the Beatles  
 ## 4 With the Beatles  
 ## 5 Yellow Submarine  
 ## 6 Magical Mystery Tour  
 ## 7 A Hard Day's Night  
 ## 8 Revolver  
 ## 9 Please Please Me  
 ## 10 Help!  
 ## 11 A Hard Day's Night  
 ## 12 Please Please Me  
 ## 13 Please Please Me  
 ## 14 Magical Mystery Tour  
 ## 15 Beatles for Sale  
 ## 16 The Beatles ("White Album")  
 ## 17 Past Masters  
 ## 18 Past Masters  
 ## 19 Abbey Road  
 ## 20 Sgt. Pepper's Lonely Hearts Club Band  
 ## 21 The Beatles ("White Album")  
 ## 22 The Beatles ("White Album")  
 ## 23 Magical Mystery Tour  
 ## 24 Please Please Me  
 ## 25 A Hard Day's Night  
 ## 26 Abbey Road  
 ## 27 Please Please Me  
 ## 28 Abbey Road  
 ## 29 The Beatles ("White Album")  
 ## 30 The Beatles ("White Album")  
 ## 31 Sgt. Pepper's Lonely Hearts Club Band  
 ## 32 Past Masters(Double A-side with "We Can Work It Out")  
 ## 33 The Beatles ("White Album")  
 ## 34 With the Beatles  
 ## 35 Let It Be  
 ## 36 Let It Be  
 ## 37 Help!  
 ## 38 Please Please Me  
 ## 39 Revolver  
 ## 40 With the Beatles  
 ## 41 Past Masters(B-side of "Get Back")  
 ## 42 The Beatles ("White Album")  
 ## 43 Rubber Soul  
 ## 44 Beatles for Sale  
 ## 45 Revolver  
 ## 46 Abbey Road  
 ## 47 Beatles for Sale  
 ## 48 The Beatles ("White Album")  
 ## 49 Beatles for Sale  
 ## 50 Sgt. Pepper's Lonely Hearts Club Band  
 ## 51 Magical Mystery Tour

## 52                                   Magical Mystery Tour  
 ## 53                                    Revolver  
 ## 54                                    Let It Be  
 ## 55                                    Past Masters  
 ## 56                                    Let It Be  
 ## 57                   Sgt. Pepper's Lonely Hearts Club Band  
 ## 58                                    Rubber Soul  
 ## 59                                    The Beatles ("White Album")  
 ## 60                                    Abbey Road  
 ## 61                                    Revolver  
 ## 62                   Sgt. Pepper's Lonely Hearts Club Band  
 ## 63                                    The Beatles ("White Album")  
 ## 64                                    Revolver  
 ## 65                                    The Beatles ("White Album")  
 ## 66                                    A Hard Day's Night  
 ## 67                                    Magical Mystery Tour  
 ## 68                                    Help!  
 ## 69                                    The Beatles ("White Album")  
 ## 70                                    Abbey Road  
 ## 71                                    Abbey Road  
 ## 72                                    Revolver  
 ## 73                                    Yellow Submarine  
 ## 74                                    Past Masters  
 ## 75                                    With the Beatles  
 ## 76                                    Beatles for Sale  
 ## 77                                    The Beatles ("White Album")  
 ## 78                                    Magical Mystery Tour  
 ## 79                                    Past Masters  
 ## 80                                    Beatles for Sale  
 ## 81                                    Past Masters  
 ## 82                                    Let It Be  
 ## 83                                    Help!  
 ## 84                                    Please Please Me  
 ## 85                                    A Hard Day's Night  
 ## 86                                    With the Beatles  
 ## 87                                    Past Masters  
 ## 88                                    Revolver  
 ## 89                                    Abbey Road  
 ## 90                                    The Beatles ("White Album")  
 ## 91                                    A Hard Day's Night  
 ## 92                                    Rubber Soul  
 ## 93                                    A Hard Day's Night  
 ## 94                                    A Hard Day's Night  
 ## 95                                    Beatles for Sale  
 ## 96                   Past Masters(B-side of "She Loves You")  
 ## 97                                    Beatles for Sale  
 ## 98                   Past Masters(B-side of "Help!")  
 ## 99                                    A Hard Day's Night  
 ## 100                                   Rubber Soul  
 ## 101                                   Revolver  
 ## 102                                   The Beatles ("White Album")  
 ## 103                                   Let It Be  
 ## 104                                   Help!  
 ## 105                                   Rubber Soul



## 106 Past Masters(B-side of "Lady Madonna")  
 ## 107 With the Beatles  
 ## 108 Yellow Submarine  
 ## 109 Help!  
 ## 110 The Beatles ("White Album")  
 ## 111 Beatles for Sale  
 ## 112 Past Masters  
 ## 113 Past Masters  
 ## 114 Let It Be  
 ## 115 With the Beatles  
 ## 116 Let It Be  
 ## 117 Past Masters  
 ## 118 The Beatles ("White Album")  
 ## 119 Please Please Me  
 ## 120 Revolver  
 ## 121 Sgt. Pepper's Lonely Hearts Club Band  
 ## 122 Sgt. Pepper's Lonely Hearts Club Band  
 ## 123 Let It Be  
 ## 124 Magical Mystery Tour  
 ## 125 The Beatles ("White Album")  
 ## 126 Past Masters  
 ## 127 Abbey Road  
 ## 128 Abbey Road  
 ## 129 Rubber Soul  
 ## 130 Please Please Me  
 ## 131 With the Beatles  
 ## 132 The Beatles ("White Album")  
 ## 133 Beatles for Sale  
 ## 134 Help!  
 ## 135 Beatles for Sale  
 ## 136 Rubber Soul  
 ## 137 With the Beatles  
 ## 138 Rubber Soul  
 ## 139 The Beatles ("White Album")  
 ## 140 Abbey Road  
 ## 141 Abbey Road  
 ## 142 Past Masters(B-side of "The Ballad of John and Yoko")  
 ## 143 Let It Be  
 ## 144 Yellow Submarine  
 ## 145 Past Masters  
 ## 146 Magical Mystery Tour  
 ## 147 The Beatles ("White Album")  
 ## 148 With the Beatles  
 ## 149 Please Please Me  
 ## 150 Abbey Road  
 ## 151 Please Please Me  
 ## 152 Past Masters(B-side of "Paperback Writer")  
 ## 153 Past Masters(B-side of "Hey Jude")  
 ## 154 The Beatles ("White Album")  
 ## 155 The Beatles ("White Album")  
 ## 156 Beatles for Sale  
 ## 157 The Beatles ("White Album")  
 ## 158 With the Beatles  
 ## 159 Rubber Soul

## 160 The Beatles ("White Album")  
 ## 161 The Beatles ("White Album")  
 ## 162 Sgt. Pepper's Lonely Hearts Club Band  
 ## 163 Sgt. Pepper's Lonely Hearts Club Band  
 ## 164 Abbey Road  
 ## 165 Past Masters  
 ## 166 Revolver  
 ## 167 Past Masters(B-side of "I Feel Fine")  
 ## 168 Sgt. Pepper's Lonely Hearts Club Band  
 ## 169 Past Masters(B-side of "Komm, gib mir deine Hand")  
 ## 170 Past Masters  
 ## 171 Abbey Road  
 ## 172 Magical Mystery Tour  
 ## 173 Abbey Road  
 ## 174 Please Please Me  
 ## 175 Revolver  
 ## 176 Help!  
 ## 177 A Hard Day's Night  
 ## 178 Past Masters(B-side of "From Me to You")  
 ## 179 Please Please Me  
 ## 180 A Hard Day's Night  
 ## 181 Rubber Soul  
 ## 182 Past Masters(B-side of "I Want to Hold Your Hand" (UK))  
 ## 183 Help!  
 ## 184 With the Beatles  
 ## 185 Revolver  
 ## 186 Please Please Me  
 ## 187 Let It Be  
 ## 188 Rubber Soul  
 ## 189 Past Masters(Double A-side with "Day Tripper")  
 ## 190 Rubber Soul  
 ## 191 Beatles for Sale  
 ## 192 A Hard Day's Night  
 ## 193 Sgt. Pepper's Lonely Hearts Club Band  
 ## 194 The Beatles ("White Album")  
 ## 195 The Beatles ("White Album")  
 ## 196 The Beatles ("White Album")  
 ## 197 Sgt. Pepper's Lonely Hearts Club Band  
 ## 198 Sgt. Pepper's Lonely Hearts Club Band  
 ## 199 Rubber Soul  
 ## 200 Beatles for Sale  
 ## 201 Revolver  
 ## 202 The Beatles ("White Album")  
 ## 203 Past Masters(B-side of "Ticket to Ride")  
 ## 204 Help!  
 ## 205 A Hard Day's Night  
 ## 206 Past Masters(B-side of "Let It Be")  
 ## 207 Help!  
 ## 208 Abbey Road  
 ## 209 Rubber Soul  
 ## 210 Magical Mystery Tour  
 ## 211 Help!  
 ## 212 Help!  
 ## 213 With the Beatles

| ##    | Songwriter(s)                       |
|-------|-------------------------------------|
| ## 1  | LennonMcCartney                     |
| ## 2  | Johnny RussellVoni Morrison         |
| ## 3  | LennonMcCartney                     |
| ## 4  | LennonMcCartney                     |
| ## 5  | LennonMcCartney                     |
| ## 6  | LennonMcCartney                     |
| ## 7  | LennonMcCartney                     |
| ## 8  | LennonMcCartney                     |
| ## 9  | Arthur Alexander                    |
| ## 10 | LennonMcCartney                     |
| ## 11 | LennonMcCartney                     |
| ## 12 | LennonMcCartney                     |
| ## 13 | Burt BacharachHal DavidLuther Dixon |
| ## 14 | LennonMcCartney                     |
| ## 15 | LennonMcCartney                     |
| ## 16 | LennonMcCartney                     |
| ## 17 | Larry Williams                      |
| ## 18 | LennonMcCartney                     |
| ## 19 | LennonMcCartney                     |
| ## 20 | LennonMcCartney                     |
| ## 21 | LennonMcCartney                     |
| ## 22 | LennonMcCartney                     |
| ## 23 | Harrison                            |
| ## 24 | Luther DixonWes Farrell             |
| ## 25 | LennonMcCartney                     |
| ## 26 | LennonMcCartney                     |
| ## 27 | Gerry GoffinCarole King             |
| ## 28 | LennonMcCartney                     |
| ## 29 | LennonMcCartney                     |
| ## 30 | LennonMcCartney                     |
| ## 31 | LennonMcCartney                     |
| ## 32 | LennonMcCartney                     |
| ## 33 | LennonMcCartney                     |
| ## 34 | Richard Drapkin                     |
| ## 35 | LennonMcCartney                     |
| ## 36 | LennonMcCartneyHarrisonStarkey      |
| ## 37 | Larry Williams                      |
| ## 38 | LennonMcCartney                     |
| ## 39 | LennonMcCartney                     |
| ## 40 | Harrison                            |
| ## 41 | LennonMcCartney                     |
| ## 42 | Starkey                             |
| ## 43 | LennonMcCartney                     |
| ## 44 | LennonMcCartney                     |
| ## 45 | LennonMcCartney                     |
| ## 46 | LennonMcCartney                     |
| ## 47 | LennonMcCartney                     |
| ## 48 | LennonMcCartney                     |
| ## 49 | Carl Perkins                        |
| ## 50 | LennonMcCartney                     |
| ## 51 | LennonMcCartneyHarrisonStarkey      |
| ## 52 | LennonMcCartney                     |
| ## 53 | LennonMcCartney                     |

|        |                 |
|--------|-----------------|
| ## 54  | Harrison        |
| ## 55  | LennonMcCartney |
| ## 56  | LennonMcCartney |
| ## 57  | LennonMcCartney |
| ## 58  | LennonMcCartney |
| ## 59  | LennonMcCartney |
| ## 60  | LennonMcCartney |
| ## 61  | LennonMcCartney |
| ## 62  | LennonMcCartney |
| ## 63  | LennonMcCartney |
| ## 64  | LennonMcCartney |
| ## 65  | LennonMcCartney |
| ## 66  | LennonMcCartney |
| ## 67  | LennonMcCartney |
| ## 68  | LennonMcCartney |
| ## 69  | LennonMcCartney |
| ## 70  | LennonMcCartney |
| ## 71  | Harrison        |
| ## 72  | LennonMcCartney |
| ## 73  | LennonMcCartney |
| ## 74  | LennonMcCartney |
| ## 75  | LennonMcCartney |
| ## 76  | Carl Perkins    |
| ## 77  | LennonMcCartney |
| ## 78  | LennonMcCartney |
| ## 79  | LennonMcCartney |
| ## 80  | LennonMcCartney |
| ## 81  | LennonMcCartney |
| ## 82  | Harrison        |
| ## 83  | Harrison        |
| ## 84  | LennonMcCartney |
| ## 85  | LennonMcCartney |
| ## 86  | LennonMcCartney |
| ## 87  | LennonMcCartney |
| ## 88  | Harrison        |
| ## 89  | LennonMcCartney |
| ## 90  | LennonMcCartney |
| ## 91  | LennonMcCartney |
| ## 92  | Harrison        |
| ## 93  | LennonMcCartney |
| ## 94  | LennonMcCartney |
| ## 95  | LennonMcCartney |
| ## 96  | LennonMcCartney |
| ## 97  | LennonMcCartney |
| ## 98  | LennonMcCartney |
| ## 99  | LennonMcCartney |
| ## 100 | LennonMcCartney |
| ## 101 | LennonMcCartney |
| ## 102 | LennonMcCartney |
| ## 103 | LennonMcCartney |
| ## 104 | LennonMcCartney |
| ## 105 | LennonMcCartney |
| ## 106 | Harrison        |
| ## 107 | LennonMcCartney |

