

Week 9 Assignment – Web APIs

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```
library(devtools)
```

```
## Loading required package: usethis
```

```
library(RCurl)
library(plyr)
library(ggplot2)
library(httr)
library(jsonlite)
```

Preparing Data:

1. Choose one of the New York Times APIs. I chose the Movie Reviews API
2. Request API key.
3. Construct an interface in R to read in the JSON data that will run 3 times so that I can get 60 entries for my data.frame. The max return from the API is 20.
4. Transformed data to an R dataframe

Function `proc_results_2_df` will transform data and build the data.frame.

```
proc_results_2_df <- function(results_list)
{
  (proc <- "in function")
  y <- 1
  loop_num_res = 21
  while(y < loop_num_res)
  {
    if (results_list[[y]]$display_title != "") {
      movie_title <- results_list[[y]]$display_title
      movie_rating <- results_list[[y]]$mpaa_rating
      movie_critic <- results_list[[y]]$byline
      movie_review <- results_list[[y]]$summary_short
      if (is.null(results_list[[y]]$opening_date)) {
        movie_open_date <- '9999-99-99'
      } else {
        movie_open_date <- results_list[[y]]$opening_date
      }
      if (is.null(results_list[[y]]$publication_date)) {
```

```

    movie_rev_pub_date <- '9999-99-99'
  } else {
    movie_rev_pub_date <- results_list[[y]]$publication_date
  }
  movie_review_url <- results_list[[y]]$link$url
  (new_row <- c(movie_title,movie_rating,movie_critic,movie_review,movie_open_date,movie_rev_pub_date)
  movie_review_df <- rbind(movie_review_df,new_row)
  }
  if (y == 1) {
    names(movie_review_df) <- c("movie_title","movie_rating","movie_critic","movie_review","movie_open_date","movie_rev_pub_date")
  }
  y <- y + 1
  }
  (df_build_status <- "movie reviews added successfully")
  return(movie_review_df)
}

```

Initialize data frames for use

```

temp_df <- data.frame(c())
movie_review_df <- data.frame(c())
movie_review_df_final <- data.frame(c())

```

Issue API Call

1. Issue the NYT Movie Reviews API call 3 times so that I can get 60 entries for my data.frame. The max return from the API is 20.
2. Check API response status
3. Query the NYT Movie Reviews db to get the latest 60 movie reviews

```

x <- 1
loop_num = 4
while(x < loop_num)
{
  if (x == 1) {
    url <- "https://api.nytimes.com/svc/movies/v2/reviews/picks.json?opening-date=2020-02-12:2021-04-10"
    movie_reviews_1 <- GET(url)
    get_status <- movie_reviews_1$status_code
    if (get_status != 200) {
      stop_for_status(get_status)
    }
    mr_1_hdrs <- headers(movie_reviews_1)
    movie_revs_parsed_1 <- content(movie_reviews_1,"parse")
    results_list <- movie_revs_parsed_1[["results"]]
  }
  if (x == 2) {
    url <- "https://api.nytimes.com/svc/movies/v2/reviews/picks.json?opening-date=2020-01-01:2021-02-11"
    movie_reviews_2 <- GET(url)
    get_status <- movie_reviews_2$status_code
    if (get_status != 200) {

```

```

    stop_for_status(get_status)
  }
  mr_2_hdrs <- headers(movie_reviews_2)
  movie_revs_parsed_2 <- content(movie_reviews_2,"parse")
  results_list <- movie_revs_parsed_2[["results"]]
}
if (x == 3) {
  url <- "https://api.nytimes.com/svc/movies/v2/reviews/picks.json?opening-date=2020-10-01:2020-12-03"
  movie_reviews_3 <- GET(url)
  get_status <- movie_reviews_3$status_code
  if (get_status != 200) {
    stop_for_status(get_status)
  }
  mr_3_hdrs <- headers(movie_reviews_3)
  movie_revs_parsed_3 <- content(movie_reviews_3,"parse")
  results_list <- movie_revs_parsed_3[["results"]]
}

# Call function proc_results_2_df
(temp_data <- proc_results_2_df(results_list))
movie_review_df_final <- rbind(movie_review_df_final, temp_data)
x <- x + 1
}

```

