

# RworkSheet#5a\_Group(10)

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1. Each group needs to extract the top 50 tv shows in Imdb.com. It will include the rank, the title of the tv show, tv rating, the number of people who voted, the number of episodes, the year it was released.

```
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)
library(tidyverse)
```

```
## -- Attaching core tidyverse packages ----- tidyverse 2.0.0 --
## v forcats   1.0.0      v readr     2.1.4
## v ggplot2   3.4.4      v stringr  1.5.1
## v lubridate 1.9.3      v tibble   3.2.1
## v purrr     1.0.2      v tidyr    1.3.0
```

```
## -- Conflicts ----- tidyverse_conflicts() --
```

```
## x dplyr::filter()      masks stats::filter()
## x readr::guess_encoding() masks rvest::guess_encoding()
## x dplyr::lag()         masks stats::lag()
```

```
## i Use the conflicted package (<http://conflicted.r-lib.org/>) to force all conflicts to become errors
```

```
library(kableExtra)
```

```
##
## Attaching package: 'kableExtra'
##
## The following object is masked from 'package:dplyr':
##
##   group_rows
```

```
polite::use_manners(save_as = 'polite_scrape.R')
```

```
## v Setting active project to '/cloud/project'
```

```

url <- 'https://www.imdb.com/chart/toptv/?ref=nv_tv_250'
session <- bow(url,
               user_agent = "Educational")
session

## <polite session> https://www.imdb.com/chart/toptv/?ref=nv_tv_250
##   User-agent: Educational
##   robots.txt: 34 rules are defined for 2 bots
##   Crawl delay: 5 sec
##   The path is scrapable for this user-agent

rank_title <- character(0)
links <- character(0)

title_list <- scrape(session) %>%
  html_nodes("h3.ipc-title__text") %>%
  html_text

imdb <- read_html(url)

#ranks
ranks <- scrape(session) %>%
  html_nodes("div.sc-94da5b1b-0") %>%
  html_text
ranks

## character(0)

cleaned_ranks <- substr(ranks,1,2)

ranks50<- cleaned_ranks[1:50]
ranks50

## [1] NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA
## [26] NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA

#titles
titles <- scrape(session) %>%
  html_nodes("h3.ipc-title__text") %>%
  html_text
titles

## [1] "IMDb Charts"
## [2] "1. Breaking Bad"
## [3] "2. Planet Earth II"
## [4] "3. Planet Earth"
## [5] "4. Band of Brothers"
## [6] "5. Chernobyl"
## [7] "6. The Wire"
## [8] "7. Avatar: The Last Airbender"
## [9] "8. Blue Planet II"
## [10] "9. The Sopranos"
## [11] "10. Cosmos: A Spacetime Odyssey"
## [12] "11. Cosmos"
## [13] "12. Our Planet"
## [14] "13. Game of Thrones"

```

```

## [15] "14. The World at War"
## [16] "15. Bluey"
## [17] "16. Rick and Morty"
## [18] "17. Fullmetal Alchemist: Brotherhood"
## [19] "18. The Last Dance"
## [20] "19. Life"
## [21] "20. The Twilight Zone"
## [22] "21. Sherlock"
## [23] "22. The Vietnam War"
## [24] "23. Batman: The Animated Series"
## [25] "24. Attack on Titan"
## [26] "25. Scam 1992: The Harshad Mehta Story"
## [27] "26. The Office"
## [28] "27. Arcane"
## [29] "28. The Blue Planet"
## [30] "29. Better Call Saul"
## [31] "30. Human Planet"
## [32] "31. Firefly"
## [33] "32. Frozen Planet"
## [34] "33. Clarkson's Farm"
## [35] "34. Death Note"
## [36] "35. Only Fools and Horses"
## [37] "36. Hunter x Hunter"
## [38] "37. The Civil War"
## [39] "38. True Detective"
## [40] "39. Seinfeld"
## [41] "40. The Beatles: Get Back"
## [42] "41. The Decalogue"
## [43] "42. Persona"
## [44] "43. Fargo"
## [45] "44. Cowboy Bebop"
## [46] "45. Gravity Falls"
## [47] "46. Nathan for You"
## [48] "47. Last Week Tonight with John Oliver"
## [49] "48. When They See Us"
## [50] "49. Succession"
## [51] "50. Apocalypse: The Second World War"
## [52] "51. Friends"
## [53] "52. Africa"
## [54] "53. Taskmaster"
## [55] "54. TVF Pitchers"
## [56] "55. It's Always Sunny in Philadelphia"
## [57] "56. As If"
## [58] "57. Monty Python's Flying Circus"
## [59] "58. The West Wing"
## [60] "59. Curb Your Enthusiasm"
## [61] "60. Das Boot"
## [62] "61. One Piece"
## [63] "62. Fawlty Towers"
## [64] "63. BoJack Horseman"
## [65] "64. Leyla and Mecnun"
## [66] "65. Pride and Prejudice"
## [67] "66. Freaks and Geeks"
## [68] "67. Blackadder Goes Forth"

```

## [69] "68. Twin Peaks"  
 ## [70] "69. Dragon Ball Z"  
 ## [71] "70. Narcos"  
 ## [72] "71. Chappelle's Show"  
 ## [73] "72. Dragon Ball Z"  
 ## [74] "73. Black Mirror"  
 ## [75] "74. I, Claudius"  
 ## [76] "75. Blue Eye Samurai"  
 ## [77] "76. The Last of Us"  
 ## [78] "77. Over the Garden Wall"  
 ## [79] "78. South Park"  
 ## [80] "79. Ted Lasso"  
 ## [81] "80. Kota Factory"  
 ## [82] "81. Six Feet Under"  
 ## [83] "82. Peaky Blinders"  
 ## [84] "83. Vinland Saga"  
 ## [85] "84. Rome"  
 ## [86] "85. Oz"  
 ## [87] "86. Gullak"  
 ## [88] "87. Steins;Gate"  
 ## [89] "88. Panchayat"  
 ## [90] "89. Dark"  
 ## [91] "90. The Boys"  
 ## [92] "91. Fleabag"  
 ## [93] "92. Bleach: Thousand-Year Blood War"  
 ## [94] "93. Battlestar Galactica"  
 ## [95] "94. The Shield"  
 ## [96] "95. Downton Abbey"  
 ## [97] "96. The Simpsons"  
 ## [98] "97. Arrested Development"  
 ## [99] "98. House"  
 ## [100] "99. Invincible"  
 ## [101] "100. One Punch Man"  
 ## [102] "101. Severance"  
 ## [103] "102. Berserk"  
 ## [104] "103. Mad Men"  
 ## [105] "104. Peep Show"  
 ## [106] "105. Stranger Things"  
 ## [107] "106. Star Trek: The Next Generation"  
 ## [108] "107. The Marvelous Mrs. Maisel"  
 ## [109] "108. The Adventures of Sherlock Holmes"  
 ## [110] "109. Sarabhai V/S Sarabhai"  
 ## [111] "110. Mahabharat"  
 ## [112] "111. The Mandalorian"  
 ## [113] "112. The Grand Tour"  
 ## [114] "113. Justice League Unlimited"  
 ## [115] "114. Friday Night Lights"  
 ## [116] "115. Aspirants"  
 ## [117] "116. Top Gear"  
 ## [118] "117. Behzat Ç: An Ankara Detective Story"  
 ## [119] "118. Line of Duty"  
 ## [120] "119. The Thick of It"  
 ## [121] "120. 1883"  
 ## [122] "121. House of Cards"

## [123] "122. Naruto: Shippuden"  
## [124] "123. This Is Us"  
## [125] "124. How to with John Wilson"  
## [126] "125. Monster"  
## [127] "126. The Crown"  
## [128] "127. Father Ted"  
## [129] "128. Ramayan"  
## [130] "129. Atlanta"  
## [131] "130. Parks and Recreation"  
## [132] "131. Deadwood"  
## [133] "132. The X-Files"  
## [134] "133. Dexter"  
## [135] "134. Code Geass"  
## [136] "135. Critical Role"  
## [137] "136. Primal"  
## [138] "137. It's a Sin"  
## [139] "138. The Jinx: The Life and Deaths of Robert Durst"  
## [140] "139. Daredevil"  
## [141] "140. The Bridge"  
## [142] "141. Blackadder II"  
## [143] "142. Adventure Time"  
## [144] "143. Lonesome Dove"  
## [145] "144. Yeh Meri Family"  
## [146] "145. Mindhunter"  
## [147] "146. The Return of Sherlock Holmes"  
## [148] "147. The Offer"  
## [149] "148. Mystery Science Theater 3000"  
## [150] "149. Haikyuu!!"  
## [151] "150. Demon Slayer: Kimetsu no Yaiba"  
## [152] "151. Gomorrah"  
## [153] "152. Poirot"  
## [154] "153. Archer"  
## [155] "154. Blackadder the Third"  
## [156] "155. Mr. Bean"  
## [157] "156. Young Justice"  
## [158] "157. Anne with an E"  
## [159] "158. Pose"  
## [160] "159. Dopesick"  
## [161] "160. Crash Landing on You"  
## [162] "161. Yes Minister"  
## [163] "162. Yellowstone"  
## [164] "163. QI"  
## [165] "164. The Newsroom"  
## [166] "165. Boardwalk Empire"  
## [167] "166. Justified"  
## [168] "167. The Bugs Bunny Show"  
## [169] "168. The Bear"  
## [170] "169. The Haunting of Hill House"  
## [171] "170. Mr Inbetween"  
## [172] "171. The Bureau"  
## [173] "172. El Chavo del Ocho"  
## [174] "173. Homicide: Life on the Street"  
## [175] "174. What We Do in the Shadows"  
## [176] "175. Justice League"

