

Data Science Sessional I Exam Fall 2021

17F-8148

#Task1: This task will generate 12 values for each row.

```
files <- list.files('./E-10', pattern = "pdf$")
files
```

```
## [1] "e_10_gasoline_price_notification_effective_dated_april_01_2017.pdf"
## [2] "e_10_gasoline_price_notification_effective_dated_april_01_2018.pdf"
## [3] "e_10_gasoline_price_notification_effective_dated_april_01_2019.pdf"
## [4] "e_10_gasoline_price_notification_effective_dated_august_01_2017.pdf"
## [5] "e_10_gasoline_price_notification_effective_dated_august_01_2018.pdf"
## [6] "e_10_gasoline_price_notification_effective_dated_august_01_2019.pdf"
## [7] "e_10_gasoline_price_notification_effective_dated_december_01_2017.pdf"
## [8] "e_10_gasoline_price_notification_effective_dated_december_01_2018.pdf"
## [9] "e_10_gasoline_price_notification_effective_dated_december_01_2019.pdf"
## [10] "e_10_gasoline_price_notification_effective_dated_february_01_2017.pdf"
## [11] "e_10_gasoline_price_notification_effective_dated_february_01_2018.pdf"
## [12] "e_10_gasoline_price_notification_effective_dated_february_01_2019.pdf"
## [13] "e_10_gasoline_price_notification_effective_dated_february_01_2020.pdf"
## [14] "e_10_gasoline_price_notification_effective_dated_february_16_2017.pdf"
## [15] "e_10_gasoline_price_notification_effective_dated_january_01_2017.pdf"
## [16] "e_10_gasoline_price_notification_effective_dated_january_01_2018.pdf"
## [17] "e_10_gasoline_price_notification_effective_dated_january_01_2019.pdf"
## [18] "e_10_gasoline_price_notification_effective_dated_january_01_2020.pdf"
## [19] "e_10_gasoline_price_notification_effective_dated_january_16_2017.pdf"
## [20] "e_10_gasoline_price_notification_effective_dated_july_01_2017.pdf"
## [21] "e_10_gasoline_price_notification_effective_dated_july_01_2018.pdf"
## [22] "e_10_gasoline_price_notification_effective_dated_july_01_2019.pdf"
## [23] "e_10_gasoline_price_notification_effective_dated_july_08_2018.pdf"
## [24] "e_10_gasoline_price_notification_effective_dated_june_01_2017.pdf"
## [25] "e_10_gasoline_price_notification_effective_dated_june_01_2018.pdf"
## [26] "e_10_gasoline_price_notification_effective_dated_june_01_2019.pdf"
## [27] "e_10_gasoline_price_notification_effective_dated_june_01_2020.pdf"
## [28] "e_10_gasoline_price_notification_effective_dated_june_12_2018.pdf"
## [29] "e_10_gasoline_price_notification_effective_dated_june_26_2020.pdf"
## [30] "e_10_gasoline_price_notification_effective_dated_march_01_2017.pdf"
## [31] "e_10_gasoline_price_notification_effective_dated_march_01_2018.pdf"
## [32] "e_10_gasoline_price_notification_effective_dated_march_01_2019.pdf"
## [33] "e_10_gasoline_price_notification_effective_dated_march_01_2020.pdf"
## [34] "e_10_gasoline_price_notification_effective_dated_march_25_2020.pdf"
## [35] "e_10_gasoline_price_notification_effective_dated_may_01_2017.pdf"
## [36] "e_10_gasoline_price_notification_effective_dated_may_01_2018.pdf"
## [37] "e_10_gasoline_price_notification_effective_dated_may_01_2019.pdf"
## [38] "e_10_gasoline_price_notification_effective_dated_may_01_2020.pdf"
## [39] "e_10_gasoline_price_notification_effective_dated_may_05_2019.pdf"
```

```
## [40] "e_10_gasoline_price_notification_effective_dated_november_01_2017.pdf"
## [41] "e_10_gasoline_price_notification_effective_dated_november_01_2018.pdf"
## [42] "e_10_gasoline_price_notification_effective_dated_november_01_2019.pdf"
## [43] "e_10_gasoline_price_notification_effective_dated_october_01_2017.pdf"
## [44] "e_10_gasoline_price_notification_effective_dated_october_01_2018.pdf"
## [45] "e_10_gasoline_price_notification_effective_dated_october_01_2019.pdf"
## [46] "e_10_gasoline_price_notification_effective_dated_september_01_2017.pdf"
## [47] "e_10_gasoline_price_notification_effective_dated_september_01_2018.pdf"
## [48] "e_10_gasoline_price_notification_effective_dated_september_01_2019.pdf"
```

```
for(i in 1:8){
  result = paste('./E-10/',files[i],sep="")
  print (result)
  pngfile <- pdftools::pdf_convert(result, dpi = 600)
  # text <- tesseract::ocr(pngfile)
  library(magick)
  # img <- "e_10_gasoline_price_notification_effective_dated_april_01_2017_2.png"
  input <- image_read(pngfile , strip = TRUE)
  text <- input %>%
  image_resize("3000x") %>%
  #image_noise(frunk)%>%
  image_contrast(sharpen = 1) %>%
  #image_modulate(input, brightness = 100, saturation = 100, hue = 100) %>%
  image_convert(type = 'Grayscale') %>%
  image_trim(fuzz = 40) %>%
  image_write(format = 'png', density = '300x300') %>%
  tesseract::ocr()
  cat(text)
  text %>%
  stringi::stri_split(fixed = "\n") %>%
  purrr::map(~ stringi::stri_split(str = ., fixed = "'")) %>%
  .[[1]] %>%
  purrr::map_df(~ tibble::tibble(Date = .[1], Price = .[2], Change = .[3])) %>%
  dplyr::glimpse()
  withoutnull <- na.omit(text)
  withoutnull
}
```

```
## [1] "./E-10/e_10_gasoline_price_notification_effective_dated_april_01_2017.pdf"
## Converting page 1 to e_10_gasoline_price_notification_effective_dated_april_01_2017_1.png... done!
## Converting page 2 to e_10_gasoline_price_notification_effective_dated_april_01_2017_2.png... done!
```

```
## Linking to ImageMagick 6.9.12.3
## Enabled features: cairo, freetype, fftw, ghostscript, heic, lcms, pango, raw, rsvg, webp
## Disabled features: fontconfig, x11
```

```
## To be published in the gazette of Pakistan extra-ordinary Part -II
## OIL AND GAS REGULATORY AUTHORITY
## KRKKKKKEKKEKKERKEKKERREEREKER
## Islamabad, the March 31, 2017
## NOTIFICATION
## S.R.O..... (I) / 2017: - In exercise of the powers conferred by Section 6(2)(r) of Oil and
## Gas Regulatory Authority Ordinance, 2002 (XVII of 2002), and clause(4) and (4A) of Section
```