```
movie_review_df_final
```

```

##                movie_title movie_rating
## 1                      Shiva Baby
## 2      This Is Not a Burial, It's a Resurrection
## 3                      Violation
## 4                      Wojnarowicz
## 5  Operation Varsity Blues: The College Admissions Scandal      R
## 6                      Quo vadis, Aida?    Approved
## 7                      The Human Voice      R
## 8                      The Inheritance
## 9      The Truffle Hunters      PG-13
## 10                     Lost Course
## 11                     Stray      Not Rated
## 12      The World to Come      R
## 13                     The Father      PG-13
## 14                     Nomadland      R
## 15      Flora & Ulysses      PG
## 16                     I Care a Lot      R
## 17                     Minari      PG-13
## 18      Judas and the Black Messiah      R
## 19                     Land      PG-13
## 20                     Saint Maud      R
## 21                     Falling      R
## 22                     Beginning    Not Rated
## 23                     Supernova      R
## 24      Derek DelGaudio's in & of Itself
## 25                     Atlantis
## 26                     Notturmo

```

| | | |
|-------|---|-----------|
| ## 27 | Preparations to be Together for an Unknown Period of Time | |
| ## 28 | The Salt of Tears | |
| ## 29 | Identifying Features | |
| ## 30 | Acasa, My Home | |
| ## 31 | MLK/FBI | |
| ## 32 | Some Kind of Heaven | |
| ## 33 | One Night in Miami | R |
| ## 34 | Pieces of a Woman | R |
| ## 35 | Soul | PG |
| ## 36 | Sylvie's Love | M |
| ## 37 | Ma Rainey's Black Bottom | R |
| ## 38 | Giving Voice | PG-13 |
| ## 39 | To the Ends of the Earth | |
| ## 40 | Mank | R |
| ## 41 | Mayor | |
| ## 42 | Zappa | Not Rated |
| ## 43 | Happiest Season | PG-13 |
| ## 44 | Small Axe | TV-MA |
| ## 45 | Mangrove | |
| ## 46 | Collective | Not Rated |
| ## 47 | Born to Be | |
| ## 48 | Jingle Jangle: A Christmas Journey | PG |
| ## 49 | Ammonite | R |
| ## 50 | The Dark and the Wicked | Not Rated |
| ## 51 | Let Him Go | R |
| ## 52 | City Hall | |
| ## 53 | Synchronic | R |
| ## 54 | On the Rocks | R |
| ## 55 | What the Constitution Means to Me | |
| ## 56 | Martin Eden | |
| ## 57 | Time | PG-13 |
| ## 58 | The Forty-Year-Old Version | R |
| ## 59 | Black Box | |
| ## 60 | David Attenborough: A Life on Our Planet | PG |
| ## | movie_critic | |
| ## 1 | Jason Bailey | |
| ## 2 | Nicolas Rapold | |
| ## 3 | Lena Wilson | |
| ## 4 | Glenn Kenny | |
| ## 5 | Amy Nicholson | |
| ## 6 | A.O. Scott | |
| ## 7 | Glenn Kenny | |
| ## 8 | Lovia Gyarkye | |
| ## 9 | A.O. Scott | |
| ## 10 | Ben Kenigsberg | |
| ## 11 | Jeannette Catsoulis | |
| ## 12 | Ben Kenigsberg | |
| ## 13 | Jeannette Catsoulis | |
| ## 14 | A.O. Scott | |
| ## 15 | Maya Phillips | |
| ## 16 | Jeannette Catsoulis | |
| ## 17 | A.O. Scott | |
| ## 18 | A.O. Scott | |
| ## 19 | Glenn Kenny | |

20 Jeannette Catsoulis
 ## 21 Jeannette Catsoulis
 ## 22 Devika Girish
 ## 23 Glenn Kenny
 ## 24 Elisabeth Vincentelli
 ## 25 Glenn Kenny
 ## 26 Nicolas Rapold
 ## 27 Beatrice Loayza
 ## 28 Glenn Kenny
 ## 29 Teo Bugbee
 ## 30 A.O. Scott
 ## 31 A.O. Scott
 ## 32 Ben Kenigsberg
 ## 33 A.O. Scott
 ## 34 Jeannette Catsoulis
 ## 35 A.O. Scott
 ## 36 Manohla Dargis
 ## 37 A.O. Scott
 ## 38 Robert Daniels
 ## 39 Glenn Kenny
 ## 40 A.O. Scott
 ## 41 Ben Kenigsberg
 ## 42 Glenn Kenny
 ## 43 Teo Bugbee
 ## 44 Jeannette Catsoulis
 ## 45 A.O. Scott
 ## 46 Manohla Dargis
 ## 47 Glenn Kenny
 ## 48 Lovia Gyarkye
 ## 49 Jeannette Catsoulis
 ## 50 Jeannette Catsoulis
 ## 51 Glenn Kenny
 ## 52 Manohla Dargis
 ## 53 Glenn Kenny
 ## 54 Manohla Dargis
 ## 55 Elisabeth Vincentelli
 ## 56 Manohla Dargis
 ## 57 Lisa Kennedy
 ## 58 A.O. Scott
 ## 59 Glenn Kenny
 ## 60 Natalia Winkelman

 ## 1 The potential land mines of a young woman's life are set to exp
 ## 2 In this drama, a v
 ## 3 In this thriller, a woman exacts revenge against those who betrayed her and soon c
 ## 4 A documentary on the artist David Wojnarowicz shows the ways
 ## 5 Chris Smith's gripping documentary lo
 ## 6 Bosnia and Herzegovina's Oscar entry is the harrowing and rigorous story of a
 ## 7 The first English-language film from the Spanish director Pedro Almodóvar star
 ## 8 In this feature, a Black collective becomes a site of rob
 ## 9 An enchanting documentary about men and their best friends cor
 ## 10 A 2011 revolt in Wukan,
 ## 11 Elizabeth Lo's thoughtful documentary uses th
 ## 12 Katherine Waterston and Vanessa Kirby play two women who sha

13 Anthony Hopkins gives a scalding per