## 108 Harrison  
 ## 109 LennonMcCartney  
 ## 110 LennonMcCartney  
 ## 111 Jerry LeiberMike Stoller /Richard Penniman  
 ## 112 LennonMcCartneyJean NicolasHeinz Hellmer  
 ## 113 LennonMcCartney  
 ## 114 LennonMcCartney  
 ## 115 LennonMcCartney  
 ## 116 LennonMcCartney  
 ## 117 Robert BlackwellEnotris JohnsonLittle Richard  
 ## 118 Harrison  
 ## 119 LennonMcCartney  
 ## 120 Harrison  
 ## 121 LennonMcCartney  
 ## 122 LennonMcCartney  
 ## 123 Traditional, arr.LennonMcCartneyHarrisonStarkey  
 ## 124 LennonMcCartney  
 ## 125 LennonMcCartney  
 ## 126 Carl PerkinsBlind Lemon Jefferson  
 ## 127 LennonMcCartney  
 ## 128 LennonMcCartney  
 ## 129 LennonMcCartney  
 ## 130 LennonMcCartney  
 ## 131 Berry GordyJanie Bradford  
 ## 132 LennonMcCartney  
 ## 133 Roy Lee Johnson  
 ## 134 LennonMcCartney  
 ## 135 LennonMcCartney  
 ## 136 LennonMcCartney  
 ## 137 LennonMcCartney  
 ## 138 LennonMcCartney  
 ## 139 LennonMcCartney  
 ## 140 Starkey  
 ## 141 LennonMcCartney  
 ## 142 Harrison  
 ## 143 LennonMcCartney  
 ## 144 Harrison  
 ## 145 LennonMcCartney  
 ## 146 LennonMcCartney  
 ## 147 Harrison  
 ## 148 Georgia DobbinsWilliam GarrettBrian HollandRobert BatemanFreddie Gorman  
 ## 149 LennonMcCartney  
 ## 150 LennonMcCartney  
 ## 151 LennonMcCartney  
 ## 152 LennonMcCartney  
 ## 153 LennonMcCartney  
 ## 154 LennonMcCartney  
 ## 155 LennonMcCartney  
 ## 156 Chuck Berry  
 ## 157 LennonMcCartney  
 ## 158 Chuck Berry  
 ## 159 LennonMcCartney  
 ## 160 Harrison  
 ## 161 LennonMcCartney

|        |                                |                  |
|--------|--------------------------------|------------------|
| ## 162 |                                | LennonMcCartney  |
| ## 163 |                                | LennonMcCartney  |
| ## 164 |                                | LennonMcCartney  |
| ## 165 |                                | LennonMcCartney  |
| ## 166 |                                | LennonMcCartney  |
| ## 167 |                                | LennonMcCartney  |
| ## 168 |                                | LennonMcCartney  |
| ## 169 | LennonMcCartneyJean NicolasLee | Montogue         |
| ## 170 |                                | Larry Williams   |
| ## 171 |                                | Harrison         |
| ## 172 |                                | LennonMcCartney  |
| ## 173 |                                | LennonMcCartney  |
| ## 174 | Bobby ScottRic                 | Marlow           |
| ## 175 |                                | Harrison         |
| ## 176 |                                | LennonMcCartney  |
| ## 177 |                                | LennonMcCartney  |
| ## 178 |                                | LennonMcCartney  |
| ## 179 |                                | LennonMcCartney  |
| ## 180 |                                | LennonMcCartney  |
| ## 181 |                                | Harrison         |
| ## 182 |                                | LennonMcCartney  |
| ## 183 |                                | LennonMcCartney  |
| ## 184 |                                | Meredith Willson |
| ## 185 |                                | LennonMcCartney  |
| ## 186 | Phil MedleyBert Berns          |                  |
| ## 187 |                                | LennonMcCartney  |
| ## 188 |                                | LennonMcCartney  |
| ## 189 |                                | LennonMcCartney  |
| ## 190 | LennonMcCartneyStarkey         |                  |
| ## 191 |                                | LennonMcCartney  |
| ## 192 |                                | LennonMcCartney  |
| ## 193 |                                | LennonMcCartney  |
| ## 194 |                                | Harrison         |
| ## 195 |                                | LennonMcCartney  |
| ## 196 |                                | LennonMcCartney  |
| ## 197 |                                | LennonMcCartney  |
| ## 198 |                                | Harrison         |
| ## 199 |                                | LennonMcCartney  |
| ## 200 |                                | Buddy Holly      |
| ## 201 |                                | LennonMcCartney  |
| ## 202 |                                | LennonMcCartney  |
| ## 203 |                                | LennonMcCartney  |
| ## 204 |                                | LennonMcCartney  |
| ## 205 |                                | LennonMcCartney  |
| ## 206 |                                | LennonMcCartney  |
| ## 207 |                                | Harrison         |
| ## 208 |                                | LennonMcCartney  |
| ## 209 |                                | LennonMcCartney  |
| ## 210 |                                | LennonMcCartney  |
| ## 211 |                                | LennonMcCartney  |
| ## 212 |                                | LennonMcCartney  |
| ## 213 |                                | Smokey Robinson  |
| ##     | Lead vocal(s) [a]              | Year Ref(s)      |
| ## 1   | Lennon                         | 1969 [6]         |

|       |   |      |           |
|-------|---|------|-----------|
| ## 2  | Starr                                     | 1965 | [7]       |
| ## 3  | Lennon                                    | 1963 | [8]       |
| ## 4  | McCartney                                 | 1963 | [8]       |
| ## 5  | McCartney(with Lennon)                    | 1969 | [9]       |
| ## 6  | Lennon                                    | 1967 | [10] [11] |
| ## 7  | McCartney                                 | 1964 | [12]      |
| ## 8  | Lennon                                    | 1966 | [13]      |
| ## 9  | Lennon                                    | 1963 | [14]      |
| ## 10 | McCartney                                 | 1965 | [7]       |
| ## 11 | Lennon(with McCartney)                    | 1964 | [12]      |
| ## 12 | Lennon                                    | 1963 | [14]      |
| ## 13 | Lennon                                    | 1963 | [14]      |
| ## 14 | Lennon                                    | 1967 | [10] [11] |
| ## 15 | LennonMcCartney                           | 1964 | [15]      |
| ## 16 | McCartney                                 | 1968 | [16]      |
| ## 17 | Lennon                                    | 1966 | [17]      |
| ## 18 | Lennon                                    | 1969 | [18] [17] |
| ## 19 | LennonMcCartneyHarrison                   | 1969 | [19]      |
| ## 20 | Lennon                                    | 1967 | [20]      |
| ## 21 | McCartney(with Lennon)                    | 1968 | [16]      |
| ## 22 | McCartney                                 | 1968 | [16]      |
| ## 23 | Harrison                                  | 1967 | [11]      |
| ## 24 | Starr                                     | 1963 | [14]      |
| ## 25 | McCartney                                 | 1964 | [12]      |
| ## 26 | McCartney(with Lennon,Harrison,and Starr) | 1969 | [19]      |
| ## 27 | Harrison                                  | 1963 | [14]      |
| ## 28 | Lennon                                    | 1969 | [19]      |
| ## 29 | Lennon(with Yoko Ono)                     | 1968 | [16]      |
| ## 30 | Lennon(with McCartney)                    | 1968 | [16]      |
| ## 31 | LennonMcCartney                           | 1967 | [20]      |
| ## 32 | LennonMcCartney                           | 1965 | [21] [17] |
| ## 33 | Lennon                                    | 1968 | [16]      |
| ## 34 | Harrison                                  | 1963 | [8]       |
| ## 35 | Lennon                                    | 1970 | [6]       |
| ## 36 | Lennon                                    | 1970 | [6]       |
| ## 37 | Lennon                                    | 1965 | [7]       |
| ## 38 | Harrison                                  | 1963 | [14]      |
| ## 39 | Lennon                                    | 1966 | [13]      |
| ## 40 | Harrison                                  | 1963 | [8]       |
| ## 41 | Lennon                                    | 1969 | [17] [22] |
| ## 42 | Starr                                     | 1968 | [16]      |
| ## 43 | McCartney(with Lennon)                    | 1965 | [23]      |
| ## 44 | LennonMcCartney                           | 1964 | [15]      |
| ## 45 | McCartney                                 | 1966 | [13]      |
| ## 46 | McCartney                                 | 1969 | [19]      |
| ## 47 | Lennon(with McCartney)                    | 1964 | [15]      |
| ## 48 | Lennon                                    | 1968 | [16]      |
| ## 49 | Harrison                                  | 1964 | [15]      |
| ## 50 | McCartney                                 | 1967 | [20]      |
| ## 51 | Instrumental                              | 1967 | [11]      |
| ## 52 | McCartney                                 | 1967 | [11]      |
| ## 53 | McCartney                                 | 1966 | [13]      |
| ## 54 | Harrison                                  | 1970 | [6]       |
| ## 55 | Lennon(with McCartney)                    | 1963 | [24] [17] |

|        |                        |      |      |      |
|--------|------------------------|------|------|------|
| ## 56  | McCartney              | 1969 | [22] | [6]  |
| ## 57  | McCartney              | 1967 |      | [20] |
| ## 58  | Lennon                 | 1965 |      | [23] |
| ## 59  | Lennon                 | 1968 |      | [16] |
| ## 60  | McCartney              | 1969 |      | [19] |
| ## 61  | McCartney              | 1966 |      | [13] |
| ## 62  | Lennon                 | 1967 |      | [20] |
| ## 63  | Starr                  | 1968 |      | [16] |
| ## 64  | McCartney              | 1966 |      | [13] |
| ## 65  | Lennon                 | 1968 |      | [16] |
| ## 66  | Lennon(with McCartney) | 1964 |      | [12] |
| ## 67  | McCartney              | 1967 | [26] | [11] |
| ## 68  | Lennon                 | 1965 |      | [7]  |
| ## 69  | McCartney              | 1968 |      | [16] |
| ## 70  | McCartney              | 1969 |      | [19] |
| ## 71  | Harrison               | 1969 |      | [19] |
| ## 72  | McCartney              | 1966 |      | [13] |
| ## 73  | Lennon                 | 1969 |      | [9]  |
| ## 74  | McCartney              | 1968 | [27] | [17] |
| ## 75  | McCartney              | 1963 |      | [8]  |
| ## 76  | Starr                  | 1964 |      | [15] |
| ## 77  | McCartney              | 1968 |      | [16] |
| ## 78  | Lennon                 | 1967 |      | [11] |
| ## 79  | Lennon                 | 1964 |      | [17] |
| ## 80  | Lennon(with McCartney) | 1964 |      | [15] |
| ## 81  | Lennon                 | 1964 | [29] | [17] |
| ## 82  | Harrison               | 1970 |      | [6]  |
| ## 83  | Harrison               | 1965 |      | [7]  |
| ## 84  | McCartney              | 1963 |      | [14] |
| ## 85  | Lennon                 | 1964 |      | [12] |
| ## 86  | Starr                  | 1963 |      | [8]  |
| ## 87  | LennonMcCartney        | 1963 | [30] | [17] |
| ## 88  | Harrison               | 1966 |      | [13] |
| ## 89  | Lennon                 | 1969 |      | [19] |
| ## 90  | McCartney              | 1968 |      | [16] |
| ## 91  | LennonMcCartney        | 1964 |      | [12] |
| ## 92  | Harrison               | 1965 |      | [23] |
| ## 93  | Lennon(with McCartney) | 1964 |      | [12] |
| ## 94  | Lennon                 | 1964 |      | [12] |
| ## 95  | McCartney              | 1964 |      | [15] |
| ## 96  | Lennon(with McCartney) | 1963 | [31] | [17] |
| ## 97  | Lennon                 | 1964 |      | [15] |
| ## 98  | McCartney              | 1965 | [32] | [17] |
| ## 99  | Harrison               | 1964 |      | [12] |
| ## 100 | McCartney              | 1965 |      | [23] |
| ## 101 | Lennon                 | 1966 |      | [13] |
| ## 102 | Lennon                 | 1968 |      | [16] |
| ## 103 | McCartney(with Lennon) | 1970 |      | [6]  |
| ## 104 | McCartney              | 1965 |      | [7]  |
| ## 105 | Lennon                 | 1965 |      | [23] |
| ## 106 | Harrison               | 1968 | [33] | [17] |
| ## 107 | Lennon                 | 1963 |      | [8]  |
| ## 108 | Harrison               | 1969 |      | [9]  |
| ## 109 | Lennon                 | 1965 |      | [23] |



