Worksheet#5a

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2024-11-23

```
# Load necessary libraries
library(rvest)
library(httr)
library(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
library(polite)
# Define target URL
url <- 'https://www.imdb.com/chart/toptv/'</pre>
# Create a polite session
session <- bow(url, user_agent = "Educational")</pre>
session
## <polite session> https://www.imdb.com/chart/toptv/
##
       User-agent: Educational
##
       robots.txt: 35 rules are defined for 3 bots
##
      Crawl delay: 5 sec
     The path is scrapable for this user-agent
#Extracting the ranks and titles
title_list <- read_html(url) %>%
html_nodes('.ipc-title__text') %>%
html_text()
title_list
  [1] "IMDb Charts"
## [2] "Top 250 TV Shows"
## [3] "1. Breaking Bad"
## [4] "2. Planet Earth II"
## [5] "3. Planet Earth"
## [6] "4. Band of Brothers"
## [7] "5. Chernobyl"
```

```
## [8] "6. The Wire"
## [9] "7. Avatar: The Last Airbender"
## [10] "8. Blue Planet II"
## [11] "9. The Sopranos"
## [12] "10. Cosmos: A Spacetime Odyssey"
## [13] "11. Cosmos"
## [14] "12. Our Planet"
## [15] "13. Game of Thrones"
## [16] "14. Bluey"
## [17] "15. The World at War"
## [18] "16. Fullmetal Alchemist: Brotherhood"
## [19] "17. Rick and Morty"
## [20] "18. Life"
## [21] "19. The Last Dance"
## [22] "20. The Twilight Zone"
## [23] "21. The Vietnam War"
## [24] "22. Sherlock"
## [25] "23. Attack on Titan"
## [26] "24. Batman: The Animated Series"
## [27] "25. Arcane"
## [28] "Recently viewed"
#Cleaning extracted text
title_list_sub <- as.data.frame(title_list[3:27], stringsAsFactors = FALSE)</pre>
colnames(title_list_sub) <- "ranks"</pre>
split_df <- strsplit(as.character(title_list_sub$ranks), "\\.", fixed = FALSE)</pre>
split_df <- data.frame(do.call(rbind, split_df), stringsAsFactors = FALSE)</pre>
colnames(split_df) <- c("rank", "title")</pre>
split_df <- split_df %>%
select(rank, title)
split_df$title <- trimws(split_df$title)</pre>
rank_title <- split_df</pre>
rank_title
##
      rank
                                        title
## 1
         1
                                Breaking Bad
## 2
                             Planet Earth II
## 3
         3
                                Planet Earth
## 4
         4
                            Band of Brothers
## 5
         5
                                    Chernobyl
## 6
         6
                                    The Wire
## 7
         7
                 Avatar: The Last Airbender
## 8
         8
                              Blue Planet II
## 9
         9
                                The Sopranos
## 10
        10
                 Cosmos: A Spacetime Odyssey
## 11
        11
                                       Cosmos
## 12
        12
                                  Our Planet
## 13
        13
                             Game of Thrones
## 14
        14
                                        Bluey
## 15
        15
                            The World at War
## 16
        16 Fullmetal Alchemist: Brotherhood
```

```
## 17
        17
                             Rick and Morty
## 18
        18
                                       Life
## 19
       19
                             The Last Dance
## 20
                         The Twilight Zone
       20
## 21
        21
                            The Vietnam War
## 22
       22
                                   Sherlock
## 23
                            Attack on Titan
       23
## 24
                Batman: The Animated Series
       24
## 25
       25
                                     Arcane
# Scrape Ratings
#Extracting tv rating, the number of people who voted, the number of episodes, and the year it was rele
rating_ls <- read_html(url) %>%
html_nodes('.ipc-rating-star--rating') %>%
html_text()
rating_ls
## [1] "9.5" "9.5" "9.4" "9.4" "9.3" "9.3" "9.3" "9.3" "9.2" "9.2" "9.2" "9.3" "9.2"
## [13] "9.2" "9.3" "9.2" "9.1" "9.1" "9.1" "9.0" "9.0" "9.1" "9.1" "9.1" "9.0"
## [25] "9.0"
# Scrape Vote Counts
voter_ls <- read_html(url) %>%
html_nodes('.ipc-rating-star--voteCount') %>%
html text()
clean_votes <- gsub('[()]', '', voter_ls)</pre>
# Check if vote counts were extracted correctly
print(voter_ls)
## [1] " (2.2M)" " (163K)" " (224K)" " (547K)" " (910K)" " (392K)" " (391K)"
## [8] " (49K)" " (500K)" " (132K)" " (46K)" " (54K)" " (2.4M)" " (34K)"
## [15] " (32K)" " (210K)" " (629K)" " (44K)" " (160K)" " (97K)" " (30K)"
                " (565K)" " (123K)" " (332K)"
## [22] " (1M)"
#extracted the number of episodes
eps_ls <- read_html(url) %>%
html_nodes('span.sc-300a8231-7.eaXxft.cli-title-metadata-item:nth-of-type(2)') %>%
html_text()
clean_eps <- gsub('[eps]', '', eps_ls)</pre>
num_eps <- as.numeric(clean_eps)</pre>
print(num_eps)
## [1] 62 6 11 10
                          5
                             60 62 7 86 13 13 12 74 194 26 68 78 11 10
## [20] 156 10 15 98 85 18
#note to self, use gsub() to remove constant strings appearing in the dataset.