 ## 14 Frances McDormand hits the road in C
 ## 15 A 10-year-old cynic, a bushy-tailed superhero and a cast stacked with beloved
 ## 16 Nasty people do terrible things in this
 ## 17 Steven Yeun plays the patriarch of an immigrant family adjusting
 ## 18 In Shaka King's historical drama, Daniel Kaluuya plays the radical leader Fred Hampt
 ## 19 In her feature directing debut, I
 ## 20 A disturbed young nurse becomes obsessed with a dying artist in this
 ## 21 Viggo Mortensen writes, directs and stars in this lacerating
 ## 22 Dea Kulumbegashvili's debut feature ensnares its
 ## 23 Colin Firth and Stanley Tucci play a longtime couple facing unpleasant
 ## 24 A film of Derek DelGaudio's idiosyncratic
 ## 25 Ukraine's official Oscar entry, the movie depicts an
 ## 26 Gianfranco Rosi's latest, beautifully shot documentary movingly observes people and places across
 ## 27 A neurosurgeon pursues the man of her dreams in this simmering p
 ## 28 In Philippe Garrel's film, a young Frenchman juggles three women, hoping to be destroy
 ## 29 In this confident drama, a mother searches for her son who went missi
 ## 30 A family's dispossession to make way fo
 ## 31 Sam Pollard's fascinating documentary chronicles the F.B.I. director's obsession with the private
 ## 32 This documentary co-produced by The New York T
 ## 33 A 1964 meeting of Malcolm X, Cassius Clay, Sam Cooke and Jim Brown
 ## 34 Vanessa Kirby gives an intensely physical performance as a woman v
 ## 35 This inventive tale stars Jamie Foxx as a jazz musician caught in a world that
 ## 36 Tessa Thompson and Nnamdi Asomugha star in a swoony love story
 ## 37 Viola Davis and Chadwick B
 ## 38 Netflix's inspirational documentary follows talented tl
 ## 39 A Japan
 ## 40 Gary Oldman plays a Hollywood hack with an ax to grind in David
 ## 41 This documentary focuses on the Ramallah
 ## 42 The documentary, directed by Alex Winter, portra
 ## 43 Straight expectation
 ## 44 Steve McQueen's anthology of five films is a revelatory look at Afro-Car
 ## 45 The first episode in Steve McQueen's "Small Axe" anthol
 ## 46 The shocking Romanian documentary "Collective" revisits a 2015 fire th
 ## 47 This documentary follows Dr. Jess Ting in his work a
 ## 48 This Netflix holiday movie offer
 ## 49 Kate Winslet's fossil hunter and Saoirse
 ## 50 A family is threatened by a diabolical enti
 ## 51 The mature chemistry of Kevin Cost
 ## 52 In his latest movie, the celebrated documentarian explores the id
 ## 53 The filmmakers Justin Benson and Aa
 ## 54 In Sofia Coppola's latest, Rashida Jones plays a woman worried about I
 ## 55 The timing could not be better for Heidi Schreck's affecting play about the Consti
 ## 56 In this bold adaptation of the Jack London novel, a young writer su
 ## 57 In Garrett Bradley's moving documentary, a woman fights for her family
 ## 58 Radha Blank's film is an intim
 ## 59 An amnesiac begins to see strange visions
 ## 60 In this moving documentary, the famed naturalist maps how steeply
 ## movie_open_date movie_rev_pub_date
 ## 1 2021-04-02 2021-04-08
 ## 2 2021-04-02 2021-04-01
 ## 3 2021-03-25 2021-03-25
 ## 4 2021-03-19 2021-03-18
 ## 5 2021-03-17 2021-03-17

| | | |
|-------|------------|------------|
| ## 6 | 2021-03-15 | 2021-03-11 |
| ## 7 | 2021-03-12 | 2021-04-01 |
| ## 8 | 2021-03-12 | 2021-03-11 |
| ## 9 | 2021-03-12 | 2021-03-04 |
| ## 10 | 2021-03-05 | 2021-03-04 |
| ## 11 | 2021-03-05 | 2021-03-04 |
| ## 12 | 2021-03-02 | 2021-02-11 |
| ## 13 | 2021-02-26 | 2021-02-25 |
| ## 14 | 2021-02-19 | 2021-02-18 |
| ## 15 | 2021-02-19 | 2021-02-18 |
| ## 16 | 2021-02-19 | 2021-02-18 |
| ## 17 | 2021-02-12 | 2021-02-11 |
| ## 18 | 2021-02-12 | 2021-02-11 |
| ## 19 | 2021-02-12 | 2021-02-11 |
| ## 20 | 2021-02-12 | 2021-01-28 |
| ## 21 | 2021-02-05 | 2021-02-04 |
| ## 22 | 2021-01-29 | 2021-01-28 |
| ## 23 | 2021-01-29 | 2021-01-28 |
| ## 24 | 2021-01-22 | 2021-01-22 |
| ## 25 | 2021-01-22 | 2021-01-21 |
| ## 26 | 2021-01-22 | 2021-01-21 |
| ## 27 | 2021-01-22 | 2021-01-21 |
| ## 28 | 2021-01-20 | 2021-01-20 |
| ## 29 | 2021-01-15 | 2021-01-21 |
| ## 30 | 2021-01-15 | 2021-01-14 |
| ## 31 | 2021-01-15 | 2021-01-14 |
| ## 32 | 2021-01-15 | 2021-01-14 |
| ## 33 | 2021-01-08 | 2021-01-14 |
| ## 34 | 2021-01-07 | 2020-12-30 |
| ## 35 | 2020-12-25 | 2020-12-24 |
| ## 36 | 2020-12-23 | 2020-12-22 |
| ## 37 | 2020-12-18 | 2020-12-17 |
| ## 38 | 2020-12-11 | 2020-12-11 |
| ## 39 | 2020-12-11 | 2020-12-08 |
| ## 40 | 2020-12-04 | 2020-12-03 |