## [177] "176. The Venture Bros."  
 ## [178] "177. Making a Murderer"  
 ## [179] "178. The Queen's Gambit"  
 ## [180] "179. Flight of the Conchords"  
 ## [181] "180. Dragon Ball"  
 ## [182] "181. Dragon Ball"  
 ## [183] "182. Battlestar Galactica"  
 ## [184] "183. Black Sun"  
 ## [185] "184. The Family Man"  
 ## [186] "185. Coupling"  
 ## [187] "186. The Eric Andre Show"  
 ## [188] "187. Impractical Jokers"  
 ## [189] "188. Yes, Prime Minister"  
 ## [190] "189. Rocket Boys"  
 ## [191] "190. Samurai Champloo"  
 ## [192] "191. Spaced"  
 ## [193] "192. Endeavour"  
 ## [194] "193. Mr. Robot"  
 ## [195] "194. The IT Crowd"  
 ## [196] "195. Ezel"  
 ## [197] "196. Long Way Round"  
 ## [198] "197. I'm Alan Partridge"  
 ## [199] "198. Heartstopper"  
 ## [200] "199. Formula 1: Drive to Survive"  
 ## [201] "200. Jujutsu Kaisen"  
 ## [202] "201. Mob Psycho 100"  
 ## [203] "202. Louie"  
 ## [204] "203. Samurai Jack"  
 ## [205] "204. Whose Line Is It Anyway?"  
 ## [206] "205. The Office"  
 ## [207] "206. Detectorists"  
 ## [208] "207. Spartacus"  
 ## [209] "208. Through the Wormhole"  
 ## [210] "209. Sons of Anarchy"  
 ## [211] "210. Happy Valley"  
 ## [212] "211. Neon Genesis Evangelion"  
 ## [213] "212. Shameless"  
 ## [214] "213. Letterkenny"  
 ## [215] "214. Brass Eye"  
 ## [216] "215. Twin Peaks"  
 ## [217] "216. Doctor Who"  
 ## [218] "217. Trailer Park Boys"  
 ## [219] "218. Skam"  
 ## [220] "219. North & South"  
 ## [221] "220. Spartacus: Gods of the Arena"  
 ## [222] "221. Silicon Valley"  
 ## [223] "222. Extraordinary Attorney Woo"  
 ## [224] "223. Regular Show"  
 ## [225] "224. The Rehearsal"  
 ## [226] "225. Fullmetal Alchemist"  
 ## [227] "226. Futurama"  
 ## [228] "227. Schitt's Creek"  
 ## [229] "228. From the Earth to the Moon"  
 ## [230] "229. Rurouni Kenshin: Trust and Betrayal"

```
## [231] "230. Westworld"
## [232] "231. Hannibal"
## [233] "232. The Expanse"
## [234] "233. Umbre"
## [235] "234. Derry Girls"
## [236] "235. My Brilliant Friend"
## [237] "236. Wentworth"
## [238] "237. Tear Along the Dotted Line"
## [239] "238. Community"
## [240] "239. Chef's Table"
## [241] "240. Gintama"
## [242] "241. Avrupa Yakasi"
## [243] "242. Your Lie in April"
## [244] "243. Foyle's War"
## [245] "244. Alfred Hitchcock Presents"
## [246] "245. Generation Kill"
## [247] "246. Cobra Kai"
## [248] "247. Alchemy of Souls"
## [249] "248. Southland"
## [250] "249. The Great British Baking Show"
## [251] "250. The Night Of"
## [252] "You have rated"
## [253] "More to explore"
## [254] "Charts"
## [255] "Top Box Office (US)"
## [256] "Most Popular Movies"
## [257] "IMDb Top 250 Movies"
## [258] "Top Rated English Movies"
## [259] "Most Popular TV Shows"
## [260] "Lowest Rated Movies"
## [261] "Most Popular Celebs"
## [262] "Top Rated TV by Genre"
## [263] "Recently viewed"
```

```
titles50 <- titles[2:51]
titles50
```

```
## [1] "1. Breaking Bad"
## [2] "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. The World at War"
## [15] "15. Bluey"
## [16] "16. Rick and Morty"
## [17] "17. Fullmetal Alchemist: Brotherhood"
## [18] "18. The Last Dance"
```

```
## [19] "19. Life"
## [20] "20. The Twilight Zone"
## [21] "21. Sherlock"
## [22] "22. The Vietnam War"
## [23] "23. Batman: The Animated Series"
## [24] "24. Attack on Titan"
## [25] "25. Scam 1992: The Harshad Mehta Story"
## [26] "26. The Office"
## [27] "27. Arcane"
## [28] "28. The Blue Planet"
## [29] "29. Better Call Saul"
## [30] "30. Human Planet"
## [31] "31. Firefly"
## [32] "32. Frozen Planet"
## [33] "33. Clarkson's Farm"
## [34] "34. Death Note"
## [35] "35. Only Fools and Horses"
## [36] "36. Hunter x Hunter"
## [37] "37. The Civil War"
## [38] "38. True Detective"
## [39] "39. Seinfeld"
## [40] "40. The Beatles: Get Back"
## [41] "41. The Decalogue"
## [42] "42. Persona"
## [43] "43. Fargo"
## [44] "44. Cowboy Bebop"
## [45] "45. Gravity Falls"
## [46] "46. Nathan for You"
## [47] "47. Last Week Tonight with John Oliver"
## [48] "48. When They See Us"
## [49] "49. Succession"
## [50] "50. Apocalypse: The Second World War"
```

```
#ratings
ratings <- scrape(session) %>%
html_nodes("span.ipc-rating-star.ipc-rating-star--base.ipc-rating-star--imdb.ratingGroup--imdb-rating")
  html_text

cleaned_ratings <- substr(ratings,1,3)
cleaned_ratings
```

```
## [1] "9.5" "9.5" "9.4" "9.4" "9.3" "9.3" "9.3" "9.3" "9.2" "9.3" "9.3" "9.3"
## [13] "9.2" "9.2" "9.4" "9.1" "9.1" "9.1" "9.1" "9.1" "9.1" "9.1" "9.0" "9.1"
## [25] "9.3" "9.0" "9.0" "9.0" "9.0" "9.0" "9.0" "9.0" "9.0" "8.9" "9.0" "9.0"
## [37] "9.0" "8.9" "8.9" "9.0" "8.9" "9.0" "8.9" "8.9" "8.9" "8.9" "8.9" "8.9"
## [49] "8.9" "9.0" "8.9" "8.9" "9.0" "9.1" "8.8" "9.0" "8.8" "8.9" "8.8" "8.8"
## [61] "8.9" "8.8" "8.8" "9.1" "8.8" "8.8" "8.8" "8.8" "8.8" "8.8" "8.8" "8.8"
## [73] "8.7" "8.8" "8.8" "8.8" "8.8" "8.7" "8.8" "9.0" "8.7" "8.8" "8.8" "8.7"
## [85] "8.7" "9.1" "8.8" "8.9" "8.7" "8.7" "8.7" "9.0" "8.7" "8.7" "8.7" "8.7"
## [97] "8.7" "8.7" "8.7" "8.7" "8.7" "8.7" "8.7" "8.7" "8.7" "8.7" "8.7" "8.7"
## [109] "9.0" "9.0" "8.7" "8.7" "8.7" "8.7" "9.2" "8.7" "8.9" "8.7" "8.7" "8.7"
## [121] "8.6" "8.7" "8.7" "8.7" "8.7" "8.6" "8.7" "9.0" "8.6" "8.6" "8.6" "8.6"
## [133] "8.7" "8.7" "9.2" "8.7" "8.7" "8.6" "8.6" "8.6" "8.6" "8.6" "8.7" "9.0"
## [145] "8.6" "8.7" "8.6" "8.6" "8.7" "8.6" "8.6" "8.6" "8.6" "8.6" "8.6" "8.6"
## [157] "8.6" "8.6" "8.6" "8.7" "8.7" "8.7" "8.6" "8.6" "8.6" "8.6" "8.6" "8.6"
```



```
## [169] "8.6" "8.6" "8.7" "8.7" "8.7" "8.6" "8.6" "8.6" "8.5" "8.5" "8.6" "8.5"
## [181] "8.6" "8.5" "8.9" "8.7" "8.6" "8.6" "8.6" "8.6" "8.9" "8.6" "8.5" "8.6"
## [193] "8.5" "8.5" "8.7" "8.6" "8.6" "8.6" "8.5" "8.6" "8.6" "8.5" "8.5" "8.5"
## [205] "8.5" "8.6" "8.5" "8.6" "8.6" "8.5" "8.5" "8.5" "8.6" "8.6" "8.5" "8.6"
## [217] "8.5" "8.6" "8.6" "8.5" "8.5" "8.6" "8.5" "8.5" "8.5" "8.5" "8.5" "8.6"
## [229] "8.6" "8.5" "8.5" "8.5" "8.7" "8.5" "8.6" "8.6" "8.6" "8.5" "8.5" "8.7"
## [241] "8.6" "8.6" "8.6" "8.5" "8.5" "8.5" "8.8" "8.5" "8.6" "8.4"
```

```
ratings50 <- cleaned_ratings[1:50]
ratings50
```

```
## [1] "9.5" "9.5" "9.4" "9.4" "9.3" "9.3" "9.3" "9.3" "9.2" "9.3" "9.3" "9.3"
## [13] "9.2" "9.2" "9.4" "9.1" "9.1" "9.1" "9.1" "9.1" "9.1" "9.1" "9.0" "9.1"
## [25] "9.3" "9.0" "9.0" "9.0" "9.0" "9.0" "9.0" "9.0" "9.0" "8.9" "9.0" "9.0"
## [37] "9.0" "8.9" "8.9" "9.0" "8.9" "9.0" "8.9" "8.9" "8.9" "8.9" "8.9" "8.9"
## [49] "8.9" "9.0"
```

```
#peoples vote
people_vote <- scrape(session)%>%
  html_nodes("span.ipc-rating-star--voteCount")%>%
  html_text()
```

```
people_vote50 <- people_vote[1:50]
people_vote50
```

```
## [1] " (2.1M)" " (155K)" " (218K)" " (509K)" " (836K)" " (367K)" " (350K)"
## [8] " (45K)" " (451K)" " (127K)" " (43K)" " (49K)" " (2.2M)" " (28K)"
## [15] " (22K)" " (583K)" " (191K)" " (146K)" " (42K)" " (91K)" " (978K)"
## [22] " (27K)" " (114K)" " (481K)" " (154K)" " (683K)" " (254K)" " (42K)"
## [29] " (621K)" " (28K)" " (278K)" " (33K)" " (53K)" " (365K)" " (56K)"
## [36] " (126K)" " (18K)" " (618K)" " (343K)" " (27K)" " (27K)" " (46K)"
## [43] " (399K)" " (134K)" " (129K)" " (37K)" " (94K)" " (134K)" " (248K)"
## [50] " (14K)"
```

```
cleaned_vote <- gsub("\\(|\\)", "", people_vote50)
cleaned_vote
```

```
## [1] " 2.1M" " 155K" " 218K" " 509K" " 836K" " 367K" " 350K" " 45K" " 451K"
## [10] " 127K" " 43K" " 49K" " 2.2M" " 28K" " 22K" " 583K" " 191K" " 146K"
## [19] " 42K" " 91K" " 978K" " 27K" " 114K" " 481K" " 154K" " 683K" " 254K"
## [28] " 42K" " 621K" " 28K" " 278K" " 33K" " 53K" " 365K" " 56K" " 126K"
## [37] " 18K" " 618K" " 343K" " 27K" " 27K" " 46K" " 399K" " 134K" " 129K"
## [46] " 37K" " 94K" " 134K" " 248K" " 14K"
```

```
#episodes
```

```
episodes <- scrape(session)%>%
  html_nodes("span.sc-43986a27-8:nth-of-type(2)") %>%
  html_text()
```

```
episodes50 <- episodes[1:50]
episodes50
```

```
## [1] "62 eps" "6 eps" "11 eps" "10 eps" "5 eps" "60 eps" "62 eps"
## [8] "7 eps" "86 eps" "13 eps" "13 eps" "12 eps" "73 eps" "26 eps"
## [15] "171 eps" "74 eps" "68 eps" "10 eps" "11 eps" "156 eps" "15 eps"
## [22] "10 eps" "85 eps" "98 eps" "10 eps" "188 eps" "10 eps" "8 eps"
## [29] "63 eps" "8 eps" "14 eps" "10 eps" "18 eps" "37 eps" "64 eps"
```

```
## [36] "148 eps" "9 eps" "30 eps" "173 eps" "3 eps" "10 eps" "20 eps"
## [43] "51 eps" "26 eps" "41 eps" "32 eps" "342 eps" "4 eps" "39 eps"
## [50] "6 eps"

#year
year <- scrape(session)%>%
  html_nodes("span.sc-43986a27-8:nth-of-type(1)") %>%
  html_text()
year50 <- year[1:50]
year50

## [1] "2008-2013" "2016" "2006" "2001" "2019" "2002-2008"
## [7] "2005-2008" "2017" "1999-2007" "2014" "1980" "2019-2023"
## [13] "2011-2019" "1973-1974" "2018- " "2013- " "2009-2010" "2020"
## [19] "2009" "1959-1964" "2010-2017" "2017" "1992-1995" "2013-2023"
## [25] "2020" "2005-2013" "2021- " "2001" "2015-2022" "2011"
## [31] "2002-2003" "2011-2012" "2021- " "2006-2007" "1981-2003" "2011-2014"
## [37] "1990" "2014- " "1989-1998" "2021" "1989-1990" "2018- "
## [43] "2014-2024" "1998-1999" "2012-2016" "2013-2017" "2014- " "2019"
## [49] "2018-2023" "2009"

#dataframe
topTv_df <- data.frame(Titles = titles50,
  Ranks = ranks50,
  Ratings = ratings50,
  People_Votes = cleaned_vote,
  Episodes = episodes50,
  Year = year50
)
topTv_df

##
## Titles Ranks Ratings People_Votes Episodes
## 1 1. Breaking Bad <NA> 9.5 2.1M 62 eps
## 2 2. Planet Earth II <NA> 9.5 155K 6 eps
## 3 3. Planet Earth <NA> 9.4 218K 11 eps
## 4 4. Band of Brothers <NA> 9.4 509K 10 eps
## 5 5. Chernobyl <NA> 9.3 836K 5 eps
## 6 6. The Wire <NA> 9.3 367K 60 eps
## 7 7. Avatar: The Last Airbender <NA> 9.3 350K 62 eps
## 8 8. Blue Planet II <NA> 9.3 45K 7 eps
## 9 9. The Sopranos <NA> 9.2 451K 86 eps
## 10 10. Cosmos: A Spacetime Odyssey <NA> 9.3 127K 13 eps
## 11 11. Cosmos <NA> 9.3 43K 13 eps
## 12 12. Our Planet <NA> 9.3 49K 12 eps
## 13 13. Game of Thrones <NA> 9.2 2.2M 73 eps
## 14 14. The World at War <NA> 9.2 28K 26 eps
## 15 15. Bluey <NA> 9.4 22K 171 eps
## 16 16. Rick and Morty <NA> 9.1 583K 74 eps
## 17 17. Fullmetal Alchemist: Brotherhood <NA> 9.1 191K 68 eps
## 18 18. The Last Dance <NA> 9.1 146K 10 eps
## 19 19. Life <NA> 9.1 42K 11 eps
## 20 20. The Twilight Zone <NA> 9.1 91K 156 eps
## 21 21. Sherlock <NA> 9.1 978K 15 eps
## 22 22. The Vietnam War <NA> 9.1 27K 10 eps
## 23 23. Batman: The Animated Series <NA> 9.0 114K 85 eps
## 24 24. Attack on Titan <NA> 9.1 481K 98 eps
```