|        |                         |      |           |
|--------|-------------------------|------|-----------|
| ## 110 | Lennon                  | 1968 | [16]      |
| ## 111 | McCartney               | 1964 | [15]      |
| ## 112 | LennonMcCartney         | 1964 | [34] [17] |
| ## 113 | McCartney               | 1968 | [33] [17] |
| ## 114 | McCartney               | 1970 | [6]       |
| ## 115 | LennonMcCartney         | 1963 | [8]       |
| ## 116 | McCartney               | 1970 | [6]       |
| ## 117 | McCartney               | 1964 | [17]      |
| ## 118 | Harrison                | 1968 | [16]      |
| ## 119 | McCartney(with Lennon)  | 1962 | [14]      |
| ## 120 | Harrison                | 1966 | [13]      |
| ## 121 | McCartney               | 1967 | [20]      |
| ## 122 | Lennon                  | 1967 | [20]      |
| ## 123 | Lennon(with McCartney)  | 1970 | [6]       |
| ## 124 | McCartney(with Lennon)  | 1967 | [11]      |
| ## 125 | McCartney               | 1968 | [16]      |
| ## 126 | Starr                   | 1964 | [17]      |
| ## 127 | McCartney               | 1969 | [19]      |
| ## 128 | Lennon                  | 1969 | [19]      |
| ## 129 | McCartney               | 1965 | [23]      |
| ## 130 | Lennon(with McCartney)  | 1963 | [14]      |
| ## 131 | Lennon                  | 1963 | [8]       |
| ## 132 | McCartney               | 1968 | [16]      |
| ## 133 | Lennon                  | 1964 | [15]      |
| ## 134 | McCartney               | 1965 | [7]       |
| ## 135 | Lennon                  | 1964 | [15]      |
| ## 136 | Lennon                  | 1965 | [23]      |
| ## 137 | Lennon                  | 1963 | [8]       |
| ## 138 | Lennon                  | 1965 | [23]      |
| ## 139 | McCartney               | 1968 | [16]      |
| ## 140 | Starr                   | 1969 | [19]      |
| ## 141 | McCartney               | 1969 | [19]      |
| ## 142 | Harrison                | 1969 | [18] [17] |
| ## 143 | Lennon(with McCartney)  | 1970 | [6]       |
| ## 144 | Harrison                | 1969 | [9]       |
| ## 145 | McCartney               | 1966 | [41] [17] |
| ## 146 | McCartney               | 1967 | [42] [11] |
| ## 147 | Harrison                | 1968 | [16]      |
| ## 148 | Lennon                  | 1963 | [8]       |
| ## 149 | LennonMcCartney         | 1963 | [14]      |
| ## 150 | Lennon                  | 1969 | [19]      |
| ## 151 | McCartney               | 1962 | [14]      |
| ## 152 | Lennon                  | 1966 | [41] [17] |
| ## 153 | Lennon                  | 1968 | [27] [17] |
| ## 154 | Lennon                  | 1968 | [16]      |
| ## 155 | Sound Collage[h]        | 1968 | [16]      |
| ## 156 | Lennon                  | 1964 | [15]      |
| ## 157 | McCartney               | 1968 | [16]      |
| ## 158 | Harrison                | 1963 | [8]       |
| ## 159 | Lennon                  | 1965 | [23]      |
| ## 160 | Harrison                | 1968 | [16]      |
| ## 161 | Lennon                  | 1968 | [16]      |
| ## 162 | McCartney               | 1967 | [20]      |
| ## 163 | McCartneyLennonHarrison | 1967 | [20]      |

```

## 164             McCartney 1969      [19]
## 165             LennonMcCartney 1963 [31] [17]
## 166             Lennon 1966        [13]
## 167             McCartney 1964 [29] [17]
## 168             McCartney(with Lennon) 1967 [20]
## 169             LennonMcCartney 1964 [34] [17]
## 170             Lennon 1964        [17]
## 171             Harrison 1969      [19]
## 172             Lennon 1967 [42] [11]
## 173             Lennon(with McCartneyand Harrison) 1969 [19]
## 174             McCartney 1963     [14]
## 175             Harrison 1966     [13]
## 176             McCartney(with Lennon) 1965 [7]
## 177             Lennon 1964       [12]
## 178             Lennon(with McCartney) 1963 [24] [17]
## 179             LennonMcCartney 1963 [14]
## 180             McCartney 1964     [12]
## 181             Harrison 1965     [23]
## 182             Lennon(with McCartneyand Harrison) 1963 [30] [17]
## 183             Lennon 1965       [7]
## 184             McCartney 1963     [8]
## 185             Lennon 1966     [13]
## 186             Lennon 1963     [14]
## 187             McCartney(with Lennon) 1970 [6]
## 188             LennonMcCartney 1965 [23]
## 189             McCartney 1965 [21] [17]
## 190             Starr 1965       [23]
## 191             McCartney 1964     [15]
## 192             Lennon 1964     [12]
## 193             McCartney 1967     [20]
## 194             Harrison 1968     [16]
## 195             McCartney 1968     [16]
## 196             McCartney 1968     [16]
## 197             Starr 1967       [20]
## 198             Harrison 1967     [20]
## 199             Lennon 1965     [23]
## 200             LennonMcCartney 1964 [15]
## 201             Starr 1966       [13]
## 202             Lennon 1968     [16]
## 203             Lennon(with McCartneyand Harrison) 1965 [43] [17]
## 204             McCartney 1965     [7]
## 205             Lennon 1964     [12]
## 206             LennonMcCartney 1970 [44] [17]
## 207             Harrison 1965     [7]
## 208             McCartney 1969     [19]
## 209             McCartney 1965     [23]
## 210             McCartney 1967     [11]
## 211             Lennon 1965     [7]
## 212             Lennon 1965     [7]
## 213             LennonHarrison 1963 [8]

```

```

other <- html_table(tables[[5]])
glimpse(other)

```

```
## Observations: 43
```

```

## Variables: 8
## $ Song <chr> "\"12-Bar Original\"", "\"Ain't She Sweet\"", ...
## $ `Release(s)` <chr> "Anthology 2", "Anthology 1", "Anthology 3", "...
## $ `Songwriter(s)` <chr> "LennonMcCartneyHarrisonStarkey", "Jack Yellen...
## $ `Lead vocal(s)` <chr> "Instrumental", "Lennon", "McCartney", "Harris...
## $ Yearrecorded <int> 1965, 1961, 1969, 1969, 1963, 1962, 1968, 1968...
## $ Yearreleased <int> 1996, 1995, 1996, 1996, 2013, 1995, 2018, 2018...
## $ Notes <chr> "A twelve-bar blues instrumental, recorded on ...
## $ Ref. <chr> "[47]", "[38]", "[48]", "[48]", "[28]", "[38]"...

```

other

```

##                                     Song
## 1                                     "12-Bar Original"
## 2                                     "Ain't She Sweet"
## 3                                     "Ain't She Sweet"
## 4                                     "All Things Must Pass"
## 5                                     "Bad to Me"
## 6                                     "Bésame Mucho"
## 7                                     "Blue Moon"
## 8                                     "Can You Take Me Back?"
## 9                                     "Cayenne"
## 10                                    "Child of Nature"
## 11                                    "Christmas Time (Is Here Again)"
## 12                                    "Circles"
## 13                                    "Come and Get It"
## 14                                    "Cry for a Shadow"
## 15                                    "Free as a Bird"
## 16                                    "Hallelujah, I Love Her So"
## 17                                    "Hello Little Girl"
## 18                                    "How Do You Do It?"
## 19                                    "I'm In Love"(demo)
## 20                                    "If You've Got Trouble"
## 21                                    "In Spite of All the Danger"
## 22                                    "Isn't It a Pity"
## 23                                    "Junk"
## 24                                    "Leave My Kitten Alone"
## 25                                    "Like Dreamers Do"
## 26                                    "Mailman, Bring Me No More Blues"
## 27                                    "My Bonnie"
## 28                                    "Not Guilty"
## 29                                    "Real Love"
## 30 "Rip It Up"/"Shake, Rattle and Roll"/"Blue Suede Shoes"
## 31                                    "Searchin'"
## 32                                    "The Sheik of Araby"
## 33                                    "Sour Milk Sea"
## 34                                    "Step Inside Love/Los Paranoias"
## 35                                    "St. Louis Blues"
## 36                                    "Teddy Boy"
## 37                                    "That Means a Lot"
## 38                                    "That'll Be the Day"
## 39                                    "Three Cool Cats"
## 40                                    "What's the New Mary Jane"
## 41                                    "You Know What to Do"
## 42                                    "You'll Be Mine"

```

```

## 43          "(You're So Square) Baby I Don't Care"
##              Release(s)
## 1              Anthology 2
## 2              Anthology 1
## 3              Anthology 3
## 4              Anthology 3
## 5              The Beatles Bootleg Recordings 1963
## 6              Anthology 1
## 7              The Beatles ("White Album")(2018 Deluxe Edition)
## 8              The Beatles ("White Album")(2018 Deluxe Edition)
## 9              Anthology 1
## 10             The Beatles ("White Album")(2018 Deluxe Edition)
## 11             Non-album single(B-side of "Free as a Bird")
## 12             The Beatles ("White Album")(2018 Deluxe Edition)
## 13             Anthology 3
## 14             Anthology 1
## 15             Anthology 1
## 16             Anthology 1
## 17             Anthology 1
## 18             Anthology 1
## 19             The Beatles Bootleg Recordings 1963
## 20             Anthology 2
## 21             Anthology 1
## 22 Let It Roll: Songs by George Harrison(iTunes version)
## 23             Anthology 3
## 24             Anthology 1
## 25             Anthology 1
## 26             Anthology 3
## 27             Anthology 1
## 28             Anthology 3
## 29             Anthology 2
## 30             Anthology 3
## 31             Anthology 1
## 32             Anthology 1
## 33             The Beatles ("White Album")(2018 Deluxe Edition)
## 34             Anthology 3
## 35             The Beatles ("White Album")(2018 Deluxe Edition)
## 36             Anthology 3
## 37             Anthology 2
## 38             Anthology 1
## 39             Anthology 1
## 40             Anthology 3
## 41             Anthology 1
## 42             Anthology 1
## 43             The Beatles ("White Album")(2018 Deluxe Edition)
##              Songwriter(s)
## 1              LennonMcCartneyHarrisonStarkey
## 2              Jack YellenMilton Ager
## 3              Jack YellenMilton Ager
## 4              Harrison
## 5              LennonMcCartney
## 6              Consuelo VelázquezSunny Skylar
## 7              Richard RodgersLorenz Hart
## 8              LennonMcCartney