| ## 41 | 2020-12-02 | 2020-12-02 |
| ## 42 | 2020-11-27 | 2020-11-26 |
| ## 43 | 2020-11-25 | 2020-11-25 |
| ## 44 | 2020-11-20 | 2020-12-10 |
| ## 45 | 2020-11-20 | 2020-11-19 |
| ## 46 | 2020-11-20 | 2020-11-19 |
| ## 47 | 2020-11-18 | 2020-11-18 |
| ## 48 | 2020-11-13 | 2020-11-12 |
| ## 49 | 2020-11-13 | 2020-11-12 |
| ## 50 | 2020-11-06 | 2020-11-05 |
| ## 51 | 2020-11-06 | 2020-11-05 |
| ## 52 | 2020-10-28 | 2020-10-28 |
| ## 53 | 2020-10-23 | 2020-10-22 |
| ## 54 | 2020-10-23 | 2020-10-01 |
| ## 55 | 2020-10-16 | 2020-10-22 |
| ## 56 | 2020-10-16 | 2020-10-15 |
| ## 57 | 2020-10-16 | 2020-10-08 |
| ## 58 | 2020-10-09 | 2020-10-08 |
| ## 59 | 2020-10-06 | 2020-10-06 |

| | | | |
|-------|------------|------------|---|
| ## 60 | 2020-10-04 | 2020-10-04 | |
| ## | | | mo |
| ## 1 | | | https://www.nytimes.com/2021/04/08/movies/shiva-bal |
| ## 2 | | | https://www.nytimes.com/2021/04/01/movies/this-is-not-a-burial-its-a-resurrecti |
| ## 3 | | | https://www.nytimes.com/2021/03/25/movies/violati |
| ## 4 | | | https://www.nytimes.com/2021/03/18/movies/wojnarowic |
| ## 5 | | | https://www.nytimes.com/2021/03/17/movies/operation-varsity-bl |
| ## 6 | | | https://www.nytimes.com/2021/03/11/movies/quo-vadis-ai |
| ## 7 | | | https://www.nytimes.com/2021/04/01/movies/the-human-voi |
| ## 8 | | | https://www.nytimes.com/2021/03/11/movies/the-inheritan |
| ## 9 | | | https://www.nytimes.com/2021/03/04/movies/the-truffle-hunte |
| ## 10 | | | https://www.nytimes.com/2021/03/04/movies/lost-cour |
| ## 11 | | | https://www.nytimes.com/2021/03/04/movies/str |
| ## 12 | | | https://www.nytimes.com/2021/02/11/movies/the-world-to-com |
| ## 13 | | | https://www.nytimes.com/2021/02/25/movies/the-fath |
| ## 14 | | | https://www.nytimes.com/2021/02/18/movies/nomadlan |
| ## 15 | | | https://www.nytimes.com/2021/02/18/movies/flora-ulyss |
| ## 16 | | | https://www.nytimes.com/2021/02/18/movies/i-care-a-l |
| ## 17 | | | https://www.nytimes.com/2021/02/11/movies/mina |
| ## 18 | | | https://www.nytimes.com/2021/02/11/movies/judas-and-the-black-messi |
| ## 19 | | | https://www.nytimes.com/2021/02/11/movies/lan |
| ## 20 | | | https://www.nytimes.com/2021/01/28/movies/saint-ma |
| ## 21 | | | https://www.nytimes.com/2021/02/04/movies/falli |
| ## 22 | | | https://www.nytimes.com/2021/01/28/movies/beginni |
| ## 23 | | | https://www.nytimes.com/2021/01/28/movies/superno |
| ## 24 | | | https://www.nytimes.com/2021/01/22/movies/in-of-itse |
| ## 25 | | | https://www.nytimes.com/2021/01/21/movies/atlantis-review-a-bleak-apocalypse-l |
| ## 26 | | | https://www.nytimes.com/2021/01/21/movies/nottur |
| ## 27 | | | https://www.nytimes.com/2021/01/21/movies/preparations-to-be-together-for-an-unknown-period-of-ti |
| ## 28 | | | https://www.nytimes.com/2021/01/20/movies/salt-of-tea |
| ## 29 | | | https://www.nytimes.com/2021/01/21/movies/identifying-featur |
| ## 30 | | | https://www.nytimes.com/2021/01/14/movies/acasa-my-hor |
| ## 31 | | | https://www.nytimes.com/2021/01/14/movies/mlk-fl |
| ## 32 | | | https://www.nytimes.com/2021/01/14/movies/some-kind-of-heav |
| ## 33 | | | https://www.nytimes.com/2021/01/14/movies/one-night-in-mia |
| ## 34 | | | https://www.nytimes.com/2020/12/30/movies/pieces-of-a-wom |
| ## 35 | | | https://www.nytimes.com/2020/12/24/movies/soul-rev |
| ## 36 | | | https://www.nytimes.com/2020/12/22/movies/sylvies-lo |
| ## 37 | | | https://www.nytimes.com/2020/12/17/movies/ma-raineys-black-bott |
| ## 38 | | | https://www.nytimes.com/2020/12/11/movies/giving-voi |
| ## 39 | | | https://www.nytimes.com/2020/12/08/movies/to-the-ends-of-the-ear |
| ## 40 | | | https://www.nytimes.com/2020/12/03/movies/mar |
| ## 41 | | | https://www.nytimes.com/2020/12/02/movies/may |
| ## 42 | | | https://www.nytimes.com/2020/11/26/movies/zap |
| ## 43 | | | https://www.nytimes.com/2020/11/25/movies/happiest-seas |
| ## 44 | | | https://www.nytimes.com/2020/12/10/movies/small-axe-review-steve |
| ## 45 | | | https://www.nytimes.com/2020/11/19/movies/mangrove-review-a |
| ## 46 | | | https://www.nytimes.com/2020/11/19/movies/collective-documenta |
| ## 47 | | | https://www.nytimes.com/2020/11/18/movies/born-to-l |
| ## 48 | | | https://www.nytimes.com/2020/11/12/movies/jingle-jangl |
| ## 49 | | | https://www.nytimes.com/2020/11/12/movies/ammoni |
| ## 50 | | | https://www.nytimes.com/2020/11/05/movies/the-dark-and-the-wick |
| ## 51 | | | https://www.nytimes.com/2020/11/05/movies/let-him-g |
| ## 52 | | | https://www.nytimes.com/2020/10/28/movies/city-ha |