## 25	25. Scam 1992: The Harshad Mehta Story	<NA>	9.3	154K	10 eps
## 26	26. The Office	<NA>	9.0	683K	188 eps
## 27	27. Arcane	<NA>	9.0	254K	10 eps
## 28	28. The Blue Planet	<NA>	9.0	42K	8 eps
## 29	29. Better Call Saul	<NA>	9.0	621K	63 eps
## 30	30. Human Planet	<NA>	9.0	28K	8 eps
## 31	31. Firefly	<NA>	9.0	278K	14 eps
## 32	32. Frozen Planet	<NA>	9.0	33K	10 eps
## 33	33. Clarkson's Farm	<NA>	9.0	53K	18 eps
## 34	34. Death Note	<NA>	8.9	365K	37 eps
## 35	35. Only Fools and Horses	<NA>	9.0	56K	64 eps
## 36	36. Hunter x Hunter	<NA>	9.0	126K	148 eps
## 37	37. The Civil War	<NA>	9.0	18K	9 eps
## 38	38. True Detective	<NA>	8.9	618K	30 eps
## 39	39. Seinfeld	<NA>	8.9	343K	173 eps
## 40	40. The Beatles: Get Back	<NA>	9.0	27K	3 eps
## 41	41. The Decalogue	<NA>	8.9	27K	10 eps
## 42	42. Persona	<NA>	9.0	46K	20 eps
## 43	43. Fargo	<NA>	8.9	399K	51 eps
## 44	44. Cowboy Bebop	<NA>	8.9	134K	26 eps
## 45	45. Gravity Falls	<NA>	8.9	129K	41 eps
## 46	46. Nathan for You	<NA>	8.9	37K	32 eps
## 47	47. Last Week Tonight with John Oliver	<NA>	8.9	94K	342 eps
## 48	48. When They See Us	<NA>	8.9	134K	4 eps
## 49	49. Succession	<NA>	8.9	248K	39 eps
## 50	50. Apocalypse: The Second World War	<NA>	9.0	14K	6 eps
##	Year				
## 1	2008-2013				
## 2	2016				
## 3	2006				
## 4	2001				
## 5	2019				
## 6	2002-2008				
## 7	2005-2008				
## 8	2017				
## 9	1999-2007				
## 10	2014				
## 11	1980				
## 12	2019-2023				
## 13	2011-2019				
## 14	1973-1974				
## 15	2018-				
## 16	2013-				
## 17	2009-2010				
## 18	2020				
## 19	2009				
## 20	1959-1964				
## 21	2010-2017				
## 22	2017				
## 23	1992-1995				
## 24	2013-2023				
## 25	2020				
## 26	2005-2013				
## 27	2021-				

```
## 28      2001
## 29 2015-2022
## 30      2011
## 31 2002-2003
## 32 2011-2012
## 33      2021-
## 34 2006-2007
## 35 1981-2003
## 36 2011-2014
## 37      1990
## 38      2014-
## 39 1989-1998
## 40      2021
## 41 1989-1990
## 42      2018-
## 43 2014-2024
## 44 1998-1999
## 45 2012-2016
## 46 2013-2017
## 47      2014-
## 48      2019
## 49 2018-2023
## 50      2009
```

```
knitr::kable(topTv_df, caption = "IMDb Top 50 TV Shows", output_format = "pdf_document") %>%
  kable_styling(font_size = 9)
```

2. From the 50 tv shows, select at least 5 tv shows to scrape the user reviews that will include the reviewer's name, date of reviewed, user rating, title of the review, and text reviews.

Arcane (2021)

```
Arcane_link <- ("https://www.imdb.com/title/tt11126994/reviews?ref_=tt_urv")
```

```
session2 <- bow(Arcane_link, user_agent = "Educational Purposes")
session2
```

```
## <polite session> https://www.imdb.com/title/tt11126994/reviews?ref_=tt_urv
##      User-agent: Educational Purposes
##      robots.txt: 34 rules are defined for 2 bots
##      Crawl delay: 5 sec
##      The path is scrapable for this user-agent
```

```
Arcane_Title <- scrape(session2)%>%
  html_nodes("a[itemprop='url']") %>%
  html_text()
Arcane_Title
```

```
## [1] "Arcane"
```

```
Arcane_Review_Name <- scrape(session2)%>%
  html_nodes(".display-name-link a") %>%
  html_text()
Arcane_Review_Name
```

```
## [1] "nancyldraper" "stevebondi" "Pairic" "djurrepower"
## [5] "Tactrix" "garabedian123" "Tweekums" "jasminn_tan"
## [9] "Harun_Karali" "jhuebel" "Movi3D0" "arabnikita"
```

Table 1: IMDb Top 50 TV Shows

Titles	Ranks	Ratings	People_Votes	Episodes	Year
1. Breaking Bad	NA	9.5	2.1M	62 eps	2008–2013
2. Planet Earth II	NA	9.5	155K	6 eps	2016
3. Planet Earth	NA	9.4	218K	11 eps	2006
4. Band of Brothers	NA	9.4	509K	10 eps	2001
5. Chernobyl	NA	9.3	836K	5 eps	2019
6. The Wire	NA	9.3	367K	60 eps	2002–2008
7. Avatar: The Last Airbender	NA	9.3	350K	62 eps	2005–2008
8. Blue Planet II	NA	9.3	45K	7 eps	2017
9. The Sopranos	NA	9.2	451K	86 eps	1999–2007
10. Cosmos: A Spacetime Odyssey	NA	9.3	127K	13 eps	2014
11. Cosmos	NA	9.3	43K	13 eps	1980
12. Our Planet	NA	9.3	49K	12 eps	2019–2023
13. Game of Thrones	NA	9.2	2.2M	73 eps	2011–2019
14. The World at War	NA	9.2	28K	26 eps	1973–1974
15. Bluey	NA	9.4	22K	171 eps	2018–
16. Rick and Morty	NA	9.1	583K	74 eps	2013–
17. Fullmetal Alchemist: Brotherhood	NA	9.1	191K	68 eps	2009–2010
18. The Last Dance	NA	9.1	146K	10 eps	2020
19. Life	NA	9.1	42K	11 eps	2009
20. The Twilight Zone	NA	9.1	91K	156 eps	1959–1964
21. Sherlock	NA	9.1	978K	15 eps	2010–2017
22. The Vietnam War	NA	9.1	27K	10 eps	2017
23. Batman: The Animated Series	NA	9.0	114K	85 eps	1992–1995
24. Attack on Titan	NA	9.1	481K	98 eps	2013–2023
25. Scam 1992: The Harshad Mehta Story	NA	9.3	154K	10 eps	2020
26. The Office	NA	9.0	683K	188 eps	2005–2013
27. Arcane	NA	9.0	254K	10 eps	2021–
28. The Blue Planet	NA	9.0	42K	8 eps	2001
29. Better Call Saul	NA	9.0	621K	63 eps	2015–2022
30. Human Planet	NA	9.0	28K	8 eps	2011
31. Firefly	NA	9.0	278K	14 eps	2002–2003
32. Frozen Planet	NA	9.0	33K	10 eps	2011–2012
33. Clarkson’s Farm	NA	9.0	53K	18 eps	2021–
34. Death Note	NA	8.9	365K	37 eps	2006–2007
35. Only Fools and Horses	NA	9.0	56K	64 eps	1981–2003
36. Hunter x Hunter	NA	9.0	126K	148 eps	2011–2014
37. The Civil War	NA	9.0	18K	9 eps	1990
38. True Detective	NA	8.9	618K	30 eps	2014–
39. Seinfeld	NA	8.9	343K	173 eps	1989–1998
40. The Beatles: Get Back	NA	9.0	27K	3 eps	2021
41. The Decalogue	NA	8.9	27K	10 eps	1989–1990
42. Persona	NA	9.0	46K	20 eps	2018–
43. Fargo	NA	8.9	399K	51 eps	2014–2024
44. Cowboy Bebop	NA	8.9	134K	26 eps	1998–1999
45. Gravity Falls	NA	8.9	129K	41 eps	2012–2016
46. Nathan for You	NA	8.9	37K	32 eps	2013–2017
47. Last Week Tonight with John Oliver	NA	8.9	94K	342 eps	2014–
48. When They See Us	NA	8.9	134K	4 eps	2019
49. Succession	NA	8.9	248K	39 eps	2018–2023
50. Apocalypse: The Second World War	NA	9.0	14K	6 eps	2009

```
## [13] "umlaziking"      "kevin_robbins"  "kaefab"         "Ashitaka137"
## [17] "kythia"          "Master_Strange" "svederen"        "bbevis-47954"
## [21] "DaegT"           "tarekali-19909" "karinahatem"
```

```
Arcane_Review_Date <- scrape(session2) %>%
  html_nodes("span.review-date") %>%
  html_text()
Arcane_Review_Date
```

```
## [1] "22 November 2021" "10 November 2021" "19 November 2021" "7 November 2021"
## [5] "7 November 2021"  "8 November 2021"  "25 December 2021" "21 November 2021"
## [9] "20 November 2021" "7 November 2021"  "21 November 2021" "27 November 2021"
## [13] "24 November 2021" "22 December 2021" "19 November 2021" "27 November 2021"
## [17] "9 November 2021"  "23 November 2021" "7 November 2021"  "8 November 2021"
## [21] "7 November 2021"  "25 November 2021" "26 November 2021"
```

```
Arcane_UserRating <- scrape(session2) %>%
  html_nodes("span.rating-other-user-rating") %>%
  html_text() %>% str_trim()
Arcane_UserRating
```

```
## [1] "9/10" "10/10" "9/10" "9/10" "10/10" "10/10" "10/10" "10/10" "10/10"
## [10] "10/10" "9/10" "10/10" "10/10" "9/10" "9/10" "10/10" "10/10" "10/10"
## [19] "9/10" "10/10" "10/10" "10/10" "10/10" "10/10" "10/10"
```

```
Arcane_TitleReview <- scrape(session2) %>%
  html_nodes("a.title") %>%
  html_text()
Arcane_TitleReview2 <- gsub("\n ", "", Arcane_TitleReview)
Arcane_TitleReview2
```

```
## [1] " Visually stunning\n"
## [2] " Coolest animation style I have seen to date in any TV series or movie! :-)\n"
## [3] " Great Steampunk Adventure\n"
## [4] " Excellent, also for non league fans\n"
## [5] " This is ART!\n"
## [6] " LOL is a video game right?\n"
## [7] " An animated sci-fi epic\n"
## [8] " Wow!\n"
## [9] " Brilliant Writing is Pushed to the Stratosphere by Masterful Visuals\n"
## [10] " Not A League of Legends Player, This is FANTASTIC\n"
## [11] " Time for LOLCU\n"
## [12] " Impossible to stop\n"
## [13] " awesome..amazing and most definitely worthy\n"
## [14] " The sister relation and storyline is compelling and the action scenes are awesome\n"
## [15] " fantastic\n"
## [16] " Chef-d'oeuvre.\n"
## [17] " Beyond belief - Netflix Show of the Year\n"
## [18] " Animation and Visuals Are Beautiful, From the Cities to the Characters\n"
## [19] " Not just for fans of the video game\n"
## [20] " Fantastic\n"
## [21] " Best steampunk anime\n"
## [22] " This series is definitive and foundational, it is perfect\n"
## [23] " Awesome awesome awesome\n"
```

```
Arcane_Text_Review <- scrape(session2) %>%
  html_nodes("div.text") %>%
```

```
html_text()
Arcane_Text_Review
```

```
## [1] "Made by gamers (RIOT) for gamers, but, also, is a stand alone piece of art for people, like me
## [2] "I am a newbie to the source material, but the first 3 episodes of this show blew me away! And
## [3] "Arcane: An animated SF/Fantasy Steampunk series on Netflix. In the cities of Piltover and Zaun
## [4] "I watched it with my parents who don't know anything about league's universe. I have been play
## [5] "Beautiful storytelling, great underline currents, and the emotion behind this is just amazing.
## [6] "I have heard of it but never played it. When i first turned this on and saw kids i immediately
## [7] "This animated series is set in the twin cities of Piltover and Zaun. The former is a utopian c
## [8] "As someone who had never played the game before, this was a great introduction to its lore. The
## [9] "I feel like it's fair to say that it's difficult to adapt anything to the silver screen/TV the
## [10] "I'm not a League of Legends player. In fact, I know almost nothing about it. But this show is
## [11] "Here's to the new us.League of Legends (LoL)' first project in expanding its own cinematic uni
## [12] "Arcane (2021)I have never played a single minute of League of Legends in my life but I always l
## [13] "Really great, stunning, amazing and beautiful tv show. Possibly the most unique show to come o
## [14] "Arcane: League of Legends (2021) is a series my daughter and I recently watched on Netflix (se
## [15] "I never played the game lots of people at my jobs are fan of it.But this series is amazing, an
## [16] "So many positives i don't know where to start! This is unique, gripping probably won't happen
## [17] "This is a piece of art, pure and simple. Every frame is a painting ready to fill a museum. The
## [18] "What I especially enjoyed was how expressive the characters are. Character development is impr
## [19] "Arcane tells the story of two young orphaned sisters, growing up and getting into trouble in t
## [20] "I'm a big critic and it's hard for me to find any fault in the first two episodes I watched. A
## [21] "I would categorise it as a steampunk anime and I know even if it's not 100% correct, it won't b
## [22] "I am a massive fan of animation, having consumed copious amounts of Western and Eastern animat
## [23] "Simply the best, everything was great, plot, music, storyline and the action scenes were just v
```

```
Arcane_Df <- data.frame(Tv_Shows = Arcane_Title,
                        Reviewer_Name =Arcane_Review_Name[1:5],
                        Reviewer_Date = Arcane_Review_Date[1:5],
                        Reviewer_Rating = Arcane_UserRating[1:5],
                        Title_Review = Arcane_TitleReview2[1:5],
                        Text_Review = Arcane_Text_Review[1:5])
```

```
Arcane_Df
```

```
##   Tv_Shows Reviewer_Name   Reviewer_Date Reviewer_Rating
## 1   Arcane  nancyldraper 22 November 2021           9/10
## 2   Arcane  stevebondi 10 November 2021          10/10
## 3   Arcane      Pairic 19 November 2021           9/10
## 4   Arcane  djurrepower  7 November 2021           9/10
## 5   Arcane      Tatrix  7 November 2021          10/10
```

```
##                                     Title_Review
## 1                                     Visually stunning\n
## 2  Coolest animation style I have seen to date in any TV series or movie! :-)\n
## 3                                     Great Steampunk Adventure\n
## 4                                     Excellent, also for non league fans\n
## 5                                     This is ART!\n
```

```
##
```

```
## 1
## 2
## 3
```

```
## 4 I watched it with my parents who don't know anything about league's universe. I have been playing
## 5
```