#extracted the year released
years <- read_html(url) %>%
html_nodes('span.sc-300a8231-7.eaXxft.cli-title-metadata-item:nth-of-type(1)') %>%
html text()
years
```

```
## [1] "2008-2013" "2016"
                                 "2006"
                                              "2001"
                                                           "2019"
                                                                       "2002-2008"
## [7] "2005-2008" "2017"
                                 "1999-2007" "2014"
                                                          "1980"
                                                                       "2019-2023"
## [13] "2011-2019" "2018- "
                                 "1973-1974" "2009-2010" "2013- "
                                                                       "2009"
## [19] "2020"
                     "1959-1964" "2017"
                                              "2010-2017" "2013-2023" "1992-1995"
## [25] "2021-2024"
top tv shows <- data.frame(
Title = rank_title[,2],
Rating = rating ls,
Voters = clean votes,
Episodes = num_eps,
Year = years)
top_tv_shows
##
                                  Title Rating Voters Episodes
                                                                      Year
## 1
                           Breaking Bad
                                            9.5
                                                  2.2M
                                                              62 2008-2013
## 2
                        Planet Earth II
                                            9.5
                                                  163K
                                                               6
                                                                      2016
## 3
                           Planet Earth
                                            9.4
                                                  224K
                                                                      2006
                                                              11
## 4
                       Band of Brothers
                                            9.4
                                                  547K
                                                              10
                                                                      2001
## 5
                              Chernobyl
                                            9.3
                                                  910K
                                                              5
                                                                      2019
## 6
                               The Wire
                                            9.3
                                                  392K
                                                              60 2002-2008
## 7
            Avatar: The Last Airbender
                                            9.3
                                                  391K
                                                              62 2005-2008
## 8
                         Blue Planet II
                                            9.3
                                                   49K
                                                              7
                                                                      2017
## 9
                                            9.2
                                                              86 1999-2007
                           The Sopranos
                                                  500K
## 10
           Cosmos: A Spacetime Odyssey
                                            9.2
                                                  132K
                                                              13
                                                                      2014
## 11
                                 Cosmos
                                            9.3
                                                   46K
                                                              13
                                                                      1980
## 12
                             Our Planet
                                            9.2
                                                   54K
                                                              12 2019-2023
## 13
                        Game of Thrones
                                            9.2
                                                  2.4M
                                                             74 2011-2019
## 14
                                                             194
                                   Bluey
                                            9.3
                                                   34K
                                                                    2018-
## 15
                       The World at War
                                            9.2
                                                   32K
                                                              26 1973-1974
                                                              68 2009-2010
## 16 Fullmetal Alchemist: Brotherhood
                                            9.1
                                                  210K
## 17
                         Rick and Morty
                                            9.1
                                                  629K
                                                              78
                                                                    2013-
## 18
                                   Life
                                            9.1
                                                   44K
                                                              11
                                                                      2009
## 19
                         The Last Dance
                                            9.0
                                                  160K
                                                              10
                                                                      2020
## 20
                                            9.0
                                                   97K
                                                             156 1959-1964
                      The Twilight Zone
## 21
                                                   30K
                        The Vietnam War
                                            9.1
                                                              10
                                                                      2017
## 22
                                            9.1
                                                    1M
                                                              15 2010-2017
                               Sherlock
## 23
                        Attack on Titan
                                            9.1
                                                  565K
                                                              98 2013-2023
## 24
           Batman: The Animated Series