2 of the Petroleum Products (Petroleum Levy) Ordinance 1961 (XXV of 1961), rule 3, sub-rule (1) of rule 6 and rule 7 of Petroleum Products (Petroleum Development Levy) Rules 1967 read with the Ministry of Petroleum and Natural Resources S.R.O. No. 254(1)/2006, dated March 15, 2006 and in supersession of the Oil and Gas Regulatory Authority's notification S.R.O. No. 137 (I) / 2017, dated February 28, 2017, Oil and Gas Regulatory Authority does hereby, in respect of the petroleum products, refined by the refineries in Pakistan and imports, specified in column (1) of the table below, determine the prescribed price specified in column (2) of the said table, including the rate of Petroleum Levy as notified vide the Ministry of Petroleum and Natural Resources S.R.O. No. dated March 31, 2017 and specified in column (3) and inland freight equalization margin (IFEM) as provisionally determined by OGRA specified in column (4) of the table, notify the dealers commission specified in column (5) of the table, distributors margin specified in column (6) of the table, general sales tax specified in column (7) of the table and declare the maximum ex-depot sale price specified in column (8) of the table, thereof;

TABLE

Products	Prescribed Petroleum Rate	Rate of inland Rate	Rate of distributors' General Sales	Maximum Price	Levy	freight margin	Dealers margin	of oil Tax	included Ex-Depot
(Note-1)	included in	included Commission	marketing company in	maximum	Sale Price	Prescribed in	maximum	included in	Ex Depot Sale
(Note-2)	Price	Ex-Depot	Prescribed	Prescribed	Price	Sales Price	Price	Price	Price
(1)	(2)	(3)	(4)	(3)	(6)	(7)	(8)		
Rs/ Liter	Rs / Liter	Rs / Liter	Rs / Liter	Rs / Liter	Rs / Liter	Rs / Liter	Rs / Liter	Rs / Liter	Rs / Liter
1. E-10 Gasoline									
(i) For sale through retail outlets / others, and	60.57	6.69	0.54	3.16	2.41	10.39	71.50		
(ii) for direct sale to consumers by oil companies (Note-3)	60.57	9.85	0.54	-	2.41	10.39	71.50		

Notes:

(1) Prescribed price includes ex-refinery import parity price, petroleum levy, distributor margin and dealer margin.