```
## 53 https://www.nytimes.com/2020/10/22/movies/synchron
## 54 https://www.nytimes.com/2020/10/01/movies/on-the-roch
## 55 https://www.nytimes.com/2020/10/22/movies/what-the-constitution-means-to-r
## 56 https://www.nytimes.com/2020/10/15/movies/martin-ed
## 57 https://www.nytimes.com/2020/10/08/movies/tin
## 58 https://www.nytimes.com/2020/10/08/movies/the-forty-year-old-versi
## 59 https://www.nytimes.com/2020/10/06/movies/black-b
## 60 https://www.nytimes.com/2020/10/04/movies/david-attenborough-a-life-on-our-plan
```

```
(movie_review_df_final <- cbind( data.frame("movie_rev_id" = as.integer(rownames(movie_review_df_final))
```

Add a unique ID column based on row name of each entry for future load to a db table.

| ## | movie_rev_id | movie_title |
|-------|--------------|---|
| ## 1 | 1 | Shiva Baby |
| ## 2 | 2 | This Is Not a Burial, It's a Resurrection |
| ## 3 | 3 | Violation |
| ## 4 | 4 | Wojnarowicz |
| ## 5 | 5 | Operation Varsity Blues: The College Admissions Scandal |
| ## 6 | 6 | Quo vadis, Aida? |
| ## 7 | 7 | The Human Voice |
| ## 8 | 8 | The Inheritance |
| ## 9 | 9 | The Truffle Hunters |
| ## 10 | 10 | Lost Course |
| ## 11 | 11 | Stray |
| ## 12 | 12 | The World to Come |
| ## 13 | 13 | The Father |
| ## 14 | 14 | Nomadland |
| ## 15 | 15 | Flora & Ulysses |
| ## 16 | 16 | I Care a Lot |
| ## 17 | 17 | Minari |
| ## 18 | 18 | Judas and the Black Messiah |
| ## 19 | 19 | Land |
| ## 20 | 20 | Saint Maud |
| ## 21 | 21 | Falling |
| ## 22 | 22 | Beginning |
| ## 23 | 23 | Supernova |
| ## 24 | 24 | Derek DelGaudio's in & of Itself |
| ## 25 | 25 | Atlantis |
| ## 26 | 26 | Notturmo |
| ## 27 | 27 | Preparations to be Together for an Unknown Period of Time |
| ## 28 | 28 | The Salt of Tears |
| ## 29 | 29 | Identifying Features |
| ## 30 | 30 | Acasa, My Home |
| ## 31 | 31 | MLK/FBI |
| ## 32 | 32 | Some Kind of Heaven |
| ## 33 | 33 | One Night in Miami |
| ## 34 | 34 | Pieces of a Woman |

| | | |
|-------|--------------|--|
| ## 35 | 35 | Soul |
| ## 36 | 36 | Sylvie's Love |
| ## 37 | 37 | Ma Rainey's Black Bottom |
| ## 38 | 38 | Giving Voice |
| ## 39 | 39 | To the Ends of the Earth |
| ## 40 | 40 | Mank |
| ## 41 | 41 | Mayor |
| ## 42 | 42 | Zappa |
| ## 43 | 43 | Happiest Season |
| ## 44 | 44 | Small Axe |
| ## 45 | 45 | Mangrove |
| ## 46 | 46 | Collective |
| ## 47 | 47 | Born to Be |
| ## 48 | 48 | Jingle Jangle: A Christmas Journey |
| ## 49 | 49 | Ammonite |
| ## 50 | 50 | The Dark and the Wicked |
| ## 51 | 51 | Let Him Go |
| ## 52 | 52 | City Hall |
| ## 53 | 53 | Synchronic |
| ## 54 | 54 | On the Rocks |
| ## 55 | 55 | What the Constitution Means to Me |
| ## 56 | 56 | Martin Eden |
| ## 57 | 57 | Time |
| ## 58 | 58 | The Forty-Year-Old Version |
| ## 59 | 59 | Black Box |
| ## 60 | 60 | David Attenborough: A Life on Our Planet |
| ## | movie_rating | movie_critic |
| ## 1 | | Jason Bailey |
| ## 2 | | Nicolas Rapold |
| ## 3 | | Lena Wilson |
| ## 4 | | Glenn Kenny |
| ## 5 | R | Amy Nicholson |
| ## 6 | Approved | A.O. Scott |
| ## 7 | R | Glenn Kenny |
| ## 8 | | Lovia Gyarkye |
| ## 9 | PG-13 | A.O. Scott |
| ## 10 | | Ben Kenigsberg |
| ## 11 | Not Rated | Jeannette Catsoulis |
| ## 12 | R | Ben Kenigsberg |
| ## 13 | PG-13 | Jeannette Catsoulis |
| ## 14 | R | A.O. Scott |
| ## 15 | PG | Maya Phillips |
| ## 16 | R | Jeannette Catsoulis |
| ## 17 | PG-13 | A.O. Scott |
| ## 18 | R | A.O. Scott |
| ## 19 | PG-13 | Glenn Kenny |
| ## 20 | R | Jeannette Catsoulis |
| ## 21 | R | Jeannette Catsoulis |
| ## 22 | Not Rated | Devika Girish |
| ## 23 | R | Glenn Kenny |
| ## 24 | | Elisabeth Vincentelli |
| ## 25 | | Glenn Kenny |
| ## 26 | | Nicolas Rapold |
| ## 27 | | Beatrice Loayza |

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|-------|-----------|-----------------------|
| ## 28 | | Glenn Kenny |
| ## 29 | | Teo Bugbee |
| ## 30 | | A.O. Scott |