                                            9.0
                                                  123K
                                                              85 1992-1995
                                 Arcane
                                            9.0
                                                  332K
                                                              18 2021-2024
home_link <- 'https://www.imdb.com/chart/toptv/'</pre>
main_page <- read_html(home_link)</pre>
links <- main_page %>%
html_nodes("a.ipc-title-link-wrapper") %>%
html_attr("href")
links
   [1] "/title/tt0903747/?ref =chttvtp t 1"
## [2] "/title/tt5491994/?ref_=chttvtp_t_2"
## [3] "/title/tt0795176/?ref_=chttvtp_t_3"
## [4] "/title/tt0185906/?ref_=chttvtp_t_4"
```

```
## [5] "/title/tt7366338/?ref =chttvtp t 5"
## [6] "/title/tt0306414/?ref_=chttvtp_t_6"
## [7] "/title/tt0417299/?ref =chttvtp t 7"
## [8] "/title/tt6769208/?ref_=chttvtp_t_8"
## [9] "/title/tt0141842/?ref_=chttvtp_t_9"
## [10] "/title/tt2395695/?ref_=chttvtp_t_10"
## [11] "/title/tt0081846/?ref =chttvtp t 11"
## [12] "/title/tt9253866/?ref =chttvtp t 12"
## [13] "/title/tt0944947/?ref_=chttvtp_t_13"
## [14] "/title/tt7678620/?ref_=chttvtp_t_14"
## [15] "/title/tt0071075/?ref_=chttvtp_t_15"
## [16] "/title/tt1355642/?ref_=chttvtp_t_16"
## [17] "/title/tt2861424/?ref_=chttvtp_t_17"
## [18] "/title/tt1533395/?ref_=chttvtp_t_18"
## [19] "/title/tt8420184/?ref_=chttvtp_t_19"
## [20] "/title/tt0052520/?ref_=chttvtp_t_20"
## [21] "/title/tt1877514/?ref_=chttvtp_t_21"
## [22] "/title/tt1475582/?ref =chttvtp t 22"
## [23] "/title/tt2560140/?ref_=chttvtp_t_23"
## [24] "/title/tt0103359/?ref =chttvtp t 24"
## [25] "/title/tt11126994/?ref_=chttvtp_t_25"
# Loop to get link of each show's page
show_data <- lapply(links, function(link) {</pre>
complete_link <- paste0("https://imdb.com", link)</pre>
#loop to get the link for user review page
usrv link <- read html(complete link)</pre>
usrv_link_page <- usrv_link %>%
html nodes('a.isReview') %>%
html_attr("href")
#loop to extract critic reviews
critic <- usrv_link %>%
html_nodes("span.score") %>%
html text()
critic_df <- data.frame(Critic_Reviews = critic[2], stringsAsFactors = FALSE)</pre>
#loop to extract pop rating
pop_rating <- usrv_link %>%
html_nodes('[data-testid="hero-rating-bar_popularity_score"]') %>%
html text()
#loop to get user reviews of each shows
usrv <- read html(paste0("https://imdb.com", usrv link page[1]))</pre>
usrv_count <- usrv %>%
html nodes('[data-testid="tturv-total-reviews"]') %>%
html_text()
return(data.frame(Show_Link = complete_link, User_Reviews = usrv_count, Critic = critic_df, Popularity_
show_url_df <- do.call(rbind, show_data)</pre>
print(show url df)
```

```
##
                                                  Show Link User Reviews
## 1
        https://imdb.com/title/tt0903747/?ref_=chttvtp_t_1 5,108 reviews
##
  2
        https://imdb.com/title/tt0903747/?ref =chttvtp t 1 5,108 reviews
##
  3
        https://imdb.com/title/tt5491994/?ref_=chttvtp_t_2
                                                               158 reviews
##
  4
        https://imdb.com/title/tt5491994/?ref =chttvtp t 2
                                                               158 reviews
##
  5
        https://imdb.com/title/tt0795176/?ref =chttvtp t 3
                                                               111 reviews
        https://imdb.com/title/tt0795176/?ref =chttvtp t 3
##
  6
                                                               111 reviews
##
  7
        https://imdb.com/title/tt0185906/?ref =chttvtp t 4 1,058 reviews
##
  8
        https://imdb.com/title/tt0185906/?ref_=chttvtp_t_4 1,058 reviews
##
  9
        https://imdb.com/title/tt7366338/?ref_=chttvtp_t_5 3,534 reviews
##
  10
        https://imdb.com/title/tt7366338/?ref_=chttvtp_t_5 3,534 reviews
                                                               787 reviews
##
  11
        https://imdb.com/title/tt0306414/?ref_=chttvtp_t_6
##
   12
        https://imdb.com/title/tt0306414/?ref_=chttvtp_t_6
                                                               787 reviews
##
  13
        https://imdb.com/title/tt0417299/?ref_=chttvtp_t_7 1,003 reviews
##
  14
        https://imdb.com/title/tt0417299/?ref_=chttvtp_t_7 1,003 reviews
##
  15
        https://imdb.com/title/tt6769208/?ref_=chttvtp_t_8
                                                                53 reviews
##
  16
        https://imdb.com/title/tt6769208/?ref_=chttvtp_t_8
                                                                53 reviews
##
  17
        https://imdb.com/title/tt0141842/?ref =chttvtp t 9
                                                               966 reviews
##
  18
        https://imdb.com/title/tt0141842/?ref_=chttvtp_t_9
                                                               966 reviews
                                                               205 reviews
##
   19
       https://imdb.com/title/tt2395695/?ref =chttvtp t 10
##
  20
       https://imdb.com/title/tt2395695/?ref_=chttvtp_t_10
                                                               205 reviews
  21
       https://imdb.com/title/tt0081846/?ref_=chttvtp_t_11
##
                                                                80 reviews
       https://imdb.com/title/tt0081846/?ref_=chttvtp_t_11
## 22
                                                                80 reviews
       https://imdb.com/title/tt9253866/?ref =chttvtp t 12
##
  23
                                                               245 reviews
  24
##
       https://imdb.com/title/tt9253866/?ref =chttvtp t 12
                                                               245 reviews
##
  25
       https://imdb.com/title/tt0944947/?ref =chttvtp t 13 5,907 reviews
##
  26
       https://imdb.com/title/tt0944947/?ref_=chttvtp_t_13
                                                            5,907 reviews
##
   27
       https://imdb.com/title/tt7678620/?ref_=chttvtp_t_14
                                                               369 reviews
##
  28
       https://imdb.com/title/tt7678620/?ref_=chttvtp_t_14
                                                               369 reviews
##
  29
       https://imdb.com/title/tt0071075/?ref_=chttvtp_t_15
                                                               126 reviews
##
  30
       https://imdb.com/title/tt0071075/?ref_=chttvtp_t_15
                                                               126 reviews
##
   31
       https://imdb.com/title/tt1355642/?ref_=chttvtp_t_16
                                                               468 reviews
##
   32
       https://imdb.com/title/tt1355642/?ref_=chttvtp_t_16
                                                               468 reviews
       https://imdb.com/title/tt2861424/?ref_=chttvtp_t_17
                                                               910 reviews
##
   33
                                                               910 reviews
##
   34
       https://imdb.com/title/tt2861424/?ref =chttvtp t 17
##
       https://imdb.com/title/tt1533395/?ref_=chttvtp_t_18
   35
                                                                12 reviews