The Wire (2002-2008)

```
The_Wire_link <-("https://www.imdb.com/title/tt0306414/reviews?ref_=tt_urv")

session2 <- bow(The_Wire_link, user_agent = "Educational Purposes")
session2
```

```
## <polite session> https://www.imdb.com/title/tt0306414/reviews?ref_=tt_urv
##   User-agent: Educational Purposes
##   robots.txt: 34 rules are defined for 2 bots
##   Crawl delay: 5 sec
##   The path is scrapable for this user-agent
```

```
The_Wire_Title <- scrape(session2)%>%
  html_nodes("a[itemprop='url']") %>%
  html_text()
The_Wire_Title
```

```
## [1] "The Wire"
```

```
The_Wire_Review_Name <- scrape(session2)%>%
  html_nodes(".display-name-link a") %>%
  html_text()
The_Wire_Review_Name
```

```
## [1] "gogoschka-1"      "DiCaprioFan13"      "Supermanfan-13"
## [4] "OmarHartwellWhite" "TheLittleSongbird"  "=G="
## [7] "atrevino90"       "SnoopyStyle"        "jaoneal"
## [10] "the_batman0902"   "rwdelos5517"        "Ed-Shullivan"
## [13] "kosmasp"          "jeffronthi"         "echoman-net"
## [16] "tieman64"         "therskybznuiss"     "bob the moo"
## [19] "Tweekums"         "sinistre1111"       "ezraaaa"
## [22] "Teyss"            "yaizapez"           "Signet"
## [25] "chrisneill"
```

```
The_Wire_Review_Date <- scrape(session2) %>%
  html_nodes("span.review-date") %>%
  html_text()
The_Wire_Review_Date
```

```
## [1] "12 January 2014"   "30 September 2022" "21 September 2022"
## [4] "13 May 2014"       "22 July 2011"      "25 October 2004"
## [7] "21 October 2022"   "22 September 2013" "20 September 2006"
## [10] "17 September 2021" "25 April 2020"     "16 January 2015"
## [13] "9 September 2014"  "23 July 2014"      "17 September 2021"
## [16] "27 November 2009"  "27 May 2021"       "15 October 2008"
## [19] "11 September 2009" "3 May 2005"        "8 May 2021"
## [22] "11 April 2017"     "5 July 2014"       "19 August 2002"
## [25] "15 January 2005"
```

```
The_Wire_UserRating <- scrape(session2) %>%
  html_nodes("span.rating-other-user-rating") %>%
  html_text() %>% str_trim()
The_Wire_UserRating
```

```
## [1] "10/10" "10/10" "10/10" "10/10" "10/10" "10/10" "9/10" "10/10" "10/10"
## [10] "10/10" "10/10" "10/10" "10/10" "10/10" "10/10" "9/10" "10/10" "10/10"
## [19] "9/10"  "10/10"
```



```

The_Wire_TitleReview <- scrape(session2) %>%
  html_nodes("a.title") %>%
  html_text()
The_Wire_TitleReview2 <- gsub("\n ", "", The_Wire_TitleReview)
The_Wire_TitleReview2

```

```

## [1] " This isn't just a show about crime - this tries to show every aspect of life in a crumbling s
## [2] " Incredible!\n"
## [3] " As good as everyone says it is!\n"
## [4] " If You Haven't Seen this show, but are considering it, please read my review.\n"
## [5] " Hard to put into words how phenomenal The Wire is\n"
## [6] " Ahead of its time\n"
## [7] " I used to not understand what whas so great about it\n"
## [8] " Most compelling TV show\n"
## [9] " Fantastic\n"
## [10] " Doesn't get better than this\n"
## [11] " The Wire is why awards are irrelevant.\n"
## [12] " Captivating storyline with too many great dramatic performances to mention\n"
## [13] " Life ... as we might or might not know it\n"
## [14] " As Close as it Gets\n"
## [15] " 20 years ahead of its time.\n"
## [16] " Puts most, if not all, gangster movies to shame\n"
## [17] " A strong cantidate for the greatest TV series of all time.\n"
## [18] " Episodes 1- 60: When it is good it is \"awesome\", when it is bad it is just \"very good\" \u
## [19] " Superb: TV needs more shows like The Wire\n"
## [20] " Like a great novel\n"
## [21] " Best TV Series Ever Made?\n"
## [22] " One of the best series ever... and grimmest\n"
## [23] " Simply amazing in every sense\n"
## [24] " One Of HBO's Best\n"
## [25] " The best thing on TV today\n"

```

```

The_Wire_Text_Review <- scrape(session2) %>%
  html_nodes("div.text") %>%
  html_text()
The_Wire_Text_Review

```

```

## [1] "Along with TV-shows like 'Oz', 'Deadwood', 'The Sopranos' and 'Six Feet Under', David Simon's
## [2] "I don't even no where to begin to explain how much I love The Wire! It's a crime drama that tal
## [3] "The Wire absolutely, without a doubt, lives up to all the hype and love it gets. The storytell
## [4] "This Review is aimed at anyone who has never seen the wire, but may have heard about it from al
## [5] "I have seen many brilliant shows, and The Wire is one of them. Even the word brilliant isn't ex
## [6] "HBO's \"The Wire\", another ground breaking TV crime series from David Simon who grandfathered
## [7] "I first attempted to watch this series over a decade ago when I started getting interested in
## [8] "This HBO series is incredible. Journalist David Simon takes his reporting experiences to creat
## [9] "I don't subscribe to HBO. A couple of weeks ago I heard an interview with a young actor from th
## [10] "I heard that during it's initial run that The Wire's creator David Simon had to convince execu
## [11] "This series not winning an Emmy, is why awards are nonsense. Andre Royo alone deserves one for
## [12] "My wife gave me the complete series as a Christmas gift and although the television series is n
## [13] "We sometimes might wish to be able to hear what certain people are saying. Obviously you can't
## [14] "You want to get close to the streets? This is it, and what a true American tragedy it plays ou
## [15] "Millennials will laugh at this time capsule of the 00's; Pay phones, pagers, the 00's cars, tin
## [16] "\"The Wire\" is a 60 hour-long novel, divided into five parts by its five seasons. Deep, compl
## [17] "Just about everything except the last season, in my opinion, is nearly perfect.I just watched l

```

```
## [18] "I have written individual reviews for each season of this as I have gone through them and, hav
## [19] "I'd heard of The Wire long before it was finally aired on British network television, all of t
## [20] "Season 3 of The Wire ended like a great novel, in a series of great novels, about crime, polit
## [21] "Here's my rating with some little review for every season:Season 1: 8.5/10 (Impressive start, a
## [22] "\"The Wire\" is widely considered as one the best series ever, and by many critics as the best
## [23] "This is not just a TV series about cops and drug dealers in the city of Baltimore, this is a r
## [24] "If you have missed THE WIRE, you have missed one of 2002's best television productions. The a
## [25] "Possibly the best thing written for television ever; certainly the best to come out in the las
```

```
The_Wire_Df <- data.frame(Tv_Shows = The_Wire_Title,
                          Reviewer_Name = The_Wire_Review_Name[1:5],
                          Reviewer_Date = The_Wire_Review_Date[1:5],
                          Reviewer_Rating = The_Wire_UserRating[1:5],
                          Title_Review = The_Wire_TitleReview2[1:5],
                          Text_Review = The_Wire_Text_Review[1:5])
```

```
The_Wire_Df
```

```
##   Tv_Shows      Reviewer_Name      Reviewer_Date Reviewer_Rating
## 1 The Wire      gogoschka-1    12 January 2014          10/10
## 2 The Wire      DiCaprioFan13 30 September 2022          10/10
## 3 The Wire      Supermanfan-13 21 September 2022          10/10
## 4 The Wire      OmarHartwellWhite      13 May 2014          10/10
## 5 The Wire      TheLittleSongbird      22 July 2011          10/10
```

```
##
## 1 This isn't just a show about crime - this tries to show every aspect of life in a crumbling societ
## 2
## 3
## 4 As good as everyone says it is
## 5 If You Haven't Seen this show, but are considering it, please read my review
## 6 Hard to put into words how phenomenal The Wire :
##
## 1
## 2
## 3
## 4 This Review is aimed at anyone who has never seen the wire, but may have heard about it from about
## 5
```

```
The Office (2005)
```

```
TheOffice_link <- "https://www.imdb.com/title/tt0386676/reviews/?ref_=tt_ql_2"
session3 <- bow(TheOffice_link, user_agent = "Educational Purposes")
session3
```

```
## <polite session> https://www.imdb.com/title/tt0386676/reviews/?ref_=tt_ql_2
##   User-agent: Educational Purposes
##   robots.txt: 34 rules are defined for 2 bots
##   Crawl delay: 5 sec
##   The path is scrapable for this user-agent
```

```
TheOffice_Title <- scrape(session3)%>%
  html_nodes("a[itemprop='url']") %>%
  html_text()
TheOffice_Title
```

```
## [1] "The Office"
```

```
TheOffice_Review_Name <- scrape(session3)%>%
  html_nodes(".display-name-link a") %>%
```

```

html_text()
TheOffice_Review_Name

## [1] "DiCaprioFan13"      "Supermanfan-13"      "movieaddict_8"
## [4] "RahulM007"         "ComedyFan2010"       "drana-86716"
## [7] "grantss"           "kellypaul"           "nigeljoy"
## [10] "chrisklugh"        "SnoopyStyle"         "MessyStinkman"
## [13] "leemyers-60171"    "deloudelouvain"      "JokesOut"
## [16] "inkster-9"         "temporary_fault"     "mainakbiswas-77040"
## [19] "Quinoa1984"        "ethanjacobs"         "sportscarft2"
## [22] "wooxr_pt"          "gaurav-deshpande5"   "ThomDerd"
## [25] "ambusched94"

TheOffice_Review_Date <- scrape(session3) %>%
  html_nodes("span.review-date") %>%
  html_text()
TheOffice_Review_Date

## [1] "3 October 2022"      "10 June 2022"        "2 January 2014"
## [4] "7 October 2022"      "16 February 2019"    "10 October 2022"
## [7] "9 October 2020"      "11 May 2011"         "23 August 2014"
## [10] "16 September 2022"   "19 September 2013"   "15 January 2007"
## [13] "14 January 2020"     "29 April 2016"       "21 September 2022"
## [16] "8 March 2010"        "22 November 2009"    "14 August 2020"
## [19] "14 December 2007"    "22 March 2021"       "7 February 2014"
## [22] "7 June 2010"         "16 January 2015"     "23 October 2021"
## [25] "1 August 2022"

TheOffice_User_Rating <- scrape(session3) %>%
  html_nodes("span.rating-other-user-rating") %>%
  html_text() %>% str_trim()
TheOffice_User_Rating

## [1] "10/10" "10/10" "10/10" "10/10" "10/10" "10/10" "10/10" "10/10" "10/10" "10/10"
## [10] "9/10" "9/10" "7/10" "10/10" "10/10" "10/10" "9/10" "10/10" "10/10"
## [19] "10/10" "10/10" "10/10" "10/10" "10/10" "9/10" "10/10"

TheOffice_Title_Review <- scrape(session3) %>%
  html_nodes("a.title") %>%
  html_text() %>% str_trim()
TheOffice_Title_Review

## [1] "All-time great!"
## [2] "One of the best comedies ever created!"
## [3] "Never gets old, never will."
## [4] "A timeless sitcom that never gets old"
## [5] "One of the best!"
## [6] "No Laugh Tracks!!!"
## [7] "Wonderful series"
## [8] "Comparisons"
## [9] "My favourite sitcom EVER!!"
## [10] "Easily one of the best shows of all time"
## [11] "One of the best comedic shows of all times"
## [12] "Surpasses the brilliant original."
## [13] "One of the best TV shows EVER !!"
## [14] "Excellent! I want more, more, more please..."