```

|       |  |   |              |
|-------|--|---|--------------|
| ## 9  |  | McCartney                                       |              |
| ## 10 |  | Lennon  |              |
| ## 11 |  | LennonMcCartneyHarrisonStarkey                  |              |
| ## 12 |  | Harrison  |              |
| ## 13 |  | McCartney                                       |              |
| ## 14 |  | LennonHarrison                                  |              |
| ## 15 |  | LennonMcCartneyHarrisonStarkey                  |              |
| ## 16 |  | Ray Charles                                     |              |
| ## 17 |  | LennonMcCartney                                 |              |
| ## 18 |  | Mitch Murray                                    |              |
| ## 19 |  | LennonMcCartney                                 |              |
| ## 20 |  | LennonMcCartney                                 |              |
| ## 21 |  | McCartneyHarrison                               |              |
| ## 22 |  | Harrison  |              |
| ## 23 |  | McCartney                                       |              |
| ## 24 |  | Little Willie JohnTitus TurnerJames McDougall   |              |
| ## 25 |  | LennonMcCartney                                 |              |
| ## 26 |  | Ruth RobertsBill KatzStanley Clayton            |              |
| ## 27 |  | Trad. arr. Tony Sheridan                        |              |
| ## 28 |  | Harrison  |              |
| ## 29 |  | Lennon  |              |
| ## 30 | Robert BlackwellJohn Marascalco /Charles Calhoun /Carl Perkins |   |              |
| ## 31 |  | Jerry LeiberMike Stoller                        |              |
| ## 32 |  | Harry B. SmithFrancis WheelerTed Snyder         |              |
| ## 33 |  | Harrison  |              |
| ## 34 |  | LennonMcCartney /LennonMcCartneyHarrisonStarkey |              |
| ## 35 |  | W. C. Handy                                     |              |
| ## 36 |  | McCartney                                       |              |
| ## 37 |  | LennonMcCartney                                 |              |
| ## 38 |  | Jerry AllisonBuddy HollyNorman Petty            |              |
| ## 39 |  | Jerry LeiberMike Stoller                        |              |
| ## 40 |  | LennonMcCartney                                 |              |
| ## 41 |  | Harrison  |              |
| ## 42 |  | LennonMcCartney                                 |              |
| ## 43 |  | Jerry LeiberMike Stoller                        |              |
| ##    | Lead vocal(s)  | Yearrecorded                                    | Yearreleased |
| ## 1  | Instrumental   | 1965  | 1996         |
| ## 2  | Lennon   | 1961  | 1995         |
| ## 3  | McCartney  | 1969  | 1996         |
| ## 4  | Harrison   | 1969  | 1996         |
| ## 5  | Lennon   | 1963  | 2013         |
| ## 6  | McCartney  | 1962  | 1995         |
| ## 7  | McCartney  | 1968  | 2018         |
| ## 8  | McCartney  | 1968  | 2018         |
| ## 9  | Instrumental   | 1960  | 1995         |
| ## 10 | Lennon   | 1968  | 2018         |
| ## 11 | LennonMcCartneyHarrisonStarr                                   | 1967  | 1995         |
| ## 12 | Harrison   | 1968  | 2018         |
| ## 13 | McCartney  | 1969  | 1996         |
| ## 14 | Instrumental   | 1961  | 1995         |
| ## 15 | LennonMcCartneyHarrison  | 1977  | 1995         |
| ## 16 | McCartney  | 1960  | 1995         |
| ## 17 | Lennon   | 1962  | 1995         |
| ## 18 | Lennon   | 1962  | 1995         |

|       |                 |      |      |
|-------|-----------------|------|------|
| ## 19 | Lennon          | 1963 | 2013 |
| ## 20 | Starr           | 1965 | 1996 |
| ## 21 | LennonMcCartney | 1958 | 1995 |
| ## 22 | Harrison        | 1969 | 2009 |
| ## 23 | McCartney       | 1968 | 1996 |
| ## 24 | Lennon          | 1964 | 1995 |
| ## 25 | McCartney       | 1962 | 1995 |
| ## 26 | Lennon          | 1969 | 1996 |
| ## 27 | Tony Sheridan   | 1961 | 1995 |
| ## 28 | Harrison        | 1968 | 1996 |
| ## 29 | Lennon          | 1979 | 1996 |
| ## 30 | LennonMcCartney | 1969 | 1996 |
| ## 31 | McCartney       | 1962 | 1995 |
| ## 32 | Harrison        | 1962 | 1995 |
| ## 33 | Harrison        | 1968 | 2018 |
| ## 34 | McCartney       | 1968 | 1996 |
| ## 35 | McCartney       | 1968 | 2018 |
| ## 36 | McCartney       | 1969 | 1996 |
| ## 37 | McCartney       | 1965 | 1996 |
| ## 38 | Lennon          | 1958 | 1995 |
| ## 39 | Harrison        | 1962 | 1995 |
| ## 40 | Lennon          | 1968 | 1996 |
| ## 41 | Harrison        | 1964 | 1995 |
| ## 42 | McCartney       | 1960 | 1995 |
| ## 43 | McCartney       | 1968 | 2018 |

##

## 1

A twelve-bar

## 2

## 3

## 4

Solo demo by Harrison

## 5

Piano demo by John Lennon. Subsequent

## 6

## 7

## 8

An excerpt appears as a hidden track at the end of "Cry Baby Cry", the song is an outtake

## 9

Home demo recorded by the Quarrymen in the McCartney family bathroom in April

## 10

Demo recorded at George Harrison's Kinfauns home before the

## 11

## 12

Demo recorded at George Harrison's Kinfauns home before

## 13

## 14

## 15

Recorded as a home demo by Lennon

## 16

## 17

Played by the Beatles during their failed

## 18

## 19

## 20

Recorded on 18 February 1965 during sessions for Help! [65] The song was intended to be Starr's vocal

## 21

## 22

Solo performance by

## 23

Demo recorded at George Harrison's Kinfauns home

## 24

## 25

Played by the Beatles during the

## 26

## 27

## 28

Recorded during sessions for the "White Album", [72] by

|       |  |                                   |
|-------|--|-----------------------------------|
| ## 29 |  | Recorded as a home demo by Lennon |
| ## 30 |  |                                   |
| ## 31 |  |                                   |
| ## 32 |  |                                   |
| ## 33 | Demo recorded at George Harrison's Kinfauns home before the "White Album" sessions |                                   |
| ## 34 |  |                                   |
| ## 35 |  |                                   |
| ## 36 |  | Demo recorded in January 1969     |
| ## 37 |  | Recorded by the Beatles           |
| ## 38 |  |                                   |
| ## 39 |  |                                   |
| ## 40 |  |                                   |
| ## 41 |  |                                   |
| ## 42 | Demo recorded by the Quarrymen in the McCartney family bathroom in April 1960,     |                                   |
| ## 43 |  |                                   |
| ##    | Ref.   |                                   |
| ## 1  | [47]   |                                   |
| ## 2  | [38]   |                                   |
| ## 3  | [48]   |                                   |
| ## 4  | [48]   |                                   |
| ## 5  | [28]   |                                   |
| ## 6  | [38]   |                                   |
| ## 7  | [51]   |                                   |
| ## 8  | [51]   |                                   |
| ## 9  | [38]   |                                   |
| ## 10 | [51]   |                                   |
| ## 11 | [59]   |                                   |
| ## 12 | [51]   |                                   |
| ## 13 | [48]   |                                   |
| ## 14 | [38]   |                                   |
| ## 15 | [38]   |                                   |
| ## 16 | [38]   |                                   |
| ## 17 | [38]   |                                   |
| ## 18 | [38]   |                                   |
| ## 19 | [28]   |                                   |
| ## 20 | [47]   |                                   |
| ## 21 | [38]   |                                   |
| ## 22 | [68]   |                                   |
| ## 23 | [48]   |                                   |
| ## 24 | [38]   |                                   |
| ## 25 | [38]   |                                   |
| ## 26 | [48]   |                                   |
| ## 27 | [38]   |                                   |
| ## 28 | [48]   |                                   |
| ## 29 | [47]   |                                   |
| ## 30 | [48]   |                                   |
| ## 31 | [38]   |                                   |
| ## 32 | [38]   |                                   |
| ## 33 | [51]   |                                   |
| ## 34 | [48]   |                                   |
| ## 35 | [51]   |                                   |
| ## 36 | [48]   |                                   |
| ## 37 | [47]   |                                   |
| ## 38 | [38]   |                                   |

```
## 39 [38]
## 40 [48]
## 41 [38]
## 42 [38]
## 43 [51]
```

```
songs <- songs %>% mutate(Song = gsub('\\\\', '\\', Song), Year = as.numeric(Year)) %>%
  rename(songwriters = `Songwriter(s)`)
songs
```

```
##
##
## 1 Across the Universe[b]
## 2 Act Naturally
## 3 All I've Got to Do
## 4 All My Loving
## 5 All Together Now
## 6 All You Need Is Love[c]
## 7 And I Love Her
## 8 And Your Bird Can Sing
## 9 Anna (Go to Him)
## 10 Another Girl
## 11 Any Time at All
## 12 Ask Me Why
## 13 Baby It's You
## 14 Baby, You're a Rich Man
## 15 Baby's in Black
## 16 Back in the U.S.S.R.
## 17 Bad Boy
## 18 The Ballad of John and Yoko
## 19 Because
## 20 Being for the Benefit of Mr. Kite!
## 21 Birthday
## 22 Blackbird
## 23 Blue Jay Way
## 24 Boys
## 25 Can't Buy Me Love
## 26 Carry That Weight
## 27 Chains
## 28 Come Together
## 29 The Continuing Story of Bungalow Bill
## 30 Cry Baby Cry
## 31 A Day in the Life
## 32 Day Tripper
## 33 Dear Prudence
## 34 Devil in Her Heart
## 35 Dig a Pony
## 36 Dig It
## 37 Dizzy, Miss Lizzy
## 38 Do You Want to Know a Secret
## 39 Doctor Robert
## 40 Don't Bother Me
## 41 Don't Let Me Down
## 42 Don't Pass Me By
## 43 Drive My Car
## 44 Eight Days a Week
```



## 45 Eleanor Rigby  
 ## 46 The End  
 ## 47 Every Little Thing  
 ## 48 Everybody's Got Something to Hide Except Me and My Monkey  
 ## 49 Everybody's Trying to Be My Baby  
 ## 50 Fixing a Hole  
 ## 51 Flying  
 ## 52 The Fool on the Hill  
 ## 53 For No One  
 ## 54 For You Blue  
 ## 55 From Me to You  
 ## 56 Get Back[d]  
 ## 57 Getting Better  
 ## 58 Girl  
 ## 59 Glass Onion  
 ## 60 Golden Slumbers  
 ## 61 Good Day Sunshine  
 ## 62 Good Morning Good Morning  
 ## 63 Good Night  
 ## 64 Got to Get You into My Life  
 ## 65 Happiness Is a Warm Gun  
 ## 66 A Hard Day's Night  
 ## 67 Hello, Goodbye  
 ## 68 Help!  
 ## 69 Helter Skelter  
 ## 70 Her Majesty  
 ## 71 Here Comes the Sun  
 ## 72 Here, There and Everywhere  
 ## 73 Hey Bulldog  
 ## 74 Hey Jude  
 ## 75 Hold Me Tight  
 ## 76 Honey Don't  
 ## 77 Honey Pie  
 ## 78 I Am the Walrus  
 ## 79 I Call Your Name[e]  
 ## 80 I Don't Want to Spoil the Party  
 ## 81 I Feel Fine  
 ## 82 I Me Mine  
 ## 83 I Need You  
 ## 84 I Saw Her Standing There  
 ## 85 I Should Have Known Better  
 ## 86 I Wanna Be Your Man  
 ## 87 I Want to Hold Your Hand  
 ## 88 I Want to Tell You  
 ## 89 I Want You (She's So Heavy)  
 ## 90 I Will  
 ## 91 If I Fell  
 ## 92 If I Needed Someone  
 ## 93 I'll Be Back  
 ## 94 I'll Cry Instead  
 ## 95 I'll Follow the Sun  
 ## 96 I'll Get You  
 ## 97 I'm a Loser  
 ## 98 I'm Down