##
   36
       https://imdb.com/title/tt1533395/?ref =chttvtp t 18
                                                                12 reviews
##
  37
       https://imdb.com/title/tt8420184/?ref_=chttvtp_t_19
                                                               542 reviews
       https://imdb.com/title/tt8420184/?ref_=chttvtp_t_19
                                                               542 reviews
##
   38
       https://imdb.com/title/tt0052520/?ref_=chttvtp_t_20
##
  39
                                                               214 reviews
       https://imdb.com/title/tt0052520/?ref =chttvtp t 20
##
   40
                                                               214 reviews
##
       https://imdb.com/title/tt1877514/?ref =chttvtp t 21
   41
                                                               175 reviews
       https://imdb.com/title/tt1877514/?ref =chttvtp t 21
##
   42
                                                               175 reviews
##
  43
       https://imdb.com/title/tt1475582/?ref_=chttvtp_t_22 1,098 reviews
##
  44
       https://imdb.com/title/tt1475582/?ref_=chttvtp_t_22 1,098 reviews
       https://imdb.com/title/tt2560140/?ref_=chttvtp_t_23 2,370 reviews
##
  45
##
   46
       https://imdb.com/title/tt2560140/?ref_=chttvtp_t_23 2,370 reviews
##
       https://imdb.com/title/tt0103359/?ref_=chttvtp_t_24
                                                               219 reviews
##
       https://imdb.com/title/tt0103359/?ref_=chttvtp_t_24
                                                               219 reviews
##
      https://imdb.com/title/tt11126994/?ref_=chttvtp_t_25 2,215 reviews
##
      https://imdb.com/title/tt11126994/?ref_=chttvtp_t_25 2,215 reviews
##
      Critic Reviews Popularity Rating
## 1
                 175
## 2
                 175
                                     20
```

```
## 3
                                       999
                     6
## 4
                     6
                                       999
## 5
                    10
                                     1,778
## 6
                                     1,778
                    10
## 7
                    34
                                       153
## 8
                    34
                                       153
## 9
                    88
                                       146
## 10
                    88
                                       146
## 11
                    77
                                       104
## 12
                    77
                                       104
## 13
                    57
                                       357
                    57
                                       357
## 14
                                    4,122
## 15
                     9
## 16
                     9
                                     4,122
## 17
                    93
                                        31
## 18
                    93
                                        31
## 19
                    12
                                     1,571
## 20
                    12
                                     1,571
## 21
                     8
                                    3,645
## 22
                     8
                                    3,645
## 23
                    15
                                    2,401
## 24
                    15
                                     2,401
## 25
                                        16
                   368
## 26
                   368
                                        16
## 27
                     4
                                       373
## 28
                     4
                                       373
## 29
                     5
                                     2,532
## 30
                     5
                                     2,532
## 31
                                       474
                    16
## 32
                                       474
                    16
## 33
                    94
                                       125
## 34
                    94
                                       125
## 35
                     9
                                     3,057
## 36
                     9
                                    3,057
## 37
                    28
                                    1,403
## 38
                    28
                                    1,403
## 39
                    85
                                       337
## 40
                    85
                                       337
## 41
                    13
                                     1,739
## 42
                    13
                                     1,739
## 43
                   121
                                       160
## 44
                   121
                                       160
## 45
                    64
                                        50
## 46
                                        50
                    64
## 47
                    25
                                       463
## 48
                    25
                                       463
## 49
                    59
                                         1
## 50
                    59
                                         1
shows <- cbind(top_tv_shows, show_url_df)</pre>
shows
##
                                    Title Rating Voters Episodes
                                                                          Year
## 1
                             Breaking Bad
                                                     2.2M
                                                                 62 2008-2013
                                               9.5
```

9.5

163K

Planet Earth II

2

2016

6

```
## 3
                            Planet Earth
                                             9.4
                                                    224K
                                                                         2006
                                                                11
## 4
                       Band of Brothers
                                             9.4
                                                    547K
                                                                10
                                                                         2001
## 5
                               Chernobyl
                                             9.3
                                                    910K
                                                                 5
                                                                         2019
## 6
                                The Wire
                                             9.3
                                                    392K
                                                                60 2002-2008
## 7
             Avatar: The Last Airbender
                                             9.3
                                                    391K
                                                                62