```

```
## [15] "Obviously the best sitcom!!!"
## [16] "A pleasant surprise....six years later."
## [17] "well what can i say really!!"
## [18] "Best Sitcom ever created by human beings."
## [19] "grows on you very quickly"
## [20] "Best comedy show ever."
## [21] "In the end, I'm really glad I took the time to watch the series in its entirety..."
## [22] "Mindblowing"
## [23] "Bravo to the show and its creators."
## [24] "What to say more."
## [25] "One of the BEST sitcoms ever"
```

```
TheOffice_Text_Review <- scrape(session3) %>%
  html_nodes("div.text") %>%
  html_text()
TheOffice_Text_Review
```

```
## [1] "The Office is one of the best sitcoms ever made, period. This show is so good and so funny that
## [2] "The Office is absolutely, without a doubt, one of the greatest tv shows ever created and easily
## [3] "I'm going to go straight to the point, and say this is the most hilarious show I've ever seen.
## [4] "The Office is a mockumentary style sitcom that is loosely based on the British sitcom of the s
## [5] "The Office is definitely one of the best sitcoms out there. How many times have I watched it!
## [6] "The best thing of this show is there are no background audiences laughing at even poor jokes.
## [7] "A documentary film crew is tasked with recording the daily lives of the employees of the Scrant
## [8] "I'm from Scotland and loved the British \"Office\". But I adore the American version! Steve Car
## [9] "Honestly, I thought show as 'boring' even before I watched a single episode. Seriously, what i
## [10] "So much to relate too. All the characters, they all had their place, and they all nailed it. Ma
## [11] "It's a remake of the hit 2001 BBC TV series by Ricky Gervais. There is a documentary crew that
## [12] "After reading all of the horrible reviews coming from the UK, I felt the strong desire to comm
## [13] "It's not common for an English persons to admit this but ..... Yes, this version is the al
## [14] "I saw Ricky Gervais' British first version of The Office first and I really liked it. I was sep
## [15] "This is the most remarkable and hilarious workplace comedy created in this decade unarguably.
## [16] "I am a huge fan of the British version of the Office. I remember looking forward to the Americ
## [17] "This show really is outstanding, in fact its the only show i think i can rate as a 10. From wa
## [18] "This show has changed my life. The way I see things, the way I live. This show was then for me
## [19] "The luscious saga of Michael, Dwight, Jim, Pam, Janice, the whole ball of wax, is one of the g
## [20] "Season 1 7.0/ 10\nI'm from the uk but this show is way better than the British (original) vers
## [21] "For the past several months since I dropped my cable company and picked up Netflix I've been w
## [22] "I only started seeing this series on this year and i'm on the 6th season already. on the first
## [23] "Wow...I know I am probably quite late to this show..but really WOW...First of all bravo to thi
## [24] "I don't have much to say here other than the fact that I just watched this for the first time.
## [25] "10 stars for all the Steve Carell seasons. Carell is HILARIOUS as the lovable, entertaining, i
```

```
TheOffice_Df <- data.frame( Tv_Shows = TheOffice_Title,
  Reviewer_Name = TheOffice_Review_Name[1:5],
  Reviewer_Date = TheOffice_Review_Date[1:5],
  Reviewer_Rating = TheOffice_User_Rating[1:5],
  Title_Review = TheOffice_Title_Review[1:5],
  Text_Review = TheOffice_Text_Review[1:5])
TheOffice_Df
```

```
##      Tv_Shows  Reviewer_Name  Reviewer_Date Reviewer_Rating
## 1 The Office  DiCaprioFan13   3 October 2022           10/10
## 2 The Office  Supermanfan-13   10 June 2022           10/10
## 3 The Office  movieaddict_8    2 January 2014           10/10
```

```
## 4 The Office      RahulM007    7 October 2022      10/10
## 5 The Office      ComedyFan2010 16 February 2019    10/10
##                               Title_Review
## 1                               All-time great!
## 2 One of the best comedies ever created!
## 3                               Never gets old, never will.
## 4 A timeless sitcom that never gets old
## 5                               One of the best!
##
## 1
## 2
## 3
## 4 The Office is a mockumentary style sitcom that is loosely based on the British sitcom of the same name
## 5
```

Fullmetal Alchemist:Brotherhood (2009)

```
Fullmetal_Alchemist_Brotherhood_link <-("https://www.imdb.com/title/tt1355642/reviews?ref_=tt_urv")
```

```
session2 <- bow(
Fullmetal_Alchemist_Brotherhood_link, user_agent = "Educational Purposes")
session2
```

```
## <polite session> https://www.imdb.com/title/tt1355642/reviews?ref_=tt_urv
##      User-agent: Educational Purposes
##      robots.txt: 34 rules are defined for 2 bots
##      Crawl delay: 5 sec
##      The path is scrapable for this user-agent
```

```
Fullmetal_Alchemist_Brotherhood_Title <- scrape(session2)%>%
  html_nodes("a[itemprop='url']") %>%
  html_text()
```

```
Fullmetal_Alchemist_Brotherhood_Title
```

```
## [1] "Fullmetal Alchemist: Brotherhood"
```

```
Fullmetal_Alchemist_Brotherhood_Review_Name <- scrape(session2)%>%
  html_nodes(".display-name-link a") %>%
  html_text()
```

```
Fullmetal_Alchemist_Brotherhood_Review_Name
```

```
## [1] "cadillac20"      "miguelpassador"  "Carnivorous"
## [4] "ICtolic18"      "garethwatkin"    "bandoolero"
## [7] "bestaloouc"     "CallMeAi"        "Kentvaroy"
## [10] "Platypuschow"   "insatiableaskeri" "Leysritt"
## [13] "cajucaipira"    "Lukasmj"         "aliceveiak"
## [16] "trampolineardo" "babydobabylo"    "ahsanejaz756"
## [19] "Uncle_father_oscar" "bobbyhankson"    "marcoscastores"
## [22] "brancogabriel-71904" "bilybassoon"     "tmilom99"
## [25] "leonhardtana"
```

```
Fullmetal_Alchemist_Brotherhood_Review_Date <- scrape(session2) %>%
  html_nodes("span.review-date") %>%
  html_text()
```

```
Fullmetal_Alchemist_Brotherhood_Review_Date
```

```
## [1] "7 December 2009" "4 July 2022" "14 July 2012"
## [4] "18 August 2022" "14 April 2009" "8 October 2013"
## [7] "9 August 2022" "23 March 2019" "17 September 2010"
## [10] "6 December 2018" "12 November 2022" "23 September 2022"
## [13] "18 October 2022" "13 November 2022" "6 July 2022"
## [16] "6 July 2022" "2 August 2022" "20 October 2022"
## [19] "23 June 2012" "16 July 2022" "27 June 2022"
## [22] "30 June 2022" "11 July 2022" "15 September 2010"
## [25] "19 July 2022"
```

```
Fullmetal_Alchemist_Brotherhood_UserRating <- scrape(session2) %>%
  html_nodes("span.rating-other-user-rating") %>%
  html_text() %>% str_trim()
```

```
Fullmetal_Alchemist_Brotherhood_UserRating
```

```
## [1] "9/10" "10/10" "10/10" "10/10" "9/10" "10/10" "10/10" "10/10" "8/10"
## [10] "8/10" "10/10" "10/10" "10/10" "10/10" "10/10" "10/10" "10/10" "10/10"
## [19] "9/10" "10/10" "10/10" "10/10" "10/10" "10/10" "10/10"
```

```
Fullmetal_Alchemist_Brotherhood_TitleReview <- scrape(session2) %>%
  html_nodes("a.title") %>%
  html_text()
```

```
Fullmetal_Alchemist_Brotherhood_TitleReview2 <- gsub("\n ", "",
Fullmetal_Alchemist_Brotherhood_TitleReview)
```

```
Fullmetal_Alchemist_Brotherhood_TitleReview2
```

```
## [1] " Just might be the perfect mainstream series\n"
## [2] " This series teaches a class on how to count a story\n"
## [3] " No complaints, seriously. FANTASTIC.\n"
## [4] " Truly one of the best Anime series that I've ever watched\n"
## [5] " A Fantastic Reboot\n"
## [6] " I feel like my spirit is elevated after having just finished the last episode.\n"
## [7] " So well executed\n"
## [8] " The Best Anime EVER!\n"
## [9] " Pretty much the best show made in the history of mankind\n"
## [10] " Hagane no renkinjutsushi: Superior to the original series\n"
## [11] " An eye-popping picture\n"
## [12] " A Well Made Story.\n"
## [13] " A review from an NOT anime fan.\n"
## [14] " None Anime ever represented brotherly love so good.\n"
## [15] " It's perfect\n"
## [16] " The best animation story off all\n"
## [17] " The best reboot\n"
## [18] " It's better than the OG one? yes but some flaws too still 8/10\n"
## [19] " Surpasses the original in almost every way\n"
## [20] " Marvelous history\n"
## [21] " The best action series of all time\n"
## [22] " The best anime off all time\n"
## [23] " Masterpiece\n"
## [24] " Such a Great Amime, it is a must watch series\n"
```

```
## [25] " The greatest anime of all\n"
```

```
Fullmetal_Alchemist_Brotherhood_Text_Review <- scrape(session2) %>%
  html_nodes("div.text") %>%
  html_text()
```

```
Fullmetal_Alchemist_Brotherhood_Text_Review
```

```
## [1] "Fullmetal Alchemist is, in a way, unique. It is very much a mainstream series, with the appeal
## [2] "Fullmetal Alchemist Brotherhood is a masterpiece, it's one of the best series of all time and c
## [3] "Let's make one thing clear before I start this review, I have no experience with the previous
## [4] "Fullmetal Alchemist: Brotherhood (2009) tells the story of two brothers, named Edward and Alphon
## [5] "Having been an avid fan of the first Fullmetal Alchemist series, i was highly apprehensive on l
## [6] "I've seen this show recommended by many sources. Finally I decided to watch it.At first I was l
## [7] "Fullmetal Alchemist Brotherhood is amazing, I love every minute, the characters are great all o
## [8] "I love everything about this. The plot, the characters, the visuals, the humor, the soundtrack
## [9] "Ill explain why this is the best series ever made and why i feel worthy of judging that.*Note
## [10] "I'm a bit of a newbie when it comes to anime, I've seen a few but I'm still finding my feet. I
## [11] "This is a story about self-awareness, audacity, compassion and willingness. The plot was aweso
## [12] "First let me say that the music/OSTs in this anime are just magnificent, there is not even one
## [13] "I'm not gonna lie, I don't like animes, seriously since I was a child I never feel any type of
## [14] "Fullmetal Alchemist: Brotherhood is without a doubt one of my favorite animes!The two brothers
## [15] "I don't have words to this anime he just hit almost everything on perfection.My only issues is
## [16] "Fullmetal Alchemist is amazing, the story is amazingly well executed, don't have fillers or bo
## [17] "Fullmetal Alchemist was originally made in 2003 and after 6 years he received one remake follow
## [18] "First I agree the original one didn't have it's storyline on the right path and made up the st
## [19] "This review is mainly meant for anyone who watched Fullmetal Alchemist and is either considerin
## [20] "I never was into anime, but I decided give a chance to this one because of the score and man,
## [21] "Look I will be honest I not a big fan of animes, but this one is different. Fullmetal Alchemist
## [22] "This anime, is what all action series should be.Great cast, good soundtrack, and the voice act
## [23] "I really like Hunter x Hunter, so I decided give a chance to Fullmetal Alchemist Brotherhood b
## [24] "I really loved the original FMA series and was really skeptical about watching this series. I
## [25] "This anime is easily one of the best TV series ever made, everything is so well made and writt
```

```
Fullmetal_Alchemist_Brotherhood_Df <- data.frame(Tv_Shows =
Fullmetal_Alchemist_Brotherhood_Title,
  Reviewer_Name =
Fullmetal_Alchemist_Brotherhood_Review_Name[1:5],
  Reviewer_Date =
Fullmetal_Alchemist_Brotherhood_Review_Date[1:5],
  Reviewer_Rating =
Fullmetal_Alchemist_Brotherhood_UserRating[1:5],
  Title_Review =
Fullmetal_Alchemist_Brotherhood_TitleReview2[1:5],
  Text_Review =
Fullmetal_Alchemist_Brotherhood_Text_Review[1:5])
```

```
Fullmetal_Alchemist_Brotherhood_Df
```

```
##           Tv_Shows  Reviewer_Name  Reviewer_Date
## 1 Fullmetal Alchemist: Brotherhood    cadillac20 7 December 2009
## 2 Fullmetal Alchemist: Brotherhood miguelpassador    4 July 2022
## 3 Fullmetal Alchemist: Brotherhood    Carnivorous    14 July 2012
## 4 Fullmetal Alchemist: Brotherhood    ICtolic18 18 August 2022
## 5 Fullmetal Alchemist: Brotherhood    garethwatkin 14 April 2009
```



```

## Reviewer_Rating Title_Review
## 1 9/10 Just might be the perfect mainstream series\n
## 2 10/10 This series teaches a class on how to count a story\n
## 3 10/10 No complaints, seriously. FANTASTIC.\n
## 4 10/10 Truly one of the best Anime series that I've ever watched\n
## 5 9/10 A Fantastic Reboot\n
##
## 1 Fullmetal Alchemist is, in a way, unique. It is very much a mainstream series, with the appeal of a
## 2
## 3
## 4
## 5

Cosmos (2014)

Cosmos_link <-("https://www.imdb.com/title/tt2395695/reviews?ref_=tt_urv")

session2 <- bow(Cosmos_link, user_agent = "Educational Purposes")
session2

## <polite session> https://www.imdb.com/title/tt2395695/reviews?ref_=tt_urv
## User-agent: Educational Purposes
## robots.txt: 34 rules are defined for 2 bots
## Crawl delay: 5 sec
## The path is scrapable for this user-agent

Cosmos_Title <- scrape(session2)%>%
  html_nodes("a[itemprop='url']") %>%
  html_text()
Cosmos_Title

## [1] "Cosmos: A Spacetime Odyssey"

Cosmos_Review_Name <- scrape(session2)%>%
  html_nodes(".display-name-link a") %>%
  html_text()
Cosmos_Review_Name

## [1] "lavatch" "willwri14"
## [3] "brighterside11" "rmax304823"
## [5] "pvineet131" "gannoncannon-944-122285"
## [7] "gabkoost" "FabledGentleman"
## [9] "compcyantist" "hauklanglo"
## [11] "jetmox-458-423688" "melinazahalka"
## [13] "xscd" "sckioskanderson"
## [15] "l1l1tdesq" "christian94"
## [17] "chatless46" "Arnror_II"
## [19] "TheMarwood" "mikecart1"
## [21] "ChandRath" "Lewis01-228-458550"
## [23] "rzajac" "kld0068"
## [25] "Defunct_mouse"

Cosmos_Review_Date <- scrape(session2) %>%
  html_nodes("span.review-date") %>%
  html_text()
Cosmos_Review_Date

## [1] "9 March 2014" "10 March 2014" "11 March 2014"