| ## 31 | | A.O. Scott |
| ## 32 | | Ben Kenigsberg |
| ## 33 | R | A.O. Scott |
| ## 34 | R | Jeannette Catsoulis |
| ## 35 | PG | A.O. Scott |
| ## 36 | M | Manohla Dargis |
| ## 37 | R | A.O. Scott |
| ## 38 | PG-13 | Robert Daniels |
| ## 39 | | Glenn Kenny |
| ## 40 | R | A.O. Scott |
| ## 41 | | Ben Kenigsberg |
| ## 42 | Not Rated | Glenn Kenny |
| ## 43 | PG-13 | Teo Bugbee |
| ## 44 | TV-MA | Jeannette Catsoulis |
| ## 45 | | A.O. Scott |
| ## 46 | Not Rated | Manohla Dargis |
| ## 47 | | Glenn Kenny |
| ## 48 | PG | Lovia Gyarkye |
| ## 49 | R | Jeannette Catsoulis |
| ## 50 | Not Rated | Jeannette Catsoulis |
| ## 51 | R | Glenn Kenny |
| ## 52 | | Manohla Dargis |
| ## 53 | R | Glenn Kenny |
| ## 54 | R | Manohla Dargis |
| ## 55 | | Elisabeth Vincentelli |
| ## 56 | | Manohla Dargis |
| ## 57 | PG-13 | Lisa Kennedy |
| ## 58 | R | A.O. Scott |
| ## 59 | | Glenn Kenny |
| ## 60 | PG | Natalia Winkelman |

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| ## | |
| ## 1 | The potential land mines of a young woman's life are set to explode |
| ## 2 | In this drama, a woman exacts revenge against those who betrayed her and soon |
| ## 3 | In this thriller, a woman exacts revenge against those who betrayed her and soon |
| ## 4 | A documentary on the artist David Wojnarowicz shows the ways he |
| ## 5 | Chris Smith's gripping documentary looks at the |
| ## 6 | Bosnia and Herzegovina's Oscar entry is the harrowing and rigorous story of a |
| ## 7 | The first English-language film from the Spanish director Pedro Almodóvar stars |
| ## 8 | In this feature, a Black collective becomes a site of robbery |
| ## 9 | An enchanting documentary about men and their best friends comes |
| ## 10 | A 2011 revolt in Wukan, China |
| ## 11 | Elizabeth Lo's thoughtful documentary uses the |
| ## 12 | Katherine Waterston and Vanessa Kirby play two women who share |
| ## 13 | Anthony Hopkins gives a scalding performance |
| ## 14 | Frances McDormand hits the road in Clint Eastwood's |
| ## 15 | A 10-year-old cynic, a bushy-tailed superhero and a cast stacked with beloved |
| ## 16 | Nasty people do terrible things in this |
| ## 17 | Steven Yeun plays the patriarch of an immigrant family adjusting |
| ## 18 | In Shaka King's historical drama, Daniel Kaluuya plays the radical leader Fred Hampton |
| ## 19 | In her feature directing debut, Maren Ade |
| ## 20 | A disturbed young nurse becomes obsessed with a dying artist in this |

21 Viggo Mortensen writes, directs and stars in this lacerating
 ## 22 Dea Kulumbegashvili's debut feature ensnares its
 ## 23 Colin Firth and Stanley Tucci play a longtime couple facing unpleasant
 ## 24 A film of Derek DelGaudio's idiosyncratic
 ## 25 Ukraine's official Oscar entry, the movie depicts an
 ## 26 Gianfranco Rosi's latest, beautifully shot documentary movingly observes people and places across
 ## 27 A neurosurgeon pursues the man of her dreams in this simmering p
 ## 28 In Philippe Garrel's film, a young Frenchman juggles three women, hoping to be destroy
 ## 29 In this confident drama, a mother searches for her son who went missi
 ## 30 A family's dispossession to make way for
 ## 31 Sam Pollard's fascinating documentary chronicles the F.B.I. director's obsession with the private
 ## 32 This documentary co-produced by The New York T
 ## 33 A 1964 meeting of Malcolm X, Cassius Clay, Sam Cooke and Jim Brown
 ## 34 Vanessa Kirby gives an intensely physical performance as a woman v
 ## 35 This inventive tale stars Jamie Foxx as a jazz musician caught in a world that
 ## 36 Tessa Thompson and Nnamdi Asomugha star in a swoony love story
 ## 37 Viola Davis and Chadwick B
 ## 38 Netflix's inspirational documentary follows talented t
 ## 39 A Japan
 ## 40 Gary Oldman plays a Hollywood hack with an ax to grind in David
 ## 41 This documentary focuses on the Ramallah
 ## 42 The