                                                                   2005-2008
## 8
                          Blue Planet II
                                             9.3
                                                     49K
                                                                 7
                                                                         2017
## 9
                                                                86 1999-2007
                            The Sopranos
                                             9.2
                                                    500K
## 10
            Cosmos: A Spacetime Odyssey
                                             9.2
                                                    132K
                                                                13
                                                                         2014
## 11
                                   Cosmos
                                             9.3
                                                     46K
                                                                13
                                                                         1980
## 12
                                             9.2
                              Our Planet
                                                     54K
                                                                12 2019-2023
## 13
                         Game of Thrones
                                             9.2
                                                    2.4M
                                                                   2011-2019
## 14
                                             9.3
                                    Bluev
                                                     34K
                                                               194
                                                                       2018-
##
  15
                       The World at War
                                             9.2
                                                     32K
                                                                26 1973-1974
      Fullmetal Alchemist: Brotherhood
                                                                68 2009-2010
## 16
                                             9.1
                                                    210K
## 17
                                             9.1
                                                    629K
                                                                78
                                                                      2013-
                          Rick and Morty
## 18
                                     Life
                                             9.1
                                                     44K
                                                                11
                                                                         2009
## 19
                          The Last Dance
                                             9.0
                                                    160K
                                                                10
                                                                         2020
## 20
                      The Twilight Zone
                                             9.0
                                                     97K
                                                               156 1959-1964
## 21
                         The Vietnam War
                                             9.1
                                                     30K
                                                                10
                                                                         2017
## 22
                                Sherlock
                                             9.1
                                                      1M
                                                                15 2010-2017
## 23
                         Attack on Titan
                                             9.1
                                                    565K
                                                                98 2013-2023
## 24
            Batman: The Animated Series
                                             9.0
                                                    123K
                                                                85 1992-1995
                                             9.0
                                                                18 2021-2024
## 25
                                  Arcane
                                                    332K
##
  26
                            Breaking Bad
                                             9.5
                                                                62 2008-2013
                                                    2.2M
## 27
                         Planet Earth II
                                             9.5
                                                    163K
                                                                 6
                                                                         2016
  28
                            Planet Earth
                                             9.4
                                                    224K
                                                                11
                                                                         2006
##
  29
                       Band of Brothers
                                             9.4
                                                    547K
                                                                10
                                                                         2001
   30
##
                               Chernobyl
                                             9.3
                                                    910K
                                                                 5
                                                                         2019
## 31
                                             9.3
                                                                60 2002-2008
                                The Wire
                                                    392K
## 32
             Avatar: The Last Airbender
                                             9.3
                                                    391K
                                                                62
                                                                   2005-2008
## 33
                          Blue Planet II
                                             9.3
                                                     49K
                                                                 7
                                                                         2017
##
  34
                            The Sopranos
                                             9.2
                                                    500K
                                                                86 1999-2007