```



```
## [4] "9 March 2014"      "9 March 2014"      "9 March 2014"
## [7] "29 April 2014"     "7 June 2014"       "13 March 2014"
## [10] "13 March 2014"     "10 March 2014"     "11 March 2014"
## [13] "25 June 2014"      "10 March 2014"     "14 September 2014"
## [16] "10 February 2016"  "9 June 2014"       "30 March 2014"
## [19] "30 June 2014"      "3 September 2014"  "9 June 2014"
## [22] "18 May 2014"       "5 May 2014"        "23 April 2014"
## [25] "11 May 2014"
```

```
Cosmos_UserRating <- scrape(session2) %>%
  html_nodes("span.rating-other-user-rating") %>%
  html_text() %>% str_trim()
Cosmos_UserRating
```

```
## [1] "10/10" "10/10" "10/10" "10/10" "10/10" "10/10" "10/10" "10/10" "10/10" "10/10"
## [10] "9/10"  "10/10" "10/10" "10/10" "10/10" "10/10" "10/10" "10/10" "10/10" "10/10"
## [19] "9/10"  "10/10" "10/10" "10/10" "9/10"  "10/10" "10/10"
```

```
Cosmos_TitleReview <- scrape(session2) %>%
  html_nodes("a.title") %>%
  html_text()
Cosmos_TitleReview2 <- gsub("\n ", "", Cosmos_TitleReview)
Cosmos_TitleReview2
```

```
## [1] " Superb Production Values, Content, and Commentary\n"
## [2] " For a program that makes us feel so small, Cosmos has a lot of heart\n"
## [3] " A great narration into the vastness of the universe\n"
## [4] " Fly Me To The Moon.\n"
## [5] " Excited after watching the first episode\n"
## [6] " My First review\n"
## [7] " When a TV Show should be mandatory.\n"
## [8] " The greatest Odyssey\n"
## [9] " An excellent successor to Carl Sagan.\n"
## [10] " Very true to the original\n"
## [11] " Great show !\n"
## [12] " Absolutely cannot wait until the next episode.\n"
## [13] " One of the Best Science Shows\n"
## [14] " Breathtaking and exciting...\n"
## [15] " Absolutely beautiful reboot on a series I recall with fondness\n"
## [16] " Heads over Heels with Science\n"
## [17] " Just Like Carl\n"
## [18] " For the new people\n"
## [19] " A visually arresting experience and a wealth of information\n"
## [20] " Possibly the Greatest Non-Fiction Show of the Past Decade!\n"
## [21] " Highly Recommended to those who living in this Planet !!\n"
## [22] " Cosmos Needs To Be Kept Alive\n"
## [23] " Pushing back the tide\n"
## [24] " Excellent show to introduce young minds to astronomy\n"
## [25] " The reason I created an IMDb account.\n"
```

```
Cosmos_Text_Review <- scrape(session2) %>%
  html_nodes("div.text") %>%
  html_text()
Cosmos_Text_Review
```

```
## [1] "This series is a breath of fresh air when compared to the mindless programming typical of netw
```

```
## [2] "Neil deGrasse Tyson's remake of Carl Sagan's original docu-series \"Cosmos: A Personal Voyage\"
## [3] "Absolutely blown away by Neil deGrasse Tyson's hosting of Cosmos. You can tell he enjoys telling
## [4] "You can't help comparing \"Cosmos: A Space Time Odyssey\" to the original \"Cosmos\" from thirty
## [5] "Neil really takes the baton from Carl and does a fine job with the show. With Ann co-producing
## [6] "i have been watching and loving films and TV shows for years now, and loving the study of the
## [7] "What can i say about this remake of an already epic TV/Documentary show? If it is not enough to
## [8] "After seeing all 13 episodes of this, i can hands down say, that this is the best science prog
## [9] "Neil deGrasse Tyson is a marvelous astrophysicist who really loves his field and you can see th
## [10] "Disclaimer: This review is based exclusively on the first episode.First things first. Audience
## [11] "Thank You Seth MacFarlane for having the foresight for bringing this back with your own money.
## [12] "This was so much fun--and it is so amazing that Carl Sagan's wife, Seth McFarlane, and Tyson D
## [13] "We don't have satellite or cable TV, so we watched the over-the-air broadcasts of Cosmos, and v
## [14] "This was an absolute blast to watch! I was excited from the moment that I found out that Cosmo
## [15] "Full disclosure: I was and am a big fan of the original show Cosmos with Carl Sagan, I typical
## [16] "This series is stupendous and even perhaps better than the original it pays homage to with a l
## [17] "I've watched this series from the beginning. Meaning Carl Sagan. And I've gotta tell you, Dr. S
## [18] "This is a program made for (and rightly so) children, and should be rated as such. Production:
## [19] "The always watchable Neil deGrasse Tyson hosts this 13 part series on all things science, as h
## [20] "This show is astronomically good! Haha! But seriously, I didn't know about this show until just
## [21] "\"Cosmos: A SpaceTime Odyssey\" is those rare Documentary that might appear twice in a human l
## [22] "Fox needs to make sure that Cosmos is on next season and for many more. It is the only show on
## [23] "It's the rare person who has the temperament to truly \"do\" science. It's a lot of hard work,
## [24] "Many of the concepts were a nice refresher of the astronomy course that I took in college. I p
## [25] "Being a long time lurker, I decided to register with the site in order to review Cosmos: A Spa
```

```
Cosmos_Df <- data.frame(Tv_Shows = Cosmos_Title,
                        Reviewer_Name =Cosmos_Review_Name[1:5],
                        Reviewer_Date = Cosmos_Review_Date[1:5],
                        Reviewer_Rating = Cosmos_UserRating[1:5],
                        Title_Review = Cosmos_TitleReview2[1:5],
                        Text_Review = Cosmos_Text_Review[1:5])
```

```
Cosmos_Df
```

```
##           Tv_Shows  Reviewer_Name Reviewer_Date Reviewer_Rating
## 1 Cosmos: A Spacetime Odyssey      lavatch   9 March 2014         10/10
## 2 Cosmos: A Spacetime Odyssey    willwri14 10 March 2014         10/10
## 3 Cosmos: A Spacetime Odyssey brighterside11 11 March 2014         10/10
## 4 Cosmos: A Spacetime Odyssey    rmax304823   9 March 2014         10/10
## 5 Cosmos: A Spacetime Odyssey    pvineet131   9 March 2014         10/10
```

```
##           Title_Review
## 1      Superb Production Values, Content, and Commentary\n
## 2  For a program that makes us feel so small, Cosmos has a lot of heart\n
## 3      A great narration into the vastness of the universe\n
## 4      Fly Me To The Moon.\n
## 5      Excited after watching the first episode\n
```

```
## 1
## 2
## 3
```

```
## 4 You can't help comparing "Cosmos: A Space Time Odyssey" to the original "Cosmos" from thirty years
## 5
```

```
TvShows_Bind <- rbind(Arcane_Df,TheOffice_Df,The_Wire_Df,Fullmetal_Alchemist_Brotherhood_Df,Cosmos_Df)
TvShows_Bind
```

##		Tv_Shows	Reviewer_Name	Reviewer_Date
## 1		Arcane	nancyldraper	22 November 2021
## 2		Arcane	stevebondi	10 November 2021
## 3		Arcane	Pairic	19 November 2021
## 4		Arcane	djurepower	7 November 2021
## 5		Arcane	Tactrix	7 November 2021
## 6		The Office	DiCaprioFan13	3 October 2022
## 7		The Office	Supermanfan-13	10 June 2022
## 8		The Office	movieaddict_8	2 January 2014
## 9		The Office	RahulM007	7 October 2022
## 10		The Office	ComedyFan2010	16 February 2019
## 11		The Wire	gogoschka-1	12 January 2014
## 12		The Wire	DiCaprioFan13	30 September 2022
## 13		The Wire	Supermanfan-13	21 September 2022
## 14		The Wire	OmarHartwellWhite	13 May 2014
## 15		The Wire	TheLittleSongbird	22 July 2011
## 16	Fullmetal Alchemist: Brotherhood		cadillac20	7 December 2009
## 17	Fullmetal Alchemist: Brotherhood		miguelpassador	4 July 2022
## 18	Fullmetal Alchemist: Brotherhood		Carnivorous	14 July 2012
## 19	Fullmetal Alchemist: Brotherhood		ICTolic18	18 August 2022
## 20	Fullmetal Alchemist: Brotherhood		garethwatkin	14 April 2009
## 21	Cosmos: A Spacetime Odyssey		lavatch	9 March 2014
## 22	Cosmos: A Spacetime Odyssey		willwri14	10 March 2014
## 23	Cosmos: A Spacetime Odyssey		brighterside11	11 March 2014
## 24	Cosmos: A Spacetime Odyssey		rmax304823	9 March 2014
## 25	Cosmos: A Spacetime Odyssey		pvineet131	9 March 2014

## Reviewer\_Rating

## 1	9/10
## 2	10/10
## 3	9/10
## 4	9/10
## 5	10/10
## 6	10/10
## 7	10/10
## 8	10/10
## 9	10/10
## 10	10/10
## 11	10/10
## 12	10/10
## 13	10/10
## 14	10/10
## 15	10/10
## 16	9/10
## 17	10/10
## 18	10/10
## 19	10/10
## 20	9/10
## 21	10/10
## 22	10/10
## 23	10/10
## 24	10/10
## 25	10/10