documentary, directed by Alex Winter, portra
 ## 43 Straight expectation
 ## 44 Steve McQueen's anthology of five films is a revelatory look at Afro-Car
 ## 45 The first episode in Steve McQueen's "Small Axe" anthol
 ## 46 The shocking Romanian documentary "Collective" revisits a 2015 fire tl
 ## 47 This documentary follows Dr. Jess Ting in his work a
 ## 48 This Netflix holiday movie offer
 ## 49 Kate Winslet's fossil hunter and Saoirse
 ## 50 A family is threatened by a diabolical enti
 ## 51 The mature chemistry of Kevin Cost
 ## 52 In his latest movie, the celebrated documentarian explores the i
 ## 53 The filmmakers Justin Benson and Aa
 ## 54 In Sofia Coppola's latest, Rashida Jones plays a woman worried about
 ## 55 The timing could not be better for Heidi Schreck's affecting play about the Consti
 ## 56 In this bold adaptation of the Jack London novel, a young writer su
 ## 57 In Garrett Bradley's moving documentary, a woman fights for her family
 ## 58 Radha Blank's film is an intim
 ## 59 An amnesiac begins to see strange visions
 ## 60 In this moving documentary, the famed naturalist maps how steeply
 ## movie_open_date movie_rev_pub_date
 ## 1 2021-04-02 2021-04-08
 ## 2 2021-04-02 2021-04-01
 ## 3 2021-03-25 2021-03-25
 ## 4 2021-03-19 2021-03-18
 ## 5 2021-03-17 2021-03-17
 ## 6 2021-03-15 2021-03-11
 ## 7 2021-03-12 2021-04-01
 ## 8 2021-03-12 2021-03-11
 ## 9 2021-03-12 2021-03-04
 ## 10 2021-03-05 2021-03-04
 ## 11 2021-03-05 2021-03-04
 ## 12 2021-03-02 2021-02-11
 ## 13 2021-02-26 2021-02-25

| | | |
|-------|------------|------------|
| ## 14 | 2021-02-19 | 2021-02-18 |
| ## 15 | 2021-02-19 | 2021-02-18 |
| ## 16 | 2021-02-19 | 2021-02-18 |
| ## 17 | 2021-02-12 | 2021-02-11 |
| ## 18 | 2021-02-12 | 2021-02-11 |
| ## 19 | 2021-02-12 | 2021-02-11 |
| ## 20 | 2021-02-12 | 2021-01-28 |
| ## 21 | 2021-02-05 | 2021-02-04 |
| ## 22 | 2021-01-29 | 2021-01-28 |
| ## 23 | 2021-01-29 | 2021-01-28 |
| ## 24 | 2021-01-22 | 2021-01-22 |
| ## 25 | 2021-01-22 | 2021-01-21 |
| ## 26 | 2021-01-22 | 2021-01-21 |
| ## 27 | 2021-01-22 | 2021-01-21 |
| ## 28 | 2021-01-20 | 2021-01-20 |
| ## 29 | 2021-01-15 | 2021-01-21 |
| ## 30 | 2021-01-15 | 2021-01-14 |
| ## 31 | 2021-01-15 | 2021-01-14 |
| ## 32 | 2021-01-15 | 2021-01-14 |
| ## 33 | 2021-01-08 | 2021-01-14 |
| ## 34 | 2021-01-07 | 2020-12-30 |
| ## 35 | 2020-12-25 | 2020-12-24 |
| ## 36 | 2020-12-23 | 2020-12-22 |
| ## 37 | 2020-12-18 | 2020-12-17 |
| ## 38 | 2020-12-11 | 2020-12-11 |
| ## 39 | 2020-12-11 | 2020-12-08 |
| ## 40 | 2020-12-04 | 2020-12-03 |
| ## 41 | 2020-12-02 | 2020-12-02 |
| ## 42 | 2020-11-27 | 2020-11-26 |
| ## 43 | 2020-11-25 | 2020-11-25 |
| ## 44 | 2020-11-20 | 2020-12-10 |
| ## 45 | 2020-11-20 | 2020-11-19 |
| ## 46 | 2020-11-20 | 2020-11-19 |
| ## 47 | 2020-11-18 | 2020-11-18 |
| ## 48 | 2020-11-13 | 2020-11-12 |
| ## 49 | 2020-11-13 | 2020-11-12 |
| ## 50 | 2020-11-06 | 2020-11-05 |
| ## 51 | 2020-11-06 | 2020-11-05 |
| ## 52 | 2020-10-28 | 2020-10-28 |
| ## 53 | 2020-10-23 | 2020-10-22 |
| ## 54 | 2020-10-23 | 2020-10-01 |
| ## 55 | 2020-10-16 | 2020-10-22 |
| ## 56 | 2020-10-16 | 2020-10-15 |
| ## 57 | 2020-10-16 | 2020-10-08 |
| ## 58 | 2020-10-09 | 2020-10-08 |
| ## 59 | 2020-10-06 | 2020-10-06 |
| ## 60 | 2020-10-04 | 2020-10-04 |

| | | |
|------|---|---|
| ## | | mo |
| ## 1 | | https://www.nytimes.com/2021/04/08/movies/shiva-bal |
| ## 2 | https://www.nytimes.com/2021/04/01/movies/this-is-not-a-burial-its-a-resurrecti | |
| ## 3 | | https://www.nytimes.com/2021/03/25/movies/violati |
| ## 4 | | https://www.nytimes.com/2021/03/18/movies/wojnarowi |
| ## 5 | https://www.nytimes.com/2021/03/17/movies/operation-varsity-bluc | |
| ## 6 | | https://www.nytimes.com/2021/03/11/movies/quo-vadis-aic |

7 <https://www.nytimes.com/2021/04/01/movies/the-human-voice/>