##
  35
            Cosmos: A Spacetime Odyssey
                                             9.2
                                                    132K
                                                                13
                                                                         2014
## 36
                                             9.3
                                  Cosmos
                                                     46K
                                                                1.3
                                                                         1980
##
  37
                              Our Planet
                                             9.2
                                                     54K
                                                                12 2019-2023
## 38
                         Game of Thrones
                                             9.2
                                                    2.4M
                                                                74
                                                                   2011-2019
## 39
                                    Bluey
                                             9.3
                                                     34K
                                                               194
                                                                       2018-
## 40
                       The World at War
                                             9.2
                                                     32K
                                                                26 1973-1974
      Fullmetal Alchemist: Brotherhood
                                             9.1
                                                    210K
                                                                68
                                                                   2009-2010
                          Rick and Morty
## 42
                                             9.1
                                                    629K
                                                                78
                                                                      2013-
## 43
                                     Life
                                             9.1
                                                     44K
                                                                11
                                                                         2009
## 44
                          The Last Dance
                                             9.0
                                                    160K
                                                                         2020
                                                                10
##
  45
                      The Twilight Zone
                                             9.0
                                                     97K
                                                               156 1959-1964
## 46
                         The Vietnam War
                                             9.1
                                                     30K
                                                                10
                                                                         2017
## 47
                                Sherlock
                                             9.1
                                                      1M
                                                                15 2010-2017
                         Attack on Titan
                                             9.1
                                                    565K
                                                                98 2013-2023
## 48
## 49
           Batman: The Animated Series
                                             9.0
                                                    123K
                                                                85 1992-1995
## 50
                                  Arcane
                                             9.0
                                                    332K
                                                                18 2021-2024
##
                                                     Show_Link
                                                                User_Reviews
## 1
        https://imdb.com/title/tt0903747/?ref_=chttvtp_t_1 5,108 reviews
##
  2
        https://imdb.com/title/tt0903747/?ref_=chttvtp_t_1 5,108 reviews
## 3
        https://imdb.com/title/tt5491994/?ref_=chttvtp_t_2
                                                                  158 reviews
## 4
        https://imdb.com/title/tt5491994/?ref_=chttvtp_t_2
                                                                  158 reviews
## 5
        https://imdb.com/title/tt0795176/?ref_=chttvtp_t_3
                                                                  111 reviews
```

```
## 6
        https://imdb.com/title/tt0795176/?ref =chttvtp t 3
                                                               111 reviews
## 7
        https://imdb.com/title/tt0185906/?ref_=chttvtp_t_4 1,058 reviews
        https://imdb.com/title/tt0185906/?ref =chttvtp t 4 1,058 reviews
## 8
## 9
        https://imdb.com/title/tt7366338/?ref_=chttvtp_t_5 3,534 reviews
## 10
        https://imdb.com/title/tt7366338/?ref_=chttvtp_t_5 3,534 reviews
## 11
        https://imdb.com/title/tt0306414/?ref =chttvtp t 6
                                                               787 reviews
## 12
        https://imdb.com/title/tt0306414/?ref =chttvtp t 6
                                                               787 reviews
        https://imdb.com/title/tt0417299/?ref =chttvtp t 7 1,003 reviews
## 13
##
  14
        https://imdb.com/title/tt0417299/?ref_=chttvtp_t_7 1,003 reviews
##
  15
        https://imdb.com/title/tt6769208/?ref_=chttvtp_t_8
                                                                53 reviews
##
  16
        https://imdb.com/title/tt6769208/?ref_=chttvtp_t_8
                                                                53 reviews
  17
        https://imdb.com/title/tt0141842/?ref_=chttvtp_t_9
                                                               966 reviews
##
                                                               966 reviews
##
   18
        https://imdb.com/title/tt0141842/?ref_=chttvtp_t_9
                                                               205 reviews
##
  19
       https://imdb.com/title/tt2395695/?ref_=chttvtp_t_10
## 20
       https://imdb.com/title/tt2395695/?ref_=chttvtp_t_10
                                                               205 reviews
##
  21
       https://imdb.com/title/tt0081846/?ref_=chttvtp_t_11
                                                                80 reviews
##
       https://imdb.com/title/tt0081846/?ref_=chttvtp_t_11
  22
                                                                80 reviews
##
       https://imdb.com/title/tt9253866/?ref =chttvtp t 12
                                                               245 reviews