(2) Maximum ex-depot sale prices specified in column 8 of the above table are applicable on 22 locations/depots of the OMCs and cover primary freight only. However, beyond 22 specified locations and in special areas of Balochistan, Azad Kashmir and Northern Areas, the OMCs are allowed to charge secondary freight also up to the respective retail outlets, per GoP policy.

(3) Direct Sales of E-10 Gasoline by OMCs will be per GoP policy.

(4) This Notification shall come into force with effect from April 01, 2017.

Reference No. 10-12(30)/2017

gente

71

Atif Sajjad

Joint Executive Director (Finance)

Rows: 56

Columns: 3

\$ Date <chr> "To be published in the gazette of Pakistan extra-ordinary Part-

\$ Price <chr> NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA,~

\$ Change <chr> NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA,~

[1] "/E-10/e_10_gasoline_price_notification_effective_dated_april_01_2018.pdf"

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## Converting page 1 to e_10_gasoline_price_notification_effective_dated_april_01_2018_1.png... done!
## Converting page 2 to e_10_gasoline_price_notification_effective_dated_april_01_2018_2.png... done!
## To be published in the gazette of Pakistan extra-ordinary Part -II
## OIL AND GAS REGULATORY AUTHORITY
## HERIKEREEERNEREREREREREREREE
## Islamabad, the March 31, 2018
## NOTIFICATION
## S.R.O..... (I) / 2018: - In exercise of the powers conferred by Section 6(2)(r) of Oil and
## Gas Regulatory Authority Ordinance, 2002 (XVII of 2002), and clause(4) and (4A) of Section
## 2 of the Petroleum Products (Petroleum Levy) Ordinance 1961(XXV of 1961), rule 3, sub-
## rule (1) of rule 6 and rule 7 of Petroleum Products (Petroleum Development Levy) Rules
## 1967 read with the Ministry of Petroleum and Natural Resources S.R.O. No. 254(1)/2006,
## dated March 15, 2006 and in supersession of the Oil and Gas Regulatory Authority's
## notification S.R.O. No. 286 (1)/2018, dated February 28, 2018, Oil and Gas Regulatory
## Authority does hereby, in respect of the petroleum products, refined by the refineries in
## Pakistan and imports, specified in column (1) of the table below, determine the prescribed
## price specified in column (2) of the said table, including the rate of Petroleum Levy as
## notified vide the Ministry of Petroleum and Natural Resources S.R.O. No..... dated March
## 31, 2018 and specified in column (3) and inland freight equalization margin (IFEM) as
## provisionally determined by OGRA specified in column (4) of the table, notify the dealers
## commission specified in column (5) of the table, distributors margin specified in column (6)
## of the table, general sales tax specified in column (7) of the table and declare the maximum
## ex-depot sale price specified in column (8) of the table, thereof;
## TABLE
## Products Prescribed Petroleum Rateofinland Rateof Rateofdistributors' GeneralSales Maximum
## Price Levy included freight margin dealers margin of ail Tax included Ex-Depot
## (Note 1) 'in Prescribed included commission marketingcompany inMaximum Sales Price
## Price in Maximum included in included in Ex Depot Sale (Note 2)
## Ex-Depot Prescribed Prescribed Price
## Sales Price Price Price
## =e) es -CSD- SCOm-T/a0
## Rs / Liter Rs / Liter Rs /Liter Rs / Liter Rs / Liter Rs / Liter Rs/Liter Rs / Liter
## 1. E-10 Gasoline |
## (i) For sale through retal = 70.83 11.73 0.54 3.35 2.55 12.13 83.50 |
## outlets / others, and
## (it) for direct sale toconsumers 70.83 15.08 0.54 - 2.55 12.13 83.50
## by oil companies (Note-3).
## Notes:
## (1) Prescribed price includes ex-refinery import parity price, petroleum levy, distributor margin
## and dealer margin. |
## (2) Maximum ex-depot sale prices specified in column 8 of the above table are applicable on 22 |
## locations/depots of the OMCs and cover primary freight only. However, beyond 22
## specified locations and in special areas of Balochistan, Azad Kashmir and Northern Areas,
## the OMCs are allowed to charge secondary freight also up to the respective retail outlets, per
## GoP policy. |
## (3) Direct Sales of E-10 Gasoline by OMCs will be per GoP policy.
## (4) This Notification shall come into force with effect from April 01, 2018.
## Reference No. 10-12(30)/2018
## eX)
## Mis Yaqub
## Executive sth (F&A)
## Rows: 50
## Columns: 3
## $ Date <chr> "To be published in the gazette of Pakistan extra-ordinary Part~

```