## 99 I'm Happy Just to Dance with You  
 ## 100 I'm Looking Through You  
 ## 101 I'm Only Sleeping  
 ## 102 I'm So Tired  
 ## 103 I've Got a Feeling  
 ## 104 I've Just Seen a Face  
 ## 105 In My Life  
 ## 106 The Inner Light  
 ## 107 It Won't Be Long  
 ## 108 It's All Too Much  
 ## 109 It's Only Love  
 ## 110 Julia  
 ## 111 Kansas City/Hey-Hey-Hey-Hey!  
 ## 112 Komm, gib mir deine Hand (German version of I Want to Hold Your Hand)  
 ## 113 Lady Madonna  
 ## 114 Let It Be[f]  
 ## 115 Little Child  
 ## 116 The Long and Winding Road  
 ## 117 Long Tall Sally  
 ## 118 Long, Long, Long  
 ## 119 Love Me Do[g]  
 ## 120 Love You To  
 ## 121 Lovely Rita  
 ## 122 Lucy in the Sky with Diamonds  
 ## 123 Maggie Mae  
 ## 124 Magical Mystery Tour  
 ## 125 Martha My Dear  
 ## 126 Matchbox  
 ## 127 Maxwell's Silver Hammer  
 ## 128 Mean Mr. Mustard  
 ## 129 Michelle  
 ## 130 Misery  
 ## 131 Money (That's What I Want)  
 ## 132 Mother Nature's Son  
 ## 133 Mr. Moonlight  
 ## 134 The Night Before  
 ## 135 No Reply  
 ## 136 Norwegian Wood (This Bird Has Flown)  
 ## 137 Not a Second Time  
 ## 138 Nowhere Man  
 ## 139 Ob-La-Di, Ob-La-Da  
 ## 140 Octopus's Garden  
 ## 141 Oh! Darling  
 ## 142 Old Brown Shoe  
 ## 143 One After 909  
 ## 144 Only a Northern Song  
 ## 145 Paperback Writer  
 ## 146 Penny Lane  
 ## 147 Piggies  
 ## 148 Please Mr. Postman  
 ## 149 Please Please Me  
 ## 150 Polythene Pam  
 ## 151 P.S. I Love You  
 ## 152 Rain

|        |  |
|--------|--|
| ## 153 | Revolution                                       |
| ## 154 | Revolution 1                                     |
| ## 155 | Revolution 9                                     |
| ## 156 | Rock and Roll Music                              |
| ## 157 | Rocky Raccoon                                    |
| ## 158 | Roll Over Beethoven                              |
| ## 159 | Run for Your Life                                |
| ## 160 | Savoy Truffle                                    |
| ## 161 | Sexy Sadie                                       |
| ## 162 | Sgt. Pepper's Lonely Hearts Club Band            |
| ## 163 | Sgt. Pepper's Lonely Hearts Club Band (Reprise)  |
| ## 164 | She Came In Through the Bathroom Window          |
| ## 165 | She Loves You                                    |
| ## 166 | She Said She Said                                |
| ## 167 | She's a Woman                                    |
| ## 168 | She's Leaving Home                               |
| ## 169 | Sie liebt dich (German version of She Loves You) |
| ## 170 | Slow Down  |
| ## 171 | Something  |
| ## 172 | Strawberry Fields Forever                        |
| ## 173 | Sun King   |
| ## 174 | A Taste of Honey                                 |
| ## 175 | Taxman   |
| ## 176 | Tell Me What You See                             |
| ## 177 | Tell Me Why                                      |
| ## 178 | Thank You Girl                                   |
| ## 179 | There's a Place                                  |
| ## 180 | Things We Said Today                             |
| ## 181 | Think for Yourself                               |
| ## 182 | This Boy   |
| ## 183 | Ticket to Ride                                   |
| ## 184 | Till There Was You                               |
| ## 185 | Tomorrow Never Knows                             |
| ## 186 | Twist and Shout                                  |
| ## 187 | Two of Us  |
| ## 188 | Wait   |
| ## 189 | We Can Work It Out                               |
| ## 190 | What Goes On                                     |
| ## 191 | What You're Doing                                |
| ## 192 | When I Get Home                                  |
| ## 193 | When I'm Sixty-Four                              |
| ## 194 | While My Guitar Gently Weeps                     |
| ## 195 | Why Don't We Do It in the Road?                  |
| ## 196 | Wild Honey Pie                                   |
| ## 197 | With a Little Help from My Friends               |
| ## 198 | Within You Without You                           |
| ## 199 | The Word   |
| ## 200 | Words of Love                                    |
| ## 201 | Yellow Submarine[c]                              |
| ## 202 | Yer Blues  |
| ## 203 | Yes It Is  |
| ## 204 | Yesterday  |
| ## 205 | You Can't Do That                                |
| ## 206 | You Know My Name (Look Up the Number)            |

## 207 You Like Me Too Much  
 ## 208 You Never Give Me Your Money  
 ## 209 You Won't See Me  
 ## 210 Your Mother Should Know  
 ## 211 You're Going to Lose That Girl  
 ## 212 You've Got to Hide Your Love Away  
 ## 213 You've Really Got a Hold on Me  
 ## Core catalogue release  
 ## 1 Let It Be  
 ## 2 Help!  
 ## 3 With the Beatles  
 ## 4 With the Beatles  
 ## 5 Yellow Submarine  
 ## 6 Magical Mystery Tour  
 ## 7 A Hard Day's Night  
 ## 8 Revolver  
 ## 9 Please Please Me  
 ## 10 Help!  
 ## 11 A Hard Day's Night  
 ## 12 Please Please Me  
 ## 13 Please Please Me  
 ## 14 Magical Mystery Tour  
 ## 15 Beatles for Sale  
 ## 16 The Beatles ("White Album")  
 ## 17 Past Masters  
 ## 18 Past Masters  
 ## 19 Abbey Road  
 ## 20 Sgt. Pepper's Lonely Hearts Club Band  
 ## 21 The Beatles ("White Album")  
 ## 22 The Beatles ("White Album")  
 ## 23 Magical Mystery Tour  
 ## 24 Please Please Me  
 ## 25 A Hard Day's Night  
 ## 26 Abbey Road  
 ## 27 Please Please Me  
 ## 28 Abbey Road  
 ## 29 The Beatles ("White Album")  
 ## 30 The Beatles ("White Album")  
 ## 31 Sgt. Pepper's Lonely Hearts Club Band  
 ## 32 Past Masters(Double A-side with "We Can Work It Out")  
 ## 33 The Beatles ("White Album")  
 ## 34 With the Beatles  
 ## 35 Let It Be  
 ## 36 Let It Be  
 ## 37 Help!  
 ## 38 Please Please Me  
 ## 39 Revolver  
 ## 40 With the Beatles  
 ## 41 Past Masters(B-side of "Get Back")  
 ## 42 The Beatles ("White Album")  
 ## 43 Rubber Soul  
 ## 44 Beatles for Sale  
 ## 45 Revolver  
 ## 46 Abbey Road

## 47 Beatles for Sale  
 ## 48 The Beatles ("White Album")  
 ## 49 Beatles for Sale  
 ## 50 Sgt. Pepper's Lonely Hearts Club Band  
 ## 51 Magical Mystery Tour  
 ## 52 Magical Mystery Tour  
 ## 53 Revolver  
 ## 54 Let It Be  
 ## 55 Past Masters  
 ## 56 Let It Be  
 ## 57 Sgt. Pepper's Lonely Hearts Club Band  
 ## 58 Rubber Soul  
 ## 59 The Beatles ("White Album")  
 ## 60 Abbey Road  
 ## 61 Revolver  
 ## 62 Sgt. Pepper's Lonely Hearts Club Band  
 ## 63 The Beatles ("White Album")  
 ## 64 Revolver  
 ## 65 The Beatles ("White Album")  
 ## 66 A Hard Day's Night  
 ## 67 Magical Mystery Tour  
 ## 68 Help!  
 ## 69 The Beatles ("White Album")  
 ## 70 Abbey Road  
 ## 71 Abbey Road  
 ## 72 Revolver  
 ## 73 Yellow Submarine  
 ## 74 Past Masters  
 ## 75 With the Beatles  
 ## 76 Beatles for Sale  
 ## 77 The Beatles ("White Album")  
 ## 78 Magical Mystery Tour  
 ## 79 Past Masters  
 ## 80 Beatles for Sale  
 ## 81 Past Masters  
 ## 82 Let It Be  
 ## 83 Help!  
 ## 84 Please Please Me  
 ## 85 A Hard Day's Night  
 ## 86 With the Beatles  
 ## 87 Past Masters  
 ## 88 Revolver  
 ## 89 Abbey Road  
 ## 90 The Beatles ("White Album")  
 ## 91 A Hard Day's Night  
 ## 92 Rubber Soul  
 ## 93 A Hard Day's Night  
 ## 94 A Hard Day's Night  
 ## 95 Beatles for Sale  
 ## 96 Past Masters(B-side of "She Loves You")  
 ## 97 Beatles for Sale  
 ## 98 Past Masters(B-side of "Help!")  
 ## 99 A Hard Day's Night  
 ## 100 Rubber Soul

## 101 Revolver  
 ## 102 The Beatles ("White Album")  
 ## 103 Let It Be  
 ## 104 Help!  
 ## 105 Rubber Soul  
 ## 106 Past Masters(B-side of "Lady Madonna")  
 ## 107 With the Beatles  
 ## 108 Yellow Submarine  
 ## 109 Help!  
 ## 110 The Beatles ("White Album")  
 ## 111 Beatles for Sale  
 ## 112 Past Masters  
 ## 113 Past Masters  
 ## 114 Let It Be  
 ## 115 With the Beatles  
 ## 116 Let It Be  
 ## 117 Past Masters  
 ## 118 The Beatles ("White Album")  
 ## 119 Please Please Me  
 ## 120 Revolver  
 ## 121 Sgt. Pepper's Lonely Hearts Club Band  
 ## 122 Sgt. Pepper's Lonely Hearts Club Band  
 ## 123 Let It Be  
 ## 124 Magical Mystery Tour  
 ## 125 The Beatles ("White Album")  
 ## 126 Past Masters  
 ## 127 Abbey Road  
 ## 128 Abbey Road  
 ## 129 Rubber Soul  
 ## 130 Please Please Me  
 ## 131 With the Beatles  
 ## 132 The Beatles ("White Album")  
 ## 133 Beatles for Sale  
 ## 134 Help!  
 ## 135 Beatles for Sale  
 ## 136 Rubber Soul  
 ## 137 With the Beatles  
 ## 138 Rubber Soul  
 ## 139 The Beatles ("White Album")  
 ## 140 Abbey Road  
 ## 141 Abbey Road  
 ## 142 Past Masters(B-side of "The Ballad of John and Yoko")  
 ## 143 Let It Be  
 ## 144 Yellow Submarine  
 ## 145 Past Masters  
 ## 146 Magical Mystery Tour  
 ## 147 The Beatles ("White Album")  
 ## 148 With the Beatles  
 ## 149 Please Please Me  
 ## 150 Abbey Road  
 ## 151 Please Please Me  
 ## 152 Past Masters(B-side of "Paperback Writer")  
 ## 153 Past Masters(B-side of "Hey Jude")  
 ## 154 The Beatles ("White Album")

## 155 The Beatles ("White Album")  
 ## 156 Beatles for Sale  
 ## 157 The Beatles ("White Album")  
 ## 158 With the Beatles  
 ## 159 Rubber Soul  
 ## 160 The Beatles ("White Album")  
 ## 161 The Beatles ("White Album")  
 ## 162 Sgt. Pepper's Lonely Hearts Club Band  
 ## 163 Sgt. Pepper's Lonely Hearts Club Band  
 ## 164 Abbey Road  
 ## 165 Past Masters  
 ## 166 Revolver  
 ## 167 Past Masters(B-side of "I Feel Fine")  
 ## 168 Sgt. Pepper's Lonely Hearts Club Band  
 ## 169 Past Masters(B-side of "Komm, gib mir deine Hand")  
 ## 170 Past Masters  
 ## 171 Abbey Road  
 ## 172 Magical Mystery Tour  
 ## 173 Abbey Road  
 ## 174 Please Please Me  
 ## 175 Revolver  
 ## 176 Help!  
 ## 177 A Hard Day's Night  
 ## 178 Past Masters(B-side of "From Me to You")  
 ## 179 Please Please Me  
 ## 180 A Hard Day's Night  
 ## 181 Rubber Soul  
 ## 182 Past Masters(B-side of "I Want to Hold Your Hand" (UK))  
 ## 183 Help!  
 ## 184 With the Beatles  
 ## 185 Revolver  
 ## 186 Please Please Me  
 ## 187 Let It Be  
 ## 188 Rubber Soul  
 ## 189 Past Masters(Double A-side with "Day Tripper")  
 ## 190 Rubber Soul  
 ## 191 Beatles for Sale  
 ## 192 A Hard Day's Night  
 ## 193 Sgt. Pepper's Lonely Hearts Club Band  
 ## 194 The Beatles ("White Album")  
 ## 195 The Beatles ("White Album")  
 ## 196 The Beatles ("White Album")  
 ## 197 Sgt. Pepper's Lonely Hearts Club Band  
 ## 198 Sgt. Pepper's Lonely Hearts Club Band  
 ## 199 Rubber Soul  
 ## 200 Beatles for Sale  
 ## 201 Revolver  
 ## 202 The Beatles ("White Album")  
 ## 203 Past Masters(B-side of "Ticket to Ride")  
 ## 204 Help!  
 ## 205 A Hard Day's Night  
 ## 206 Past Masters(B-side of "Let It Be")  
 ## 207 Help!  
 ## 208 Abbey Road