##
       https://imdb.com/title/tt9253866/?ref_=chttvtp_t_12
  24
                                                               245 reviews
##
  25
       https://imdb.com/title/tt0944947/?ref =chttvtp t 13 5,907 reviews
##
  26
       https://imdb.com/title/tt0944947/?ref_=chttvtp_t_13 5,907 reviews
  27
       https://imdb.com/title/tt7678620/?ref_=chttvtp_t_14
##
                                                               369 reviews
       https://imdb.com/title/tt7678620/?ref_=chttvtp_t_14
## 28
                                                               369 reviews
       https://imdb.com/title/tt0071075/?ref =chttvtp t 15
##
  29
                                                               126 reviews
                                                               126 reviews
##
  30
       https://imdb.com/title/tt0071075/?ref =chttvtp t 15
##
  31
       https://imdb.com/title/tt1355642/?ref =chttvtp t 16
                                                               468 reviews
##
  32
       https://imdb.com/title/tt1355642/?ref_=chttvtp_t_16
                                                               468 reviews
##
   33
       https://imdb.com/title/tt2861424/?ref_=chttvtp_t_17
                                                               910 reviews
##
   34
       https://imdb.com/title/tt2861424/?ref_=chttvtp_t_17
                                                               910 reviews
##
   35
       https://imdb.com/title/tt1533395/?ref_=chttvtp_t_18
                                                                12 reviews
##
  36
       https://imdb.com/title/tt1533395/?ref_=chttvtp_t_18
                                                                12 reviews
##
   37
       https://imdb.com/title/tt8420184/?ref_=chttvtp_t_19
                                                               542 reviews
##
   38
       https://imdb.com/title/tt8420184/?ref_=chttvtp_t_19
                                                               542 reviews
##
       https://imdb.com/title/tt0052520/?ref_=chttvtp_t_20
  39
                                                               214 reviews
##
       https://imdb.com/title/tt0052520/?ref =chttvtp t 20
                                                               214 reviews
   40
##
       https://imdb.com/title/tt1877514/?ref_=chttvtp_t_21
  41
                                                               175 reviews
##
  42
       https://imdb.com/title/tt1877514/?ref =chttvtp t 21
                                                               175 reviews
##
  43
       https://imdb.com/title/tt1475582/?ref_=chttvtp_t_22 1,098 reviews
       https://imdb.com/title/tt1475582/?ref_=chttvtp_t_22 1,098 reviews
##
  44
       https://imdb.com/title/tt2560140/?ref_=chttvtp_t_23 2,370 reviews
##
       https://imdb.com/title/tt2560140/?ref =chttvtp t 23 2,370 reviews
##
   46
##
       https://imdb.com/title/tt0103359/?ref =chttvtp t 24
                                                               219 reviews
  47
       https://imdb.com/title/tt0103359/?ref_=chttvtp_t_24
##
   48
                                                               219 reviews
##
     https://imdb.com/title/tt11126994/?ref_=chttvtp_t_25 2,215 reviews
   50 https://imdb.com/title/tt11126994/?ref_=chttvtp_t_25 2,215 reviews
##
      Critic_Reviews Popularity_Rating
## 1
                 175
                                     20
## 2
                 175
                                     20
##
  3
                   6
                                    999
## 4
                   6
                                    999
## 5
                  10
                                  1,778
## 6
                  10
                                  1,778
## 7
                  34
                                    153
## 8
                  34
                                    153
```

```
## 9
                   88
                                      146
## 10
                                      146
                   88
## 11
                   77
                                      104
## 12
                   77
                                      104
## 13
                   57
                                      357
## 14
                   57
                                      357
## 15
                    9
                                   4,122
                                   4,122
## 16
                    9
## 17
                   93
                                       31
## 18
                   93
                                       31
## 19
                   12
                                   1,571
## 20
                   12
                                    1,571
## 21
                    8
                                   3,645
## 22
                    8
                                   3,645
## 23
                   15
                                   2,401
## 24
                   15
                                   2,401
## 25
                  368
                                       16
## 26
                  368
                                       16
## 27
                                      373
                    4
## 28
                    4
                                      373
## 29
                    5
                                   2,532
## 30
                    5
                                   2,532
## 31
                   16
                                      474
## 32
                   16
                                      474
## 33
                                      125
                   94
## 34
                   94
                                      125
## 35
                    9
                                   3,057
## 36
                    9
                                   3,057
## 37
                                   1,403
                   28
## 38
                   28
                                    1,403
## 39
                   85
                                      337
## 40
                   85
                                      337
## 41
                   13
                                    1,739
## 42
                   13
                                    1,739
## 43
                  121
                                      160
## 44
                  121
                                      160
## 45
                   64
                                       50
## 46
                   64
                                       50
                                      463
## 47
                   25
## 48
                   25
                                      463
## 49
                   59
                                        1
## 50
                   59
                                        1
#knitr::kable()
library(kableExtra)
##
## Attaching package: 'kableExtra'
## The following object is masked from 'package:dplyr':
##
##
       group_rows
```

knitr::kable(shows,caption = "Extracting Rating, VoteCount, Episodes, Year and Reviews") %>%
kable_classic(full_width = T, html_font = "Cambria") %>%
kable_styling(font_size = 8)

 ${\it Table 1: Extracting Rating, VoteCount, Episodes, Year and Reviews}$