```

## $ Price <chr> NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA,~
## $ Change <chr> NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA,~
## [1] "/E-10/e_10_gasoline_price_notification_effective_dated_april_01_2019.pdf"
## Converting page 1 to e_10_gasoline_price_notification_effective_dated_april_01_2019_1.png... done!
## Converting page 2 to e_10_gasoline_price_notification_effective_dated_april_01_2019_2.png... done!
## Lo be published in the gazette of Pakistan extra-ordinary Part -II
## OIL AND GAS REGULATORY AUTHORITY
## HREKEREERRERE EERE ERE ERRERE
## Islamabad, the March 31, 2019
## NOTIFICATION
## S.R.O..... (J) / 2019: - In exercise of the powers conferred by Section 6(2)(r) of Oil and
## Gas Regulatory Authority Ordinance, 2002 (XVII of 2002), and clause(4) and (4A) of Section
## 2 of the Petroleum Products (Petroleum Levy) Ordinance 1961(XXV of 1961), rule 3, sub-
## rule (1) of rule 6 and rule 7 of Petroleum Products (Petroleum Development Levy) Rules
## 1967 read with the Ministry of Energy (Petroleum Division) S.R.O. No. 254(1)/2006, dated
## March 15, 2006 and in supersession of the Oil and Gas Regulatory Authority's notification
## S.R.O. No. 282 (1)/2019, dated February 28, 2019, Oil and Gas Regulatory Authority does
## hereby, in respect of the petroleum products, refined by the refineries in Pakistan and
## imports, specified in column (1) of the table below, determine the prescribed price specified
## in column (2) of the said table, including the rate of Petroleum Levy as notified vide the
## Ministry of Energy (Petroleum Division) S.R.O. No..... dated March 31, 2019 and specified
## in column (3) and inland freight equalization margin (IFEM) as provisionally determined
## by OGRA specified in column (4) of the table, notify the dealers commission specified in
## column (5) of the table, distributors margin specified in column (6) of the table, general
## sales tax specified in column (7) of the table and declare the maximum ex-depot sale price
## specified in column (8) of the table, thereof;
## TABLE
## Products Prescribed Petroleum Rateofinland Rateof Rateofdistributors' GeneralSales | Maximum
## Price Levy included freight margin dealers margin of oil Tax included Ex-Depot
## (Note 1) in Prescribed included commission marketingcompany in Maximum Sales Price
## Price inMaximum _ included in included in Ex Depot Sale (Note 2)
## Ex-Depot Prescribed Prescribed Price
## Sales Price Price Price
## ye C-0 1?)
## Rs / Liter' Rs / Liter Rs /Liter' Rs / Liter Rs / Liter Rs / Liter Rs / Liter
## 1. E-10 Gasoline
## (i) For sale through retail 81.84 9.37 0.54 3.47 2.64 14.00 96.38
## outlets / others, and
## ee a 81.84 12.84 0.54 - 2.64 14.00 96.38
## Notes:
## (1) Prescribed price includes ex-refinery import parity price, petroleum levy, distributor margin
## and dealer margin.
## (2) Maximum ex-depot sale prices specified in column 8 of the above table are applicable on 22
## locations/depots of the OMCs and cover primary freight only. However, beyond 22
## specified locations and in special areas of Balochistan, Azad Kashmir and Northern Areas, |
## the OMCs are allowed to charge secondary freight also up to the respective retail outlets, per |
## GoP policy.
## (3) Direct Sales of E-10 Gasoline by OMCs will be per GoP policy. |
## (4) This Notification shall come into force with effect from April 01, 2019.
## Reference No. 10-12(30) / 2019
## |
## ey
## (Misbah Yaqub) |
## Executive Director (F&A) |

```