|        |                                     |
|--------|-------------------------------------|
| ## 209 | Rubber Soul                         |
| ## 210 | Magical Mystery Tour                |
| ## 211 | Help!                               |
| ## 212 | Help!                               |
| ## 213 | With the Beatles                    |
| ##     | songwriters                         |
| ## 1   | LennonMcCartney                     |
| ## 2   | Johnny RussellVoni Morrison         |
| ## 3   | LennonMcCartney                     |
| ## 4   | LennonMcCartney                     |
| ## 5   | LennonMcCartney                     |
| ## 6   | LennonMcCartney                     |
| ## 7   | LennonMcCartney                     |
| ## 8   | LennonMcCartney                     |
| ## 9   | Arthur Alexander                    |
| ## 10  | LennonMcCartney                     |
| ## 11  | LennonMcCartney                     |
| ## 12  | LennonMcCartney                     |
| ## 13  | Burt BacharachHal DavidLuther Dixon |
| ## 14  | LennonMcCartney                     |
| ## 15  | LennonMcCartney                     |
| ## 16  | LennonMcCartney                     |
| ## 17  | Larry Williams                      |
| ## 18  | LennonMcCartney                     |
| ## 19  | LennonMcCartney                     |
| ## 20  | LennonMcCartney                     |
| ## 21  | LennonMcCartney                     |
| ## 22  | LennonMcCartney                     |
| ## 23  | Harrison                            |
| ## 24  | Luther DixonWes Farrell             |
| ## 25  | LennonMcCartney                     |
| ## 26  | LennonMcCartney                     |
| ## 27  | Gerry GoffinCarole King             |
| ## 28  | LennonMcCartney                     |
| ## 29  | LennonMcCartney                     |
| ## 30  | LennonMcCartney                     |
| ## 31  | LennonMcCartney                     |
| ## 32  | LennonMcCartney                     |
| ## 33  | LennonMcCartney                     |
| ## 34  | Richard Drapkin                     |
| ## 35  | LennonMcCartney                     |
| ## 36  | LennonMcCartneyHarrisonStarkey      |
| ## 37  | Larry Williams                      |
| ## 38  | LennonMcCartney                     |
| ## 39  | LennonMcCartney                     |
| ## 40  | Harrison                            |
| ## 41  | LennonMcCartney                     |
| ## 42  | Starkey                             |
| ## 43  | LennonMcCartney                     |
| ## 44  | LennonMcCartney                     |
| ## 45  | LennonMcCartney                     |
| ## 46  | LennonMcCartney                     |
| ## 47  | LennonMcCartney                     |
| ## 48  | LennonMcCartney                     |



|        |                                |
|--------|--------------------------------|
| ## 49  | Carl Perkins                   |
| ## 50  | LennonMcCartney                |
| ## 51  | LennonMcCartneyHarrisonStarkey |
| ## 52  | LennonMcCartney                |
| ## 53  | LennonMcCartney                |
| ## 54  | Harrison                       |
| ## 55  | LennonMcCartney                |
| ## 56  | LennonMcCartney                |
| ## 57  | LennonMcCartney                |
| ## 58  | LennonMcCartney                |
| ## 59  | LennonMcCartney                |
| ## 60  | LennonMcCartney                |
| ## 61  | LennonMcCartney                |
| ## 62  | LennonMcCartney                |
| ## 63  | LennonMcCartney                |
| ## 64  | LennonMcCartney                |
| ## 65  | LennonMcCartney                |
| ## 66  | LennonMcCartney                |
| ## 67  | LennonMcCartney                |
| ## 68  | LennonMcCartney                |
| ## 69  | LennonMcCartney                |
| ## 70  | LennonMcCartney                |
| ## 71  | Harrison                       |
| ## 72  | LennonMcCartney                |
| ## 73  | LennonMcCartney                |
| ## 74  | LennonMcCartney                |
| ## 75  | LennonMcCartney                |
| ## 76  | Carl Perkins                   |
| ## 77  | LennonMcCartney                |
| ## 78  | LennonMcCartney                |
| ## 79  | LennonMcCartney                |
| ## 80  | LennonMcCartney                |
| ## 81  | LennonMcCartney                |
| ## 82  | Harrison                       |
| ## 83  | Harrison                       |
| ## 84  | LennonMcCartney                |
| ## 85  | LennonMcCartney                |
| ## 86  | LennonMcCartney                |
| ## 87  | LennonMcCartney                |
| ## 88  | Harrison                       |
| ## 89  | LennonMcCartney                |
| ## 90  | LennonMcCartney                |
| ## 91  | LennonMcCartney                |
| ## 92  | Harrison                       |
| ## 93  | LennonMcCartney                |
| ## 94  | LennonMcCartney                |
| ## 95  | LennonMcCartney                |
| ## 96  | LennonMcCartney                |
| ## 97  | LennonMcCartney                |
| ## 98  | LennonMcCartney                |
| ## 99  | LennonMcCartney                |
| ## 100 | LennonMcCartney                |
| ## 101 | LennonMcCartney                |
| ## 102 | LennonMcCartney                |

|        |   |
|--------|---|
| ## 103 | LennonMcCartney   |
| ## 104 | LennonMcCartney   |
| ## 105 | LennonMcCartney   |
| ## 106 | Harrison  |
| ## 107 | LennonMcCartney   |
| ## 108 | Harrison  |
| ## 109 | LennonMcCartney   |
| ## 110 | LennonMcCartney   |
| ## 111 | Jerry LeiberMike Stoller /Richard Penniman                              |
| ## 112 | LennonMcCartneyJean NicolasHeinz Hellmer                                |
| ## 113 | LennonMcCartney   |
| ## 114 | LennonMcCartney   |
| ## 115 | LennonMcCartney   |
| ## 116 | LennonMcCartney   |
| ## 117 | Robert BlackwellEnotris JohnsonLittle Richard                           |
| ## 118 | Harrison  |
| ## 119 | LennonMcCartney   |
| ## 120 | Harrison  |
| ## 121 | LennonMcCartney   |
| ## 122 | LennonMcCartney   |
| ## 123 | Traditional, arr.LennonMcCartneyHarrisonStarkey                         |
| ## 124 | LennonMcCartney   |
| ## 125 | LennonMcCartney   |
| ## 126 | Carl PerkinsBlind Lemon Jefferson                                       |
| ## 127 | LennonMcCartney   |
| ## 128 | LennonMcCartney   |
| ## 129 | LennonMcCartney   |
| ## 130 | LennonMcCartney   |
| ## 131 | Berry GordyJanie Bradford   |
| ## 132 | LennonMcCartney   |
| ## 133 | Roy Lee Johnson   |
| ## 134 | LennonMcCartney   |
| ## 135 | LennonMcCartney   |
| ## 136 | LennonMcCartney   |
| ## 137 | LennonMcCartney   |
| ## 138 | LennonMcCartney   |
| ## 139 | LennonMcCartney   |
| ## 140 | Starkey   |
| ## 141 | LennonMcCartney   |
| ## 142 | Harrison  |
| ## 143 | LennonMcCartney   |
| ## 144 | Harrison  |
| ## 145 | LennonMcCartney   |
| ## 146 | LennonMcCartney   |
| ## 147 | Harrison  |
| ## 148 | Georgia DobbinsWilliam GarrettBrian HollandRobert BatemanFreddie Gorman |
| ## 149 | LennonMcCartney   |
| ## 150 | LennonMcCartney   |
| ## 151 | LennonMcCartney   |
| ## 152 | LennonMcCartney   |
| ## 153 | LennonMcCartney   |
| ## 154 | LennonMcCartney   |
| ## 155 | LennonMcCartney   |
| ## 156 | Chuck Berry   |

|        |   |
|--------|---|
| ## 157 | LennonMcCartney                         |
| ## 158 | Chuck Berry                             |
| ## 159 | LennonMcCartney                         |
| ## 160 | Harrison                                |
| ## 161 | LennonMcCartney                         |
| ## 162 | LennonMcCartney                         |
| ## 163 | LennonMcCartney                         |
| ## 164 | LennonMcCartney                         |
| ## 165 | LennonMcCartney                         |
| ## 166 | LennonMcCartney                         |
| ## 167 | LennonMcCartney                         |
| ## 168 | LennonMcCartney                         |
| ## 169 | LennonMcCartneyJean NicolasLee Montogue |
| ## 170 | Larry Williams                          |
| ## 171 | Harrison                                |
| ## 172 | LennonMcCartney                         |
| ## 173 | LennonMcCartney                         |
| ## 174 | Bobby ScottRic Marlow                   |
| ## 175 | Harrison                                |
| ## 176 | LennonMcCartney                         |
| ## 177 | LennonMcCartney                         |
| ## 178 | LennonMcCartney                         |
| ## 179 | LennonMcCartney                         |
| ## 180 | LennonMcCartney                         |
| ## 181 | Harrison                                |
| ## 182 | LennonMcCartney                         |
| ## 183 | LennonMcCartney                         |
| ## 184 | Meredith Willson                        |
| ## 185 | LennonMcCartney                         |
| ## 186 | Phil MedleyBert Berns                   |
| ## 187 | LennonMcCartney                         |
| ## 188 | LennonMcCartney                         |
| ## 189 | LennonMcCartney                         |
| ## 190 | LennonMcCartneyStarkey                  |
| ## 191 | LennonMcCartney                         |
| ## 192 | LennonMcCartney                         |
| ## 193 | LennonMcCartney                         |
| ## 194 | Harrison                                |
| ## 195 | LennonMcCartney                         |
| ## 196 | LennonMcCartney                         |
| ## 197 | LennonMcCartney                         |
| ## 198 | Harrison                                |
| ## 199 | LennonMcCartney                         |
| ## 200 | Buddy Holly                             |
| ## 201 | LennonMcCartney                         |
| ## 202 | LennonMcCartney                         |
| ## 203 | LennonMcCartney                         |
| ## 204 | LennonMcCartney                         |
| ## 205 | LennonMcCartney                         |
| ## 206 | LennonMcCartney                         |
| ## 207 | Harrison                                |
| ## 208 | LennonMcCartney                         |
| ## 209 | LennonMcCartney                         |
| ## 210 | LennonMcCartney                         |

| ##     | Lead vocal(s) [a]                         | Year | Ref (s)         |
|--------|---|------|-----------------|
| ## 211 |   |      | LennonMcCartney |
| ## 212 |   |      | LennonMcCartney |
| ## 213 |   |      | Smokey Robinson |
| ##     |   |      |                 |
| ## 1   | Lennon                                    | 1969 | [6]             |
| ## 2   | Starr                                     | 1965 | [7]             |
| ## 3   | Lennon                                    | 1963 | [8]             |
| ## 4   | McCartney                                 | 1963 | [8]             |
| ## 5   | McCartney(with Lennon)                    | 1969 | [9]             |
| ## 6   | Lennon                                    | 1967 | [10] [11]       |
| ## 7   | McCartney                                 | 1964 | [12]            |
| ## 8   | Lennon                                    | 1966 | [13]            |
| ## 9   | Lennon                                    | 1963 | [14]            |
| ## 10  | McCartney                                 | 1965 | [7]             |
| ## 11  | Lennon(with McCartney)                    | 1964 | [12]            |
| ## 12  | Lennon                                    | 1963 | [14]            |
| ## 13  | Lennon                                    | 1963 | [14]            |
| ## 14  | Lennon                                    | 1967 | [10] [11]       |
| ## 15  | LennonMcCartney                           | 1964 | [15]            |
| ## 16  | McCartney                                 | 1968 | [16]            |
| ## 17  | Lennon                                    | 1966 | [17]            |
| ## 18  | Lennon                                    | 1969 | [18] [17]       |
| ## 19  | LennonMcCartneyHarrison                   | 1969 | [19]            |
| ## 20  | Lennon                                    | 1967 | [20]            |
| ## 21  | McCartney(with Lennon)                    | 1968 | [16]            |
| ## 22  | McCartney                                 | 1968 | [16]            |
| ## 23  | Harrison                                  | 1967 | [11]            |
| ## 24  | Starr                                     | 1963 | [14]            |
| ## 25  | McCartney                                 | 1964 | [12]            |
| ## 26  | McCartney(with Lennon,Harrison,and Starr) | 1969 | [19]            |
| ## 27  | Harrison                                  | 1963 | [14]            |
| ## 28  | Lennon                                    | 1969 | [19]            |
| ## 29  | Lennon(with Yoko Ono)                     | 1968 | [16]            |
| ## 30  | Lennon(with McCartney)                    | 1968 | [16]            |
| ## 31  | LennonMcCartney                           | 1967 | [20]            |
| ## 32  | LennonMcCartney                           | 1965 | [21] [17]       |
| ## 33  | Lennon                                    | 1968 | [16]            |
| ## 34  | Harrison                                  | 1963 | [8]             |
| ## 35  | Lennon                                    | 1970 | [6]             |
| ## 36  | Lennon                                    | 1970 | [6]             |
| ## 37  | Lennon                                    | 1965 | [7]             |
| ## 38  | Harrison                                  | 1963 | [14]            |
| ## 39  | Lennon                                    | 1966 | [13]            |
| ## 40  | Harrison                                  | 1963 | [8]             |
| ## 41  | Lennon                                    | 1969 | [17] [22]       |
| ## 42  | Starr                                     | 1968 | [16]            |
| ## 43  | McCartney(with Lennon)                    | 1965 | [23]            |
| ## 44  | LennonMcCartney                           | 1964 | [15]            |
| ## 45  | McCartney                                 | 1966 | [13]            |
| ## 46  | McCartney                                 | 1969 | [19]            |
| ## 47  | Lennon(with McCartney)                    | 1964 | [15]            |
| ## 48  | Lennon                                    | 1968 | [16]            |
| ## 49  | Harrison                                  | 1964 | [15]            |
| ## 50  | McCartney                                 | 1967 | [20]            |