 ## 8 <https://www.nytimes.com/2021/03/11/movies/the-inheritance/>
 ## 9 <https://www.nytimes.com/2021/03/04/movies/the-truffle-hunter/>
 ## 10 <https://www.nytimes.com/2021/03/04/movies/lost-courier/>
 ## 11 <https://www.nytimes.com/2021/03/04/movies/strange/>
 ## 12 <https://www.nytimes.com/2021/02/11/movies/the-world-to-come/>
 ## 13 <https://www.nytimes.com/2021/02/25/movies/the-father/>
 ## 14 <https://www.nytimes.com/2021/02/18/movies/nomadland/>
 ## 15 <https://www.nytimes.com/2021/02/18/movies/flora-ulyssa/>
 ## 16 <https://www.nytimes.com/2021/02/18/movies/i-care-a-lot/>
 ## 17 <https://www.nytimes.com/2021/02/11/movies/minari/>
 ## 18 <https://www.nytimes.com/2021/02/11/movies/judas-and-the-black-messiah/>
 ## 19 <https://www.nytimes.com/2021/02/11/movies/laurel/>
 ## 20 <https://www.nytimes.com/2021/01/28/movies/saint-mary/>
 ## 21 <https://www.nytimes.com/2021/02/04/movies/fallin>
 ## 22 <https://www.nytimes.com/2021/01/28/movies/beginning/>
 ## 23 <https://www.nytimes.com/2021/01/28/movies/supernova/>
 ## 24 <https://www.nytimes.com/2021/01/22/movies/in-of-itself/>
 ## 25 <https://www.nytimes.com/2021/01/21/movies/atlantis-review-a-bleak-apocalypse-land/>
 ## 26 <https://www.nytimes.com/2021/01/21/movies/notturmo/>
 ## 27 <https://www.nytimes.com/2021/01/21/movies/preparations-to-be-together-for-an-unknown-period-of-time/>
 ## 28 <https://www.nytimes.com/2021/01/20/movies/salt-of-tears/>
 ## 29 <https://www.nytimes.com/2021/01/21/movies/identifying-features/>
 ## 30 <https://www.nytimes.com/2021/01/14/movies/acasa-my-home/>
 ## 31 <https://www.nytimes.com/2021/01/14/movies/mlk-film/>
 ## 32 <https://www.nytimes.com/2021/01/14/movies/some-kind-of-heaven/>
 ## 33 <https://www.nytimes.com/2021/01/14/movies/one-night-in-miami/>
 ## 34 <https://www.nytimes.com/2020/12/30/movies/pieces-of-a-woman/>
 ## 35 <https://www.nytimes.com/2020/12/24/movies/soul-revival/>
 ## 36 <https://www.nytimes.com/2020/12/22/movies/sylvies-love/>
 ## 37 <https://www.nytimes.com/2020/12/17/movies/ma-raineys-black-bottle/>
 ## 38 <https://www.nytimes.com/2020/12/11/movies/giving-voice/>
 ## 39 <https://www.nytimes.com/2020/12/08/movies/to-the-ends-of-the-earth/>
 ## 40 <https://www.nytimes.com/2020/12/03/movies/marcel/>
 ## 41 <https://www.nytimes.com/2020/12/02/movies/may/>
 ## 42 <https://www.nytimes.com/2020/11/26/movies/zappa/>
 ## 43 <https://www.nytimes.com/2020/11/25/movies/happiest-season/>
 ## 44 <https://www.nytimes.com/2020/12/10/movies/small-axe-review-steve/>
 ## 45 <https://www.nytimes.com/2020/11/19/movies/mangrove-review-s/>
 ## 46 <https://www.nytimes.com/2020/11/19/movies/collective-documentary/>
 ## 47 <https://www.nytimes.com/2020/11/18/movies/born-to-breed/>
 ## 48 <https://www.nytimes.com/2020/11/12/movies/jingle-jangle/>
 ## 49 <https://www.nytimes.com/2020/11/12/movies/ammonia/>
 ## 50 <https://www.nytimes.com/2020/11/05/movies/the-dark-and-the-wicked/>
 ## 51 <https://www.nytimes.com/2020/11/05/movies/let-him-go/>
 ## 52 <https://www.nytimes.com/2020/10/28/movies/city-hall/>
 ## 53 <https://www.nytimes.com/2020/10/22/movies/synchronic/>
 ## 54 <https://www.nytimes.com/2020/10/01/movies/on-the-rock/>
 ## 55 <https://www.nytimes.com/2020/10/22/movies/what-the-constitution-means-to-remember/>
 ## 56 <https://www.nytimes.com/2020/10/15/movies/martin-edwards/>
 ## 57 <https://www.nytimes.com/2020/10/08/movies/tin/>
 ## 58 <https://www.nytimes.com/2020/10/08/movies/the-forty-year-old-version/>
 ## 59 <https://www.nytimes.com/2020/10/06/movies/black-baller/>
 ## 60 <https://www.nytimes.com/2020/10/04/movies/david-attenborough-a-life-on-our-planet/>

Conclusion: I found using the NYT APIs easy to figure out. This is one one of easier assignments for me and I think that is because it is very ETL-like. I chose the Movie Reviews because one of my earlier assignments was building a database using MySQL and I create the Movies DB and this code would fit nicely into that design.