```

## Rows: 50
## Columns: 3
## $ Date <chr> "Lo be published in the gazette of Pakistan extra-ordinary Part~
## $ Price <chr> NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA,~
## $ Change <chr> NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA,~
## [1] "/E-10/e_10_gasoline_price_notification_effective_dated_august_01_2017.pdf"
## Converting page 1 to e_10_gasoline_price_notification_effective_dated_august_01_2017_1.png... done!
## Converting page 2 to e_10_gasoline_price_notification_effective_dated_august_01_2017_2.png... done!
## to be published in the gazette of Pakistan extra-ordinary Part -II
## OIL AND GAS REGULATORY AUTHORITY
## EERIE ER EREREREEEE ERG
## Islamabad, the July 31, 2017
## NOTIFICATION
## S.R.O..... (I) / 2017: - In exercise of the powers conferred by Section 6(2)(r) of Oil and
## Gas Regulatory Authority Ordinance, 2002 (XVII of 2002), and clause(4) and (4A) of Section
## 2 of the Petroleum Products (Petroleum Levy) Ordinance 1961(XXV of 1961), rule 3, sub-
## rule (1) of rule 6 and rule 7 of Petroleum Products (Petroleum Development Levy) Rules
## 1967 read with the Ministry of Petroleum and Natural Resources S.R.O. No. 254(I)/2006,
## dated March 15, 2006 and in Supersession of the Oil and Gas Regulatory Authority's
## notification S.R.O. No. 609 (I) / 2017, dated June 30, 2017, Oil and Gas Regulatory
## Authority does hereby, in respect of the petroleum products, refined by the refineries in
## Pakistan and imports, specified in column (1) of the table below, determine the prescribed
## price specified in column (2) of the said table, including the rate of Petroleum Levy as
## notified vide the Ministry of Petroleum and Natural Resources S.R.O. No..... dated July 31,
## 2017 and specified in column (3) and inland freight equalization margin (IFEM) as
## provisionally determined by OGRA specified in column (4) of the table, notify the dealers
## commission specified in column (5) of the table, distributors margin specified in column (6)
## of the table, general sales tax specified in column (7) of the table and declare the maximum
## ex-depot sale price specified in column (8) of the table, thereof;
## TABLE
## Products Prescribed Petroleum Rate of inland Rate of Rate of distributors' General Sales Maximum
## Price Levy freight margin Dealers margin of oil Tax included Ex-Depot
## {Note-1} included in included Commission marketing company inmaximum Sale Price
## Prescribed in maximum included in included in Ex Depot Sale (Note-2)
## Price Ex-Depot Prescribed Prescribed Price
## Salea Price Price Price
## a _.@ ~_@) ~~ @ a) (6) _M - @&.
## ~emnenrnnennneeneenanaeonen en eaeteh RS / Titer Re/Liter Re/Liter __Rs/Liter Rs /Liter__Rs/ Liter
## 1, E-106 Gasoline
## @) For sale through retail
## outlets / others, and 58.26 10.29 0.54 3.16 2.41 10.00 68.80
## (ii) for direct sale to consumers
## by oil companies (Note-3| 58.26 13.45 0.54 - 2.41 10.00 68.80
## Notes:
##
## (1) Prescribed price includes ex-refinery import parity price, petroleum levy, distributor margin
## and dealer margin.
##
## (2) Maximum ex-depot sale prices specified in column 8 of the above table are applicable on 22
## locations/depots of the OMCs and cover primary freight only. However, beyond 22
## specified locations and in special areas of Balochistan, Azad Kashmir and Northern Areas,
## the OMCs are allowed to charge secondary freight also up to the respective retail outlets, per
## GoP policy.
##

```