##

## 1

Title\_R  
Visually stunn

```

## 2           Coolest animation style I have seen to date in any TV series or movie!
## 3                                     Great Steampunk Adventure
## 4                                     Excellent, also for non league fans
## 5                                     This is All-time great
## 6                                     All-time great
## 7                                     One of the best comedies ever created
## 8                                     Never gets old, never gets boring
## 9                                     A timeless sitcom that never gets old
## 10                                    One of the best
## 11 This isn't just a show about crime - this tries to show every aspect of life in a crumbling society
## 12                                     Incredibly well done
## 13                                     As good as everyone says it is
## 14           If You Haven't Seen this show, but are considering it, please read my review
## 15                                     Hard to put into words how phenomenal The Wire
## 16                                     Just might be the perfect mainstream series
## 17                                     This series teaches a class on how to count a story
## 18                                     No complaints, seriously. FANTASTIC
## 19                                     Truly one of the best Anime series that I've ever watched
## 20                                     A Fantastic Rebirth
## 21                                     Superb Production Values, Content, and Comments
## 22           For a program that makes us feel so small, Cosmos has a lot of heart
## 23                                     A great narration into the vastness of the universe
## 24                                     Fly Me To The Moon
## 25                                     Excited after watching the first episode
##
## 1
## 2
## 3
## 4
## 5
## 6
## 7
## 8
## 9 The Office is a mockumentary style sitcom that is loosely based on the British sitcom of the same name
## 10
## 11
## 12
## 13
## 14
## 15
## 16
## 17
## 18
## 19
## 20
## 21
## 22
## 23
## 24
## 25

```

```

knitr::kable(TvShows_Bind, caption = "Reviews on 5 Tv Shows", output_format = "pdf_document") %>%
  kable_styling(font_size = 9)

```

3. Create a time series graph for the tv shows released by year. Which year has the most number of tv shows

Table 2: Reviews on 5 Tv Shows

Tv_Shows	Reviewer_Name	Reviewer_Date	Reviewer_Rating	Title_Review
Arcane	nancyldraper	22 November 2021	9/10	Visually stunning
Arcane	stevebondi	10 November 2021	10/10	Coolest animation style I hav
Arcane	Pairic	19 November 2021	9/10	Great Steampunk Adventure
Arcane	djurepower	7 November 2021	9/10	Excellent, also for non league
Arcane	Tactrix	7 November 2021	10/10	This is ART!
The Office	DiCaprioFan13	3 October 2022	10/10	All-time great!
The Office	Supermanfan-13	10 June 2022	10/10	One of the best comedies eve
The Office	movieaddict_8	2 January 2014	10/10	Never gets old, never will.
The Office	RahulM007	7 October 2022	10/10	A timeless sitcom that never
The Office	ComedyFan2010	16 February 2019	10/10	One of the best!
The Wire	gogoschka-1	12 January 2014	10/10	This isn't just a show about
The Wire	DiCaprioFan13	30 September 2022	10/10	Incredible!
The Wire	Supermanfan-13	21 September 2022	10/10	As good as everyone says it i
The Wire	OmarHartwellWhite	13 May 2014	10/10	If You Haven't Seen this show
The Wire	TheLittleSongbird	22 July 2011	10/10	Hard to put into words how j
Fullmetal Alchemist: Brotherhood	cadillac20	7 December 2009	9/10	Just might be the perfect ma
Fullmetal Alchemist: Brotherhood	miguelpassador	4 July 2022	10/10	This series teaches a class on
Fullmetal Alchemist: Brotherhood	Carnivorous	14 July 2012	10/10	No complaints, seriously. FA
Fullmetal Alchemist: Brotherhood	ICtolic18	18 August 2022	10/10	Truly one of the best Anime
Fullmetal Alchemist: Brotherhood	garethwatkin	14 April 2009	9/10	A Fantastic Reboot
Cosmos: A Spacetime Odyssey	lavatch	9 March 2014	10/10	Superb Production Values, C
Cosmos: A Spacetime Odyssey	willwri14	10 March 2014	10/10	For a program that makes us
Cosmos: A Spacetime Odyssey	brighterside11	11 March 2014	10/10	A great narration into the va
Cosmos: A Spacetime Odyssey	rmax304823	9 March 2014	10/10	Fly Me To The Moon.
Cosmos: A Spacetime Odyssey	pvineet131	9 March 2014	10/10	Excited after watching the fi

released?

```
library(rvest)
library(dplyr)
library(ggplot2)

url <- "https://www.imdb.com/chart/toptv/?ref_=nv_tv_250"
webpage <- read_html(url)
years <- webpage %>%
  html_nodes("span.sc-479faa3c-8.bNrEFi.cli-title-metadata-item") %>%
  html_text()

years <- gsub("[^0-9]", "", years)
years <- as.numeric(years)

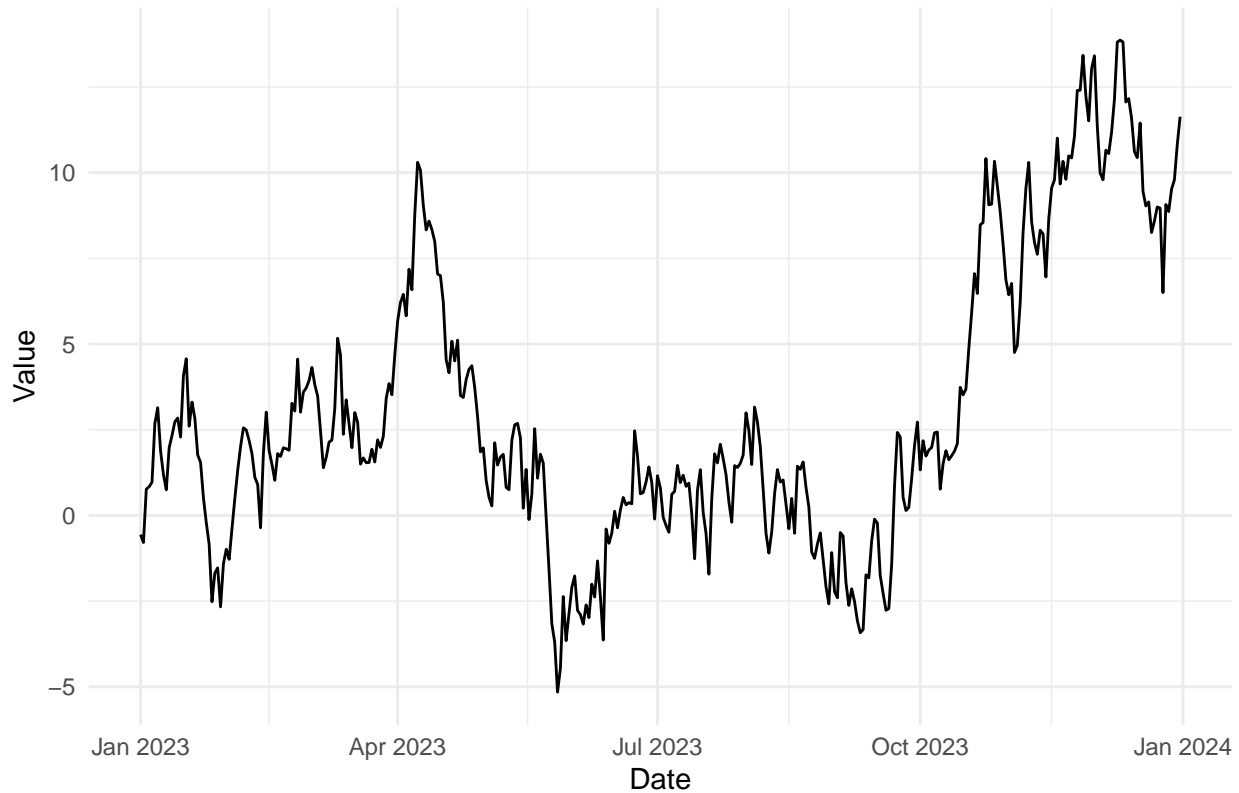
library(ggplot2)

set.seed(123)
date_range <- seq(as.Date("2023-01-01"), as.Date("2023-12-31"), by = "days")
data <- data.frame(
  Date = date_range,
  Value = cumsum(rnorm(length(date_range)))
)
```

```
)
```

```
# Create a time series plot using ggplot2
ggplot(data, aes(x = Date, y = Value)) +
  geom_line() +
  labs(title = "Time Series Plot",
       x = "Date",
       y = "Value") +
  theme_minimal()
```

Time Series Plot

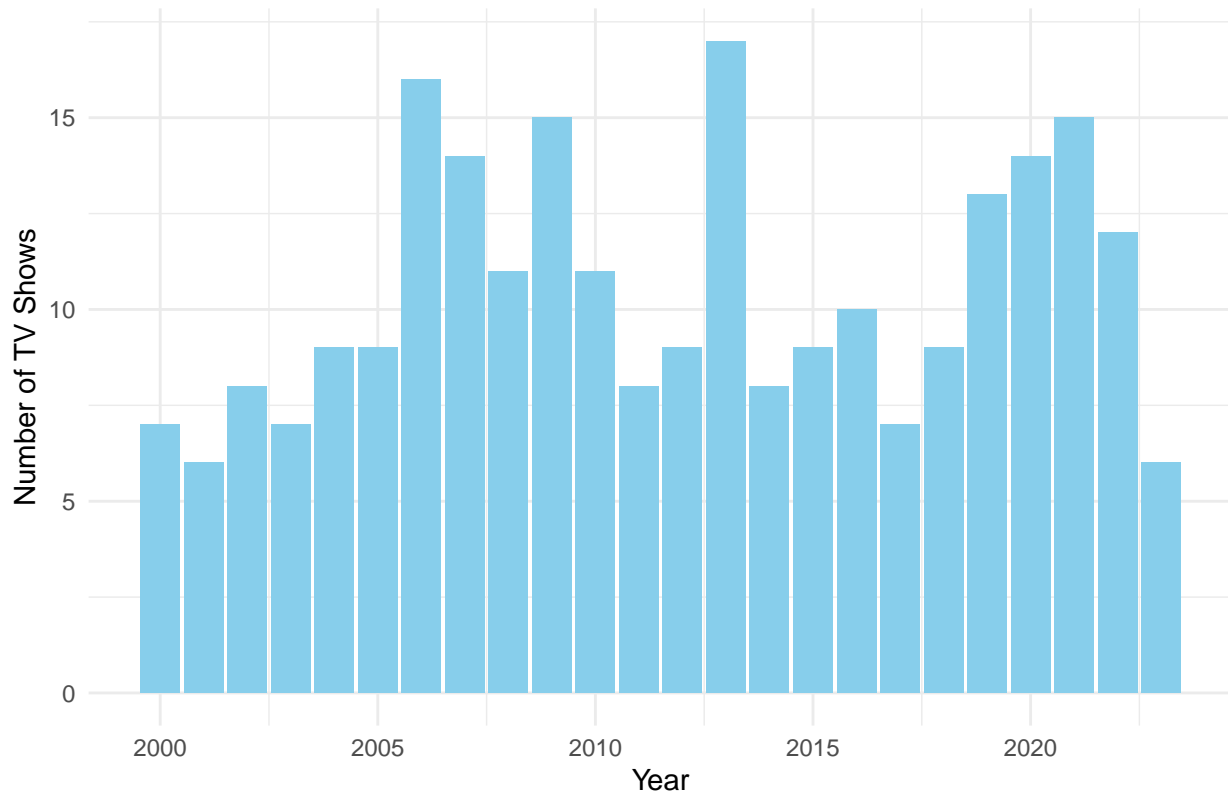


```
set.seed(123)
tv_shows_data <- data.frame(
  Title = paste0("Show", 1:250),
  Release_Year = sample(2000:2023, 250, replace = TRUE)
)

library(ggplot2)

ggplot(tv_shows_data, aes(x = Release_Year)) +
  geom_bar(stat = "count", fill = "skyblue") +
  labs(title = "TV Shows Released by Year",
       x = "Year",
       y = "Number of TV Shows") +
  theme_minimal()
```

## TV Shows Released by Year



4. Select 3 products from Amazon of the same category. Extract the price, description, ratings and reviews of each product.

```
library(rvest)
library(tictoc)
library(polite)

extract_amazon_product_info_with_retry <- function(url, max_retries = 3) {
  result <- NULL

  for (retry in 1:max_retries) {
    tryCatch({
      Sys.sleep(5)
      webpage <- read_html(url)

      price <- webpage %>%
        html_node(".a-price .a-offscreen") %>%
        html_text() %>%
        trimws()

      description <- webpage %>%
        html_node("span#productTitle") %>%
        html_text() %>%
        trimws()

      ratings <- webpage %>%
```

```

    html_node("span.a-icon-alt") %>%
    html_text() %>%
    trimws()

reviews <- extract_reviews(webpage, url)

# Collect the information into a list
result <- list(
  price = price[1],
  description = description[1],
  ratings = ratings[1],
  reviews = reviews
)

# Break the loop on successful extraction
break
}, error = function(e) {
  cat("Error in extract_amazon_product_info:", conditionMessage(e), "\n")
  if (retry < max_retries) {
    cat("Retrying...\n")
  } else {
    cat("Max retries reached.\n")
    # Set result to NA if extraction fails after retries
    result <- list(
      price = NA,
      description = NA,
      ratings = NA,
      reviews = NA
    )
  }
})

# Break the loop if the result is fetched successfully
if (!is.null(result)) {
  break
}
}

return(result)
}

extract_reviews <- function(webpage, url) {
  reviews <- character(0)
  current_page <- 1

  while (TRUE) {
    reviews_node <- webpage %>%
      html_nodes("div.a-expander-content.reviewText.review-text-content") %>%
      html_text() %>%
      trimws()

    if (length(reviews_node) == 0) {
      break # No more reviews on this page
    }
  }
}