|        |                        |      |           |
|--------|------------------------|------|-----------|
| ## 51  | Instrumental           | 1967 | [11]      |
| ## 52  | McCartney              | 1967 | [11]      |
| ## 53  | McCartney              | 1966 | [13]      |
| ## 54  | Harrison               | 1970 | [6]       |
| ## 55  | Lennon(with McCartney) | 1963 | [24] [17] |
| ## 56  | McCartney              | 1969 | [22] [6]  |
| ## 57  | McCartney              | 1967 | [20]      |
| ## 58  | Lennon                 | 1965 | [23]      |
| ## 59  | Lennon                 | 1968 | [16]      |
| ## 60  | McCartney              | 1969 | [19]      |
| ## 61  | McCartney              | 1966 | [13]      |
| ## 62  | Lennon                 | 1967 | [20]      |
| ## 63  | Starr                  | 1968 | [16]      |
| ## 64  | McCartney              | 1966 | [13]      |
| ## 65  | Lennon                 | 1968 | [16]      |
| ## 66  | Lennon(with McCartney) | 1964 | [12]      |
| ## 67  | McCartney              | 1967 | [26] [11] |
| ## 68  | Lennon                 | 1965 | [7]       |
| ## 69  | McCartney              | 1968 | [16]      |
| ## 70  | McCartney              | 1969 | [19]      |
| ## 71  | Harrison               | 1969 | [19]      |
| ## 72  | McCartney              | 1966 | [13]      |
| ## 73  | Lennon                 | 1969 | [9]       |
| ## 74  | McCartney              | 1968 | [27] [17] |
| ## 75  | McCartney              | 1963 | [8]       |
| ## 76  | Starr                  | 1964 | [15]      |
| ## 77  | McCartney              | 1968 | [16]      |
| ## 78  | Lennon                 | 1967 | [11]      |
| ## 79  | Lennon                 | 1964 | [17]      |
| ## 80  | Lennon(with McCartney) | 1964 | [15]      |
| ## 81  | Lennon                 | 1964 | [29] [17] |
| ## 82  | Harrison               | 1970 | [6]       |
| ## 83  | Harrison               | 1965 | [7]       |
| ## 84  | McCartney              | 1963 | [14]      |
| ## 85  | Lennon                 | 1964 | [12]      |
| ## 86  | Starr                  | 1963 | [8]       |
| ## 87  | LennonMcCartney        | 1963 | [30] [17] |
| ## 88  | Harrison               | 1966 | [13]      |
| ## 89  | Lennon                 | 1969 | [19]      |
| ## 90  | McCartney              | 1968 | [16]      |
| ## 91  | LennonMcCartney        | 1964 | [12]      |
| ## 92  | Harrison               | 1965 | [23]      |
| ## 93  | Lennon(with McCartney) | 1964 | [12]      |
| ## 94  | Lennon                 | 1964 | [12]      |
| ## 95  | McCartney              | 1964 | [15]      |
| ## 96  | Lennon(with McCartney) | 1963 | [31] [17] |
| ## 97  | Lennon                 | 1964 | [15]      |
| ## 98  | McCartney              | 1965 | [32] [17] |
| ## 99  | Harrison               | 1964 | [12]      |
| ## 100 | McCartney              | 1965 | [23]      |
| ## 101 | Lennon                 | 1966 | [13]      |
| ## 102 | Lennon                 | 1968 | [16]      |
| ## 103 | McCartney(with Lennon) | 1970 | [6]       |
| ## 104 | McCartney              | 1965 | [7]       |

|        |                        |      |           |
|--------|------------------------|------|-----------|
| ## 105 | Lennon                 | 1965 | [23]      |
| ## 106 | Harrison               | 1968 | [33] [17] |
| ## 107 | Lennon                 | 1963 | [8]       |
| ## 108 | Harrison               | 1969 | [9]       |
| ## 109 | Lennon                 | 1965 | [23]      |
| ## 110 | Lennon                 | 1968 | [16]      |
| ## 111 | McCartney              | 1964 | [15]      |
| ## 112 | LennonMcCartney        | 1964 | [34] [17] |
| ## 113 | McCartney              | 1968 | [33] [17] |
| ## 114 | McCartney              | 1970 | [6]       |
| ## 115 | LennonMcCartney        | 1963 | [8]       |
| ## 116 | McCartney              | 1970 | [6]       |
| ## 117 | McCartney              | 1964 | [17]      |
| ## 118 | Harrison               | 1968 | [16]      |
| ## 119 | McCartney(with Lennon) | 1962 | [14]      |
| ## 120 | Harrison               | 1966 | [13]      |
| ## 121 | McCartney              | 1967 | [20]      |
| ## 122 | Lennon                 | 1967 | [20]      |
| ## 123 | Lennon(with McCartney) | 1970 | [6]       |
| ## 124 | McCartney(with Lennon) | 1967 | [11]      |
| ## 125 | McCartney              | 1968 | [16]      |
| ## 126 | Starr                  | 1964 | [17]      |
| ## 127 | McCartney              | 1969 | [19]      |
| ## 128 | Lennon                 | 1969 | [19]      |
| ## 129 | McCartney              | 1965 | [23]      |
| ## 130 | Lennon(with McCartney) | 1963 | [14]      |
| ## 131 | Lennon                 | 1963 | [8]       |
| ## 132 | McCartney              | 1968 | [16]      |
| ## 133 | Lennon                 | 1964 | [15]      |
| ## 134 | McCartney              | 1965 | [7]       |
| ## 135 | Lennon                 | 1964 | [15]      |
| ## 136 | Lennon                 | 1965 | [23]      |
| ## 137 | Lennon                 | 1963 | [8]       |
| ## 138 | Lennon                 | 1965 | [23]      |
| ## 139 | McCartney              | 1968 | [16]      |
| ## 140 | Starr                  | 1969 | [19]      |
| ## 141 | McCartney              | 1969 | [19]      |
| ## 142 | Harrison               | 1969 | [18] [17] |
| ## 143 | Lennon(with McCartney) | 1970 | [6]       |
| ## 144 | Harrison               | 1969 | [9]       |
| ## 145 | McCartney              | 1966 | [41] [17] |
| ## 146 | McCartney              | 1967 | [42] [11] |
| ## 147 | Harrison               | 1968 | [16]      |
| ## 148 | Lennon                 | 1963 | [8]       |
| ## 149 | LennonMcCartney        | 1963 | [14]      |
| ## 150 | Lennon                 | 1969 | [19]      |
| ## 151 | McCartney              | 1962 | [14]      |
| ## 152 | Lennon                 | 1966 | [41] [17] |
| ## 153 | Lennon                 | 1968 | [27] [17] |
| ## 154 | Lennon                 | 1968 | [16]      |
| ## 155 | Sound Collage[h]       | 1968 | [16]      |
| ## 156 | Lennon                 | 1964 | [15]      |
| ## 157 | McCartney              | 1968 | [16]      |
| ## 158 | Harrison               | 1963 | [8]       |

|        |                                    |           |      |
|--------|------------------------------------|-----------|------|
| ## 159 | Lennon                             | 1965      | [23] |
| ## 160 | Harrison                           | 1968      | [16] |
| ## 161 | Lennon                             | 1968      | [16] |
| ## 162 | McCartney                          | 1967      | [20] |
| ## 163 | McCartneyLennonHarrison            | 1967      | [20] |
| ## 164 | McCartney                          | 1969      | [19] |
| ## 165 | LennonMcCartney                    | 1963 [31] | [17] |
| ## 166 | Lennon                             | 1966      | [13] |
| ## 167 | McCartney                          | 1964 [29] | [17] |
| ## 168 | McCartney(with Lennon)             | 1967      | [20] |
| ## 169 | LennonMcCartney                    | 1964 [34] | [17] |
| ## 170 | Lennon                             | 1964      | [17] |
| ## 171 | Harrison                           | 1969      | [19] |
| ## 172 | Lennon                             | 1967 [42] | [11] |
| ## 173 | Lennon(with McCartneyand Harrison) | 1969      | [19] |
| ## 174 | McCartney                          | 1963      | [14] |
| ## 175 | Harrison                           | 1966      | [13] |
| ## 176 | McCartney(with Lennon)             | 1965      | [7]  |
| ## 177 | Lennon                             | 1964      | [12] |
| ## 178 | Lennon(with McCartney)             | 1963 [24] | [17] |
| ## 179 | LennonMcCartney                    | 1963      | [14] |
| ## 180 | McCartney                          | 1964      | [12] |
| ## 181 | Harrison                           | 1965      | [23] |
| ## 182 | Lennon(with McCartneyand Harrison) | 1963 [30] | [17] |
| ## 183 | Lennon                             | 1965      | [7]  |
| ## 184 | McCartney                          | 1963      | [8]  |
| ## 185 | Lennon                             | 1966      | [13] |
| ## 186 | Lennon                             | 1963      | [14] |
| ## 187 | McCartney(with Lennon)             | 1970      | [6]  |
| ## 188 | LennonMcCartney                    | 1965      | [23] |
| ## 189 | McCartney                          | 1965 [21] | [17] |
| ## 190 | Starr                              | 1965      | [23] |
| ## 191 | McCartney                          | 1964      | [15] |
| ## 192 | Lennon                             | 1964      | [12] |
| ## 193 | McCartney                          | 1967      | [20] |
| ## 194 | Harrison                           | 1968      | [16] |
| ## 195 | McCartney                          | 1968      | [16] |
| ## 196 | McCartney                          | 1968      | [16] |
| ## 197 | Starr                              | 1967      | [20] |
| ## 198 | Harrison                           | 1967      | [20] |
| ## 199 | Lennon                             | 1965      | [23] |
| ## 200 | LennonMcCartney                    | 1964      | [15] |
| ## 201 | Starr                              | 1966      | [13] |
| ## 202 | Lennon                             | 1968      | [16] |
| ## 203 | Lennon(with McCartneyand Harrison) | 1965 [43] | [17] |
| ## 204 | McCartney                          | 1965      | [7]  |
| ## 205 | Lennon                             | 1964      | [12] |
| ## 206 | LennonMcCartney                    | 1970 [44] | [17] |
| ## 207 | Harrison                           | 1965      | [7]  |
| ## 208 | McCartney                          | 1969      | [19] |
| ## 209 | McCartney                          | 1965      | [23] |
| ## 210 | McCartney                          | 1967      | [11] |
| ## 211 | Lennon                             | 1965      | [7]  |
| ## 212 | Lennon                             | 1965      | [7]  |

```
## 213                                LennonHarrison 1963          [8]
other <- other %>% mutate(Song = gsub('\\\\', '\\', Song), Yearrecorded = as.numeric(Yearrecorded)) %>%
  rename(songwriters = `Songwriter(s)`)
other
```

```
##                               Song
## 1                               12-Bar Original
## 2                               Ain't She Sweet
## 3                               Ain't She Sweet
## 4                               All Things Must Pass
## 5                               Bad to Me
## 6                               Bésame Mucho
## 7                               Blue Moon
## 8                               Can You Take Me Back?
## 9                               Cayenne
## 10                              Child of Nature
## 11                              Christmas Time (Is Here Again)
## 12                              Circles
## 13                              Come and Get It
## 14                              Cry for a Shadow
## 15                              Free as a Bird
## 16                              Hallelujah, I Love Her So
## 17                              Hello Little Girl
## 18                              How Do You Do It?
## 19                              I'm In Love(demo)
## 20                              If You've Got Trouble
## 21                              In Spite of All the Danger
## 22                              Isn't It a Pity
## 23                              Junk
## 24                              Leave My Kitten Alone
## 25                              Like Dreamers Do
## 26                              Mailman, Bring Me No More Blues
## 27                              My Bonnie
## 28                              Not Guilty
## 29                              Real Love
## 30 Rip It Up/Shake, Rattle and Roll/Blue Suede Shoes
## 31                              Searchin'
## 32                              The Sheik of Araby
## 33                              Sour Milk Sea
## 34                              Step Inside Love/Los Paranoias
## 35                              St. Louis Blues
## 36                              Teddy Boy
## 37                              That Means a Lot
## 38                              That'll Be the Day
## 39                              Three Cool Cats
## 40                              What's the New Mary Jane
## 41                              You Know What to Do
## 42                              You'll Be Mine
## 43                              (You're So Square) Baby I Don't Care
##                               Release(s)
## 1                               Anthology 2
## 2                               Anthology 1
## 3                               Anthology 3
## 4                               Anthology 3
```



```

## 5          The Beatles Bootleg Recordings 1963
## 6                      Anthology 1
## 7    The Beatles ("White Album")(2018 Deluxe Edition)
## 8    The Beatles ("White Album")(2018 Deluxe Edition)
## 9                      Anthology 1
## 10   The Beatles ("White Album")(2018 Deluxe Edition)
## 11   Non-album single(B-side of "Free as a Bird")
## 12   The Beatles ("White Album")(2018 Deluxe Edition)
## 13                      Anthology 3
## 14                      Anthology 1
## 15                      Anthology 1
## 16                      Anthology 1
## 17                      Anthology 1
## 18                      Anthology 1
## 19          The Beatles Bootleg Recordings 1963
## 20                      Anthology 2
## 21                      Anthology 1
## 22 Let It Roll: Songs by George Harrison(iTunes version)
## 23                      Anthology 3
## 24                      Anthology 1
## 25                      Anthology 1
## 26                      Anthology 3
## 27                      Anthology 1
## 28                      Anthology 3
## 29                      Anthology 2
## 30                      Anthology 3
## 31                      Anthology 1
## 32                      Anthology 1
## 33   The Beatles ("White Album")(2018 Deluxe Edition)
## 34                      Anthology 3
## 35   The Beatles ("White Album")(2018 Deluxe Edition)
## 36                      Anthology 3
## 37                      Anthology 2
## 38                      Anthology 1
## 39                      Anthology 1
## 40                      Anthology 3
## 41                      Anthology 1
## 42                      Anthology 1
## 43   The Beatles ("White Album")(2018 Deluxe Edition)
##                      songwriters
## 1                      LennonMcCartneyHarrisonStarkey
## 2                      Jack YellenMilton Ager
## 3                      Jack YellenMilton Ager
## 4                      Harrison
## 5                      LennonMcCartney
## 6                      Consuelo VelázquezSunny Skylar
## 7                      Richard RodgersLorenz Hart
## 8                      LennonMcCartney
## 9                      McCartney
## 10                     Lennon
## 11                     LennonMcCartneyHarrisonStarkey
## 12                     Harrison
## 13                     McCartney
## 14                     LennonHarrison