```

## (3) Direct Sales of E-10 Gasoline by OMCs will be per GoP policy,
##
## (4) This Notification shall come into force with effect from August 01, 2017.
##
## Reference No. 10-12(30)/2017
## on 2?
## ~~
## Joint Executive Director (Finance
## Rows: 55
## Columns: 3
## $ Date <chr> "to be published in the gazette of Pakistan extra-ordinary Part~
## $ Price <chr> NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA,~
## $ Change <chr> NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA,~
## [1] "/E-10/e_10_gasoline_price_notification_effective_dated_august_01_2018.pdf"
## Converting page 1 to e_10_gasoline_price_notification_effective_dated_august_01_2018_1.png... done!
## Converting page 2 to e_10_gasoline_price_notification_effective_dated_august_01_2018_2.png... done!
## To be published in the gazette of Pakistan extra-ordinary Part -II
## OIL AND GAS REGULATORY AUTHORITY
## HAAAAARKRE ERE
## Islamabad, the July 31, 2018
## NOTIFICATION
## S.R.O..... I) / 2018: - In exercise of the powers conferred by Section 6(2)(r) of Oil and
## Gas Regulatory Authority Ordinance, 2002 (XVII of 2002), and clause(4) and (4A) of Section
## 2 of the Petroleum Products (Petroleum Levy) Ordinance 1961(XXV of 1961), rule 3, sub-
## rule (1) of rule 6 and rule 7 of Petroleum Products (Petroleum Development Levy) Rules
## 1967 read with the Ministry of Energy (Petroleum Division) S.R.O. No. 254(I)/2006, dated
## March 15, 2006 and in supersession of the Oil and Gas Regulatory Authority's notification
## S.R.O. No. 932 (1)/2018, dated July 07, 2018, Oil and Gas Regulatory Authority does hereby,
## in respect of the petroleum products, refined by the refineries in Pakistan and imports,
## specified in column (1) of the table below, determine the prescribed price specified in
## column (2) of the said table, including the rate of Petroleum Levy as notified vide the
## Ministry of Energy (Petroleum Division) S.R.O. No..... dated July 31, 2018 and specified in
## column (3) and inland freight equalization margin (IFEM) as provisionally determined by
## OGRA specified in column (4) of the table, notify the dealers commission specified in
## column (5) of the table, distributors margin specified in column (6) of the table, general
## sales tax specified in column (7) of the table and declare the maximum ex-depot sale price
## specified in column (8) of the table, thereof;
## TABLE
## Products Prescribed Petroleum Rate of inland Rate of Rate of distributors' General Sales Maximum
## Price Levy included freight margin dealers margin of oil Tax included Ex-Depot
## {Note 1} in Prescribed included commission marketing company in Maximum Sales Price
## ve MateDepot, Prescribed Prescrineg = XDSROtSale (Note 2)
## Sales Price Price Price
## Be 8 aE"Oorvwv---908 OT oa/s\V) oer
## TT ner is hier a ther ae pe a ee
## 1. E-10 Gasoline
## (i) For sale through retail 78.73 4.30 0.54 3.47 2.64 13.48 92.75
## i or rect ante cone 78.73 7.77 0.54 - 2.64 13.48 92.75
## Notes:
##
## (1) Prescribed price includes ex-refinery import parity price, petroleum levy, distributor margin
## and dealer margin.
##
## (2) Maximum ex-depot sale prices specified in column 8 of the above table are applicable on 22

```

```

## locations/depots of the OMCs and cover primary freight only. However, beyond 22
## specified locations and in special areas of Balochistan, Azad Kashmir and Northern Areas,
## the OMCs are allowed to charge secondary freight also up to the respective retail outlets, per
## GoP policy.
##
## (3) Direct Sales of E-10 Gasoline by OMCs will be per GoP policy.
##
## (4) This Notification shall come into force with effect from August 01, 2018.
##
## Reference No. 10-12(30)/2018
## ogg!
## (Mis Yaqub)
## Executive Director (F&A)
## Rows: 52
## Columns: 3
## $ Date <chr> "To be published in the gazette of Pakistan extra-ordinary Part~
## $ Price <chr> NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA,~
## $ Change <chr> NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA,~
## [1] "/E-10/e_10_gasoline_price_notification_effective_dated_august_01_2019.pdf"
## Converting page 1 to e_10_gasoline_price_notification_effective_dated_august_01_2019_1.png... done!
## Converting page 2 to e_10_gasoline_price_notification_effective_dated_august_01_2019_2.png... done!
## 10 be published in the gazette of Pakistan extra-ordinary Part -II
## OIL AND GAS REGULATORY AUTHORITY
## RREKEREENEKEREREE ERE ERERRE
## Islamabad, the July 31, 2019
## NOTIFICATION
## