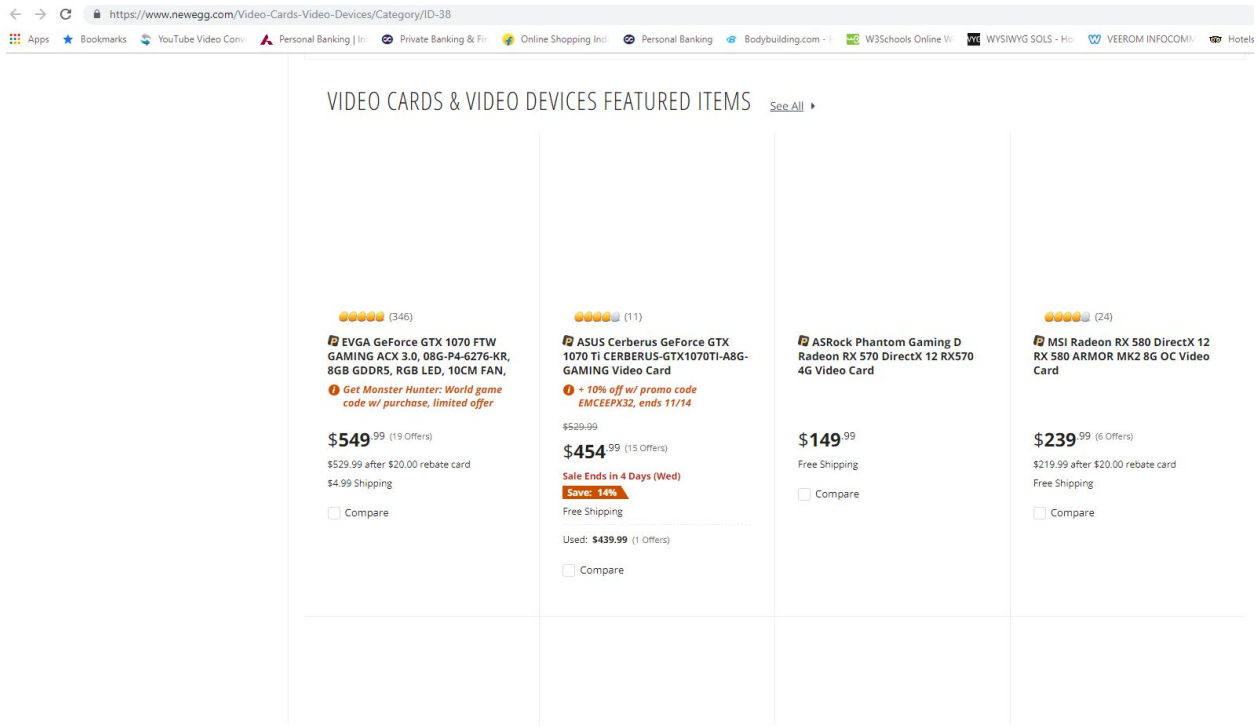
Web Scraping using R

I am illustrating code to extract prices and information on current products shown in website below:



Code:-

```
library(rvest)
library(stringr)
now <- Sys.time()

# url to scrape, then download page
url <- "https://www.newegg.com/Video-Cards-Video-Devices/Category/ID-38"
webpage <- read_html(url)

##############################################################################
# web scraping
##############################################################################

#############
# feature: card name
#############
card_name <- webpage %>% html_nodes(".item-title") %>% html_text()
```

```
################
# feature: current price
################
cur_price <- webpage %>% html_nodes(".price-current strong") %>% html_text()


org_price <- webpage %>% html_nodes(".price-was") %>% html_text(trim=TRUE)

# substring search for price, using regular expression.
needle <- "\\d{1,}\\.\\d{1,}"
indexes <- str_locate(string = org_price, pattern = needle)
indexes <- as.data.frame(indexes)
org_price <- str_sub(string=org_price, start = indexes$start, end = indexes$end)

rate.pid <- webpage %>% html_nodes(".item-rating") %>% html_attr("href")
# format: <url><"Item='><pid><'$'><stuff>
rate.pid.split <- str_split_fixed(rate.pid, pattern = "Item=", n=2)
# result:   [1]     [2]
#           <url>   <pid><'$'><stuff>
rate.pid.split <- str_split_fixed(rate.pid.split[,2], pattern="&", n=2)
# result:   [1]     [2]
#           <pid>   <stuff>
rate.pid <- rate.pid.split[,1]

# rating
rating <- webpage %>% html_nodes(".item-rating") %>% html_attr("title")
# result: <string><+\s><rating>
rating <- str_split_fixed(string = rating, pattern="\\+\\s", n = 2)[,2]
# result:   [1]         [2]
#           <string\s>  <rating>
rating_df <- as.data.frame(cbind(rate.pid, rating))

# combine


graphics_cards <- as.data.frame(card_name)
graphics_cards$scrape_date <- now
graphics_cards$cur_price <- current_price
graphics_cards$org_price <- org_price
graphics_cards$rating <- rating

na.org_price <- is.na(graphics_cards$org_price)
graphics_cards[na.org_price,"org_price"] <- graphics_cards[na.org_price,"cur_price"]

# cast into numeric
graphics_cards$org_price <- as.numeric(graphics_cards$org_price)
graphics_cards$cur_price <- as.numeric(graphics_cards$cur_price)
```

```
# sales price - current price = sales discount
graphics_cards$sales_amt <- graphics_cards$org_price - graphics_cards$cur_price

graphics_cards$discount <- graphics_cards$sales_amt / graphics_cards$org_price

########################
# feature: on_sale
########################
# logic:    if discount price as a percentage of the original price is higher than
#           a certain percentage threshold, mark as being on sale
# key:  0 = not on sale
#       1 = on sale
threshold <- 0.03
graphics_cards$on_sale <- 0
graphics_cards[graphics_cards$discount > threshold, "on_sale"] <- 1
```

Output:=>