Title	Rating	Voters	Episodes	Year	Show_Link User_ReviewsCritic_ReviewPopularity_Rating
Breaking	9.5	2.2M	62	2008-2013	https://imdb.com/08itle/tt09037547/?ref_=c20tvtp_t_1
Bad Planet	9.5	163K	6	2016	reviews https://imdb.com/08itle/tt09037547/?ref_=c20tvtp_t_1
Earth II Planet	9.4	224K	11	2006	$\begin{array}{c} {\rm reviews} \\ {\rm https://imdb.d} \underline{\bf 58/title/tt5491994/?ref_=d999vtp_t_2} \end{array}$
Earth Band of	9.4	547K	10	2001	$\begin{array}{c} {\rm reviews} \\ {\rm https://imdb.d} \\ {\rm d} \\ {\rm d} \\ {\rm d} \\ {\rm f} \\ {\rm d} \\ {\rm ftle/tt5491994/?ref_=d} \\ {\rm d} \\ {\rm ftlps://imdb.d} \\ {\rm d} \\ {\rm ftle/tt5491994/?ref_=d} \\ {\rm d} \\ {\rm d} \\ {\rm ftle/tt5491994/?ref_=d} \\ {\rm d} \\ {\rm d} \\ {\rm ftle/tt5491994/?ref_=d} \\ {\rm d} \\ {\rm d} \\ {\rm ftle/tt5491994/?ref_=d} \\ {\rm d} \\ {\rm d} \\ {\rm ftle/tt5491994/?ref_=d} \\ {\rm d} \\ {\rm d} \\ {\rm ftle/tt5491994/?ref_=d} \\ {\rm d} \\ {\rm d} \\ {\rm ftle/tt5491994/?ref_=d} \\ {\rm d} \\ {\rm d} \\ {\rm ftle/tt5491994/?ref_=d} \\ {\rm d} \\ {\rm d} \\ {\rm ftle/tt5491994/?ref_=d} \\ {\rm d} \\ {\rm d} \\ {\rm ftle/tt5491994/?ref_=d} \\ {\rm d} \\ {\rm ftle/tt549194/?ref_=d} \\ {\rm d} \\ {\rm ftle/tt549194/?ref_=d} \\ {\rm d} \\ {\rm ftle/tt549194/.ref_=d} \\ {\rm d} \\ {\rm ftle/tt549194/.ref_=d} \\ {\rm ft$
Brothers Chernobyl	9.3	910K	5	2019	reviews https://imdb.dolnh/title/tt07950176/?ref_=ch,6778p_t_3 reviews
The Wire	9.3	392K	60	2002-2008	$https://imdb.dolnh/title/tt07950176/?ref_=ch/70786p_t_3$
Avatar: The Last	9.3	391K	62	2005-2008	reviews https://imdb.dofo@title/tt0185906/?ref_=clfi8vtp_t_4 reviews
Airbender Blue	9.3	49K	7	2017	$https://imdb.do05/ctitle/tt0185906/?ref_=clfi8vtp_t_4$
Planet II The	9.2	500K	86	1999-2007	reviews https://imdb. 355 4itle/tt73 663 38/?ref_=c h46 vtp_t_5
Sopranos Cosmos: A Spacetime Odyssey	9.2	132K	13	2014	reviews https://imdb.3\pu_53\fattle/tt73\fatta_338/?ref_=cht6vtp_t_5 reviews
Cosmos	9.3	46K	13	1980	https://imdb.4787/title/tt0307414/?ref_=ch04vtp_t_6
Our	9.2	54K	12	2019-2023	reviews https://imdb.c787/title/tt03067414/?ref_=c104vtp_t_6
Planet Game of	9.2	2.4M	74	2011-2019	reviews https://imdb.dom@title/tt04b77299/?ref_=cbnvvtp_t_7
Thrones Bluey	9.3	34K	194	2018-	reviews https://imdb.dof004itle/tt0457299/?ref_=c345vtp_t_7
The World	9.2	32K	26	1973–1974	reviews https://imdb.com/etriber/st6769208/?ref_=chell202p_t_8
at War Fullmetal Alchemist: Brother-	9.1	210K	68	2009–2010	https://imdb.c 53m/tvitley/s t67 69 208/?ref_=c h tlt 2/2 p_t_8
hood Rick and Morty	9.1	629K	78	2013-	https://imdb. Q66 /title/tt01 49 842/?ref_= c3i ttvtp_t_9 reviews
Life	9.1	44K	11	2009	$https://imdb. 2966/title/tt01498842/?ref_=c3htvtp_t_9$
The Last	9.0	160K	10	2020	$\begin{array}{c} \text{reviews} \\ \text{https://imdb.} & \textbf{2005/title/tt2392695/?ref_=ch,} \\ \text{t.} & \text{10} \end{array}$
Dance The Twilight Zone	9.0	97K	156	1959–1964	reviews https://imdb.205/title/tt2392695/?ref_=ch677tp_t_10 reviews
The Vietnam	9.1	30K	10	2017	https://imdb.@0m/etritler/st00%1846/?ref_=c3h/64%p_t_11
War Sherlock	9.1	1M	15	2010-2017	$\label{limits} https://imdb. \& 0 m/e tritles/st t00 \& 1846/?ref_= -3.4645 p_t_11$
Attack on Titan	9.1	565K	98	2013-2023	https://imdb.24fh/title/tt9253866/?ref_=chut0tp_t_12 reviews
Batman: The Animated	9.0	123K	85	1992–1995	https://imdb.2245/title/tt9253866/?ref_=c2\text{ti0tp_t_12} reviews
Series Arcane	9.0	332K	18	2021-2024	https://imdb.ca.907title/tt0946947/?ref_=clfatvtp_t_13 reviews
Breaking	9.5	2.2M	62	2008-2013	$\label{eq:https://imdb.co.990} \text{https://imdb.co.990/title/tt0946847/?ref} = \text{ch6} \text{tvtp_t_13} $
Bad Planet Earth II	9.5	163K	6	2016	reviews https://imdb. 369 /title/tt76 7 8620/?ref_=c 37.8 vtp_t_14 reviews

Planet	9.4	224K	11	2006	https://imdb.c 369 /title/tt76 7 8620/?ref_=c 37.8 vtp_t_14
Earth Band of	9.4	547K	10	2001	$\begin{array}{c} {\rm reviews} \\ {\rm https://imdb.d26/title/tt00751075/?ref_=d26322p_t_15} \end{array}$
Brothers Chernobyl	9.3	910K	5	2019	reviews https://imdb.d26/title/tt00751075/?ref_=d2f322p_t_15 reviews
The Wire	9.3	392K	60	2002 – 2008	${\rm https://imdb.c}{\tt d68/title/tt1355642/?ref_=c}{\tt lf.4}{\tt vtp_t_16}$
Avatar: The Last	9.3	391K	62	2005–2008	reviews https://imdb. d468 /title/tt13 55 642/?ref_=c h74 vtp_t_16 reviews
Airbender Blue	9.3	49K	7	2017	$https://imdb.\mathfrak{GMO}/title/tt28\mathfrak{GMO}24/?ref_=cl25vtp_t_17$
Planet II The	9.2	500K	86	1999-2007	reviews https://imdb.@nn/title/tt28@1424/?ref_=d125vtp_t_17
Sopranos Cosmos: A Spacetime Odyssey	9.2	132K	13	2014	reviews https://imdb.du2m/ttilday/st1153B395/?ref_=dhu57p_t_18
Cosmos	9.3	46K	13	1980	https://imdb.dr2nr/etiides/stt153B395/?ref_=c3h057p_t_18
Our	9.2	54K	12	2019 – 2023	https://imdb.co42/title/tt84228184/?ref_=ch4103p_t_19
Planet Game of	9.2	2.4M	74	2011-2019	reviews https://imdb.com/20/title/tt84/208184/?ref_=ch/10/3 p_t_19
Thrones Bluey	9.3	34K	194	2018-	reviews https://imdb. @m /title/tt00 %2 520/?ref_=c 387 vtp_t_20
The World at War	9.2	32K	26	1973–1974	reviews https://imdb.com/title/tt00%2520/?ref_=c36%vtp_t_20 reviews
Fullmetal Alchemist: Brother-	9.1	210K	68	2009-2010	$https://imdb.dc \c fittle/tt18\c fittle/tt$
hood Rick and	9.1	629K	78	2013-	$https://imdb.d376/title/tt1873514/?ref_=ch7339p_t_21$
$_{ m Life}^{ m Morty}$	9.1	44K	11	2009	reviews https://imdb.dom/8title/tt1472382/?ref_=d160vtp_t_22
The Last	9.0	160K	10	2020	$\begin{array}{c} {\rm reviews} \\ {\rm https://imdb.dom/Ritle/tt1472382/?ref_=d160vtp_t_22} \end{array}$
Dance The Twilight Zone	9.0	97K	156	1959–1964	reviews https://imdb.dqfffditle/tt2560440/?ref_=c500tvtp_t_23 reviews
The Vietnam	9.1	30K	10	2017	https://imdb. Δ h π /title/tt2560140/?ref_=c π 0tvtp_t_23 reviews
War Sherlock	9.1	1M	15	2010-2017	$\label{limits} \text{https://imdb.} \textbf{@M}/\text{title/tt01} \textbf{@M}359/?\text{ref} = \textbf{cl68} \text{vtp_t} _24$
Attack on	9.1	565K	98	2013-2023	$\begin{array}{c} {\rm reviews} \\ {\rm https://imdb.} \textbf{@23} \textbf{@1/title/tt01023} \\ 59/?{\rm ref_=c} \textbf{168} \\ {\rm vtp_t_24} \end{array}$
Titan Batman: The	9.0	123K	85	1992–1995	reviews https://imdb.dqfdftitle/tt11f2f6994/?ref_=khttvtp_t_25 reviews
Animated Series Arcane	9.0	332K	18	2021-2024	https://imdb.@p@d/title/tt11f26994/?ref_=chttvtp_t_25 reviews

```
library(kableExtra)
movies <- shows[c(1:5),]
knitr::kable(movies, caption = "IMDB Movies") %>%
kable_classic(full_width = T, html_font = "Arial Narrow") %>%
kable_styling(font_size = 8)
```

Table 2: IMDB Movies

Title	Rating	Voters	Episodes	Year	Show_Link User_ReviewsCritic_ReviewPopularity_Ratio	ng
			1			0

Breaking	9.5	2.2M	62	2008-2013	$https://imdb. \textbf{doi:10} \textbf{8} itle/tt09 \textbf{0.375} 47/?ref_=\textbf{c20} tvtp_t_1$
Bad Planet	9.5	163K	6	2016	reviews https://imdb.com/98itle/tt09037547/?ref_=c20tvtp_t_1
Earth II Planet	9.4	224K	11	2006	$\begin{array}{c} {\rm reviews} \\ {\rm https://imdb.d} \underline{\bf 558/title/tt54951994/?ref_=c9499vtp_t_2} \end{array}$
Earth Band of	9.4	547K	10	2001	reviews https://imdb.d 558 /title/tt54 56 1994/?ref_=c 96 9vtp_t_2
Brothers Chernobyl	9.3	910K	5	2019	reviews https://imdb.dolnh/title/tt07950176/?ref_=ch7778p_t_3
					reviews