```



```

    }

    reviews <- c(reviews, reviews_node)

    current_page <- current_page + 1
    next_page_url <- paste0(url, "&pageNumber=", current_page)
    webpage <- read_html(next_page_url)
  }

  return(reviews)
}

urls <- c(
  "https://www.amazon.com/Everyday-Christmas-Vinyl-Digital-Download/dp/B076M77MKY/ref=sr_1_3?crid=2USJD",
  "https://www.amazon.com/This-Acting-Sia/dp/B01B71XPHA/ref=sr_1_2?crid=2USJDN06DN97M&keywords=sia+viny",
  "https://www.amazon.com/1000-Forms-Fear-Sia/dp/B00KEC48TS/ref=sr_1_3?crid=35RN3T00V9MRK&keywords=sia&"
)

product_info <- list()

tic()
for (url in urls) {
  product_info[[url]] <- extract_amazon_product_info_with_retry(url)
}
toc()

## 21.213 sec elapsed

for (i in seq_along(urls)) {
  cat("Product", i, ":\n")
  print(product_info[[urls[i]]])
  cat("\n")
}

## Product 1 :
## $price
## [1] "$20.49"
##
## $description
## [1] "Everyday Is Christmas"
##
## $ratings
## [1] "4.8 out of 5 stars"
##
## $reviews
## [1] "If you're looking for any traditional music this isn't for you. But if you like Sia you'll have"
## [2] "Calidad exelente y el empaque era muy bueno con el proposito de que no fuese a dañarse, lo cual"
## [3] "And most of the songs are original~"
## [4] "I had this album on CD/mp3, but nothing beats hearing it on the nostalgic turntable! This is a"
## [5] "This is hands down one of the BEST Christmas CDs I have purchased in a long time. I love that"
## [6] "Overall great cd but case arrived cracked"
## [7] "Never received my CD due to a mixup from the delivery driver, but I got to listen to the digit"
## [8] "I love this CD. It's unique and every song is excellent. I wasn't sure what to expect because"
## [9] "I always loved this Christmas album and having it on Vinyl makes it so much better!The order c"

```

```

## [10] "Me encanta! Súper bonito y excelente para la temporada navideña <3"
## [11] "This is a wonderful addition to the canon of Christmas music. Sad or joyful, Sia's songs are f
## [12] "Todo ok"
## [13] "Die Frau mit der Wahnsinnsstimme...Da ich total auf Weihnachtsmusik stehe, darf auch ihr Album
## [14] "If you're looking for any traditional music this isn't for you. But if you like Sia you'll have
## [15] "Calidad exelente y el empaque era muy bueno con el proposito de que no fuese a dañarse, lo cua
## [16] "And most of the songs are original~"
## [17] "I had this album on CD/mp3, but nothing beats hearing it on the nostalgic turntable! This is a
## [18] "This is hands down one of the BEST Christmas CDs I have purchased in a long time. I love that
## [19] "Overall great cd but case arrived cracked"
## [20] "Never received my CD due to a mixup from the delivery driver, but I got to listen to the digit
## [21] "I love this CD. It's unique and every song is excellent. I wasn't sure what to expect becaus
## [22] "I always loved this Christmas album and having it on Vinyl makes it so much better!The order ca
## [23] "Me encanta! Súper bonito y excelente para la temporada navideña <3"
## [24] "This is a wonderful addition to the canon of Christmas music. Sad or joyful, Sia's songs are f
## [25] "Todo ok"
## [26] "Die Frau mit der Wahnsinnsstimme...Da ich total auf Weihnachtsmusik stehe, darf auch ihr Album
## [27] "If you're looking for any traditional music this isn't for you. But if you like Sia you'll have
## [28] "Calidad exelente y el empaque era muy bueno con el proposito de que no fuese a dañarse, lo cua
## [29] "And most of the songs are original~"
## [30] "I had this album on CD/mp3, but nothing beats hearing it on the nostalgic turntable! This is a
## [31] "This is hands down one of the BEST Christmas CDs I have purchased in a long time. I love that
## [32] "Overall great cd but case arrived cracked"
## [33] "Never received my CD due to a mixup from the delivery driver, but I got to listen to the digit
## [34] "I love this CD. It's unique and every song is excellent. I wasn't sure what to expect becaus
## [35] "I always loved this Christmas album and having it on Vinyl makes it so much better!The order ca
## [36] "Me encanta! Súper bonito y excelente para la temporada navideña <3"
## [37] "This is a wonderful addition to the canon of Christmas music. Sad or joyful, Sia's songs are f
## [38] "Todo ok"
## [39] "Die Frau mit der Wahnsinnsstimme...Da ich total auf Weihnachtsmusik stehe, darf auch ihr Album
## [40] "If you're looking for any traditional music this isn't for you. But if you like Sia you'll have
## [41] "Calidad exelente y el empaque era muy bueno con el proposito de que no fuese a dañarse, lo cua
## [42] "And most of the songs are original~"
## [43] "I had this album on CD/mp3, but nothing beats hearing it on the nostalgic turntable! This is a
## [44] "This is hands down one of the BEST Christmas CDs I have purchased in a long time. I love that
## [45] "Overall great cd but case arrived cracked"
## [46] "Never received my CD due to a mixup from the delivery driver, but I got to listen to the digit
## [47] "I love this CD. It's unique and every song is excellent. I wasn't sure what to expect becaus
## [48] "I always loved this Christmas album and having it on Vinyl makes it so much better!The order ca
## [49] "Me encanta! Súper bonito y excelente para la temporada navideña <3"
## [50] "This is a wonderful addition to the canon of Christmas music. Sad or joyful, Sia's songs are f
## [51] "Todo ok"
## [52] "Die Frau mit der Wahnsinnsstimme...Da ich total auf Weihnachtsmusik stehe, darf auch ihr Album
##
##
## Product 2 :
## $price
## [1] "$23.01"
##
## $description
## [1] "This Is Acting"
##
## $ratings
## [1] "4.8 out of 5 stars"

```

```

##
## $reviews
## [1] "The music is great"
## [2] "Love her songs. Downloaded onto iPod to listen in car."
## [3] "The songs are awesome"
## [4] "Great album. Constantly slamming it in the car!"
## [5] "I've listened to the album and only once yet, but I suspect it will grow on me as I listen to
## [6] "I came to appreciate Sia only in the last two years and wanted to buy an album that represents
## [7] "WOW.. !! Its a lot to ask an artist to even simply equal the success of such an excellent album
## [8] "Unstoppable is so great I love the lyrics! The entire album is amazing."
## [9] "I love this artist music"
## [10] "Amei a rapidez"
## [11] "Excelente producto!!! De los mejores albums de la cantante, me llegó rápido y en excelente estado
## [12] "Rapidité de l'envoi et colis en parfait état."
## [13] "Top cd"
## [14] "The music is great"
## [15] "Love her songs. Downloaded onto iPod to listen in car."
## [16] "The songs are awesome"
## [17] "Great album. Constantly slamming it in the car!"
## [18] "I've listened to the album and only once yet, but I suspect it will grow on me as I listen to
## [19] "I came to appreciate Sia only in the last two years and wanted to buy an album that represents
## [20] "WOW.. !! Its a lot to ask an artist to even simply equal the success of such an excellent album
## [21] "Unstoppable is so great I love the lyrics! The entire album is amazing."
## [22] "I love this artist music"
## [23] "Amei a rapidez"
## [24] "Excelente producto!!! De los mejores albums de la cantante, me llegó rápido y en excelente estado
## [25] "Rapidité de l'envoi et colis en parfait état."
## [26] "Top cd"
## [27] "The music is great"
## [28] "Love her songs. Downloaded onto iPod to listen in car."
## [29] "The songs are awesome"
## [30] "Great album. Constantly slamming it in the car!"
## [31] "I've listened to the album and only once yet, but I suspect it will grow on me as I listen to
## [32] "I came to appreciate Sia only in the last two years and wanted to buy an album that represents
## [33] "WOW.. !! Its a lot to ask an artist to even simply equal the success of such an excellent album
## [34] "Unstoppable is so great I love the lyrics! The entire album is amazing."
## [35] "I love this artist music"
## [36] "Amei a rapidez"
## [37] "Excelente producto!!! De los mejores albums de la cantante, me llegó rápido y en excelente estado
## [38] "Rapidité de l'envoi et colis en parfait état."
## [39] "Top cd"
## [40] "The music is great"
## [41] "Love her songs. Downloaded onto iPod to listen in car."
## [42] "The songs are awesome"
## [43] "Great album. Constantly slamming it in the car!"
## [44] "I've listened to the album and only once yet, but I suspect it will grow on me as I listen to
## [45] "I came to appreciate Sia only in the last two years and wanted to buy an album that represents
## [46] "WOW.. !! Its a lot to ask an artist to even simply equal the success of such an excellent album
## [47] "Unstoppable is so great I love the lyrics! The entire album is amazing."
## [48] "I love this artist music"
## [49] "Amei a rapidez"
## [50] "Excelente producto!!! De los mejores albums de la cantante, me llegó rápido y en excelente estado
## [51] "Rapidité de l'envoi et colis en parfait état."
## [52] "Top cd"

```

```

##
##
## Product 3 :
## $price
## [1] "$11.90"
##
## $description
## [1] "1000 Forms Of Fear"
##
## $ratings
## [1] "4.7 out of 5 stars"
##
## $reviews
## [1] "I've loved Sia for years and always thought she didn't get the widespread recognition she dese
## [2] "I remember liking Sia on the \"Titanium\" track with David Guetta. But I was curious to check
## [3] "love this album the songs are amazing"
## [4] "On a ce qu'on voulait, merci :)"
## [5] "Top cd"
## [6] "He comprado la versión en vinilo.Me ha encantado.La única pega es que viene un solo disco y la
## [7] "i love sia"
## [8] "Wer mit Sias Gesang und mit Popmusik was anfangen kann, für den ist dieses Album eine absolute
## [9] "I've loved Sia for years and always thought she didn't get the widespread recognition she dese
## [10] "I remember liking Sia on the \"Titanium\" track with David Guetta. But I was curious to check
## [11] "love this album the songs are amazing"
## [12] "On a ce qu'on voulait, merci :)"
## [13] "Top cd"
## [14] "He comprado la versión en vinilo.Me ha encantado.La única pega es que viene un solo disco y la
## [15] "i love sia"
## [16] "Wer mit Sias Gesang und mit Popmusik was anfangen kann, für den ist dieses Album eine absolute
## [17] "I've loved Sia for years and always thought she didn't get the widespread recognition she dese
## [18] "I remember liking Sia on the \"Titanium\" track with David Guetta. But I was curious to check
## [19] "love this album the songs are amazing"
## [20] "Nuevo, llegó en buenas condiciones y antes de tiempo"
## [21] "Top cd"
## [22] "i love sia"
## [23] "tel que décrit dans l'annonce, à écouter sans modération."
## [24] "Leuke Lp. Geluids-;(opname) kwaliteit valt iets tegen."
## [25] "I've loved Sia for years and always thought she didn't get the widespread recognition she dese
## [26] "I remember liking Sia on the \"Titanium\" track with David Guetta. But I was curious to check
## [27] "love this album the songs are amazing"
## [28] "On a ce qu'on voulait, merci :)"
## [29] "Top cd"
## [30] "He comprado la versión en vinilo.Me ha encantado.La única pega es que viene un solo disco y la
## [31] "i love sia"
## [32] "Wer mit Sias Gesang und mit Popmusik was anfangen kann, für den ist dieses Album eine absolute
## [33] "I've loved Sia for years and always thought she didn't get the widespread recognition she dese
## [34] "I remember liking Sia on the \"Titanium\" track with David Guetta. But I was curious to check
## [35] "love this album the songs are amazing"
## [36] "On a ce qu'on voulait, merci :)"
## [37] "Top cd"
## [38] "He comprado la versión en vinilo.Me ha encantado.La única pega es que viene un solo disco y la
## [39] "i love sia"
## [40] "Wer mit Sias Gesang und mit Popmusik was anfangen kann, für den ist dieses Album eine absolute

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