```

|       |  |
|-------|--|
| ## 15 | LennonMcCartneyHarrisonStarkey                                 |
| ## 16 | Ray Charles  |
| ## 17 | LennonMcCartney  |
| ## 18 | Mitch Murray   |
| ## 19 | LennonMcCartney  |
| ## 20 | LennonMcCartney  |
| ## 21 | McCartneyHarrison  |
| ## 22 | Harrison   |
| ## 23 | McCartney  |
| ## 24 | Little Willie JohnTitus TurnerJames McDougall                  |
| ## 25 | LennonMcCartney  |
| ## 26 | Ruth RobertsBill KatzStanley Clayton                           |
| ## 27 | Trad. arr. Tony Sheridan                                       |
| ## 28 | Harrison   |
| ## 29 | Lennon   |
| ## 30 | Robert BlackwellJohn Marascalco /Charles Calhoun /Carl Perkins |
| ## 31 | Jerry LeiberMike Stoller                                       |
| ## 32 | Harry B. SmithFrancis WheelerTed Snyder                        |
| ## 33 | Harrison   |
| ## 34 | LennonMcCartney /LennonMcCartneyHarrisonStarkey                |
| ## 35 | W. C. Handy  |
| ## 36 | McCartney  |
| ## 37 | LennonMcCartney  |
| ## 38 | Jerry AllisonBuddy HollyNorman Petty                           |
| ## 39 | Jerry LeiberMike Stoller                                       |
| ## 40 | LennonMcCartney  |
| ## 41 | Harrison   |
| ## 42 | LennonMcCartney  |
| ## 43 | Jerry LeiberMike Stoller                                       |
| ##    | Lead vocal(s) Yearrecorded Yearreleased                        |
| ## 1  | Instrumental 1965 1996   |
| ## 2  | Lennon 1961 1995   |
| ## 3  | McCartney 1969 1996  |
| ## 4  | Harrison 1969 1996   |
| ## 5  | Lennon 1963 2013   |
| ## 6  | McCartney 1962 1995  |
| ## 7  | McCartney 1968 2018  |
| ## 8  | McCartney 1968 2018  |
| ## 9  | Instrumental 1960 1995   |
| ## 10 | Lennon 1968 2018   |
| ## 11 | LennonMcCartneyHarrisonStarr 1967 1995                         |
| ## 12 | Harrison 1968 2018   |
| ## 13 | McCartney 1969 1996  |
| ## 14 | Instrumental 1961 1995   |
| ## 15 | LennonMcCartneyHarrison 1977 1995                              |
| ## 16 | McCartney 1960 1995  |
| ## 17 | Lennon 1962 1995   |
| ## 18 | Lennon 1962 1995   |
| ## 19 | Lennon 1963 2013   |
| ## 20 | Starr 1965 1996  |
| ## 21 | LennonMcCartney 1958 1995                                      |
| ## 22 | Harrison 1969 2009   |
| ## 23 | McCartney 1968 1996  |
| ## 24 | Lennon 1964 1995   |

|       |                 |      |      |
|-------|-----------------|------|------|
| ## 25 | McCartney       | 1962 | 1995 |
| ## 26 | Lennon          | 1969 | 1996 |
| ## 27 | Tony Sheridan   | 1961 | 1995 |
| ## 28 | Harrison        | 1968 | 1996 |
| ## 29 | Lennon          | 1979 | 1996 |
| ## 30 | LennonMcCartney | 1969 | 1996 |
| ## 31 | McCartney       | 1962 | 1995 |
| ## 32 | Harrison        | 1962 | 1995 |
| ## 33 | Harrison        | 1968 | 2018 |
| ## 34 | McCartney       | 1968 | 1996 |
| ## 35 | McCartney       | 1968 | 2018 |
| ## 36 | McCartney       | 1969 | 1996 |
| ## 37 | McCartney       | 1965 | 1996 |
| ## 38 | Lennon          | 1958 | 1995 |
| ## 39 | Harrison        | 1962 | 1995 |
| ## 40 | Lennon          | 1968 | 1996 |
| ## 41 | Harrison        | 1964 | 1995 |
| ## 42 | McCartney       | 1960 | 1995 |
| ## 43 | McCartney       | 1968 | 2018 |

##

## 1

A twelve-bar

## 2

## 3

## 4

Solo demo by Harrison :

## 5

Piano demo by John Lennon. Subsequent

## 6

## 7

## 8

An excerpt appears as a hidden track at the end of "Cry Baby Cry", the song is an outtake

## 9

Home demo recorded by the Quarrymen in the McCartney family bathroom in April

## 10

Demo recorded at George Harrison's Kinfauns home before the

## 11

## 12

Demo recorded at George Harrison's Kinfauns home before the

## 13

## 14

## 15

Recorded as a home demo by Lennon

## 16

## 17

Played by the Beatles during their failed

## 18

## 19

## 20 Recorded on 18 February 1965 during sessions for Help! [65] The song was intended to be Starr's vocal

## 21

## 22

Solo performance by

## 23

Demo recorded at George Harrison's Kinfauns home

## 24

## 25

Played by the Beatles during the

## 26

## 27

## 28

Recorded during sessions for the "White Album", [72] by

## 29

Recorded as a home demo by Lennon

## 30

## 31

## 32

## 33

Demo recorded at George Harrison's Kinfauns home before the "White Album" sessions

## 34

## 35  
## 36  
## 37  
## 38  
## 39  
## 40  
## 41  
## 42  
## 43

Demo recorded in January 1969  
Recorded by the Beatles

Demo recorded by the Quarrymen in the McCartney family bathroom in April 1960, [

## Ref.  
## 1 [47]  
## 2 [38]  
## 3 [48]  
## 4 [48]  
## 5 [28]  
## 6 [38]  
## 7 [51]  
## 8 [51]  
## 9 [38]  
## 10 [51]  
## 11 [59]  
## 12 [51]  
## 13 [48]  
## 14 [38]  
## 15 [38]  
## 16 [38]  
## 17 [38]  
## 18 [38]  
## 19 [28]  
## 20 [47]  
## 21 [38]  
## 22 [68]  
## 23 [48]  
## 24 [38]  
## 25 [38]  
## 26 [48]  
## 27 [38]  
## 28 [48]  
## 29 [47]  
## 30 [48]  
## 31 [38]  
## 32 [38]  
## 33 [51]  
## 34 [48]  
## 35 [51]  
## 36 [48]  
## 37 [47]  
## 38 [38]  
## 39 [38]  
## 40 [48]  
## 41 [38]  
## 42 [38]  
## 43 [51]

```

tally(~songwriters, data = songs) %>%
  sort(decreasing = TRUE) %>%
  head()

## songwriters
##           LennonMcCartney           Harrison
##                159                22
##           Larry Williams           Carl Perkins
##                3                2
##           Chuck Berry LennonMcCartneyHarrisonStarkey
##                2                2

length(grep("McCartney", songs$songwriters))

## [1] 165

length(grep("Lennon", songs$songwriters))

## [1] 165

length(grep("(McCartney|Lennon)", songs$songwriters))

## [1] 165

length(grep("(McCartney|Lennon).*(McCartney|Lennon)", songs$songwriters))

## [1] 165

songs %>% filter(grepl("(McCartney|Lennon).*(McCartney|Lennon)", songwriters)) %>%
  select(Song) %>%
  head()

##           Song
## 1 Across the Universe[b]
## 2 All I've Got to Do
## 3 All My Loving
## 4 All Together Now
## 5 All You Need Is Love[c]
## 6 And I Love Her

song_titles <- VCorpus(VectorSource(songs$Song)) %>%
  tm_map(removeWords, stopwords("english")) %>%
  DocumentTermMatrix(control = list(weighting = weightTfIdf))
findFreqTerms(song_titles, 14)

## [1] "love" "revolution" "you"

```

## Using *httr*

The following code is from Exercise 15.10. The site [stackexchange.com](http://stackexchange.com) displays questions and answers on technical topics.

```

library(httr)

##
## Attaching package: 'httr'
## The following object is masked from 'package:NLP':

```

```
##
## content
# Find the most recent R questions on stackoverflow
getresult <- GET("http://api.stackexchange.com",
  path = "questions",
  query = list(site = "stackoverflow.com", tagged = "dplyr"))
stop_for_status(getresult) # Ensure returned without error
questions <- content(getresult) # Grab content
names(questions$items[[1]]) # What does the returned data look like?

## [1] "tags"          "owner"          "is_answered"
## [4] "view_count"     "answer_count"   "score"
## [7] "last_activity_date" "creation_date"  "question_id"
## [10] "link"          "title"
```

```
length(questions$item)
```

```
## [1] 30
```

```
substr(questions$items[[1]]$title, 1, 68)
```

```
## [1] "R Dplyr solution for summarize_at correlation"
```

```
substr(questions$items[[2]]$title, 1, 68)
```

```
## [1] "Trouble using dplyr::order to rank values from smallest to largest i"
```

```
substr(questions$items[[3]]$title, 1, 68)
```

```
## [1] "Issue with summarizing a field"
```

The question asked in this Exercise: How many questions were returned? Without using jargon, describe in words what is being displayed and how it might be used.

The next Exercise 15.11 ask for the same, dplyr. Try something else like ggplot2.

```
library(httr)
# Find the most recent R questions on stackoverflow
getresult <- GET("http://api.stackexchange.com",
  path = "questions",
  query = list(site = "stackoverflow.com", tagged = "ggplot2"))
stop_for_status(getresult) # Ensure returned without error
questions <- content(getresult) # Grab content
names(questions$items[[1]]) # What does the returned data look like?
```

```
## [1] "tags"          "migrated_from"  "owner"
## [4] "is_answered"   "view_count"     "accepted_answer_id"
## [7] "answer_count"  "score"          "last_activity_date"
## [10] "creation_date" "question_id"    "link"
## [13] "title"
```

```
substr(questions$items[[1]]$title, 1, 68)
```

```
## [1] "ggsave gives blank jpeg image"
```

```
substr(questions$items[[2]]$title, 1, 68)
```

```
## [1] "ggplot facet_wrap reading all input data as NaN (w/in looped filter)"
```

```
substr(questions$items[[3]]$title, 1, 68)
```

```
## [1] "How to add a vertical line to ggplot when the x-axis goes from 1999 "
```

```
substr(questions$items[[4]]$title, 1, 68)
```

```
## [1] "ggplot geom_boxplot rendering extremely slowly"
```

```
substr(questions$items[[5]]$title, 1, 68)
```

```
## [1] "In R, how do I create multiple time series graphs for multiple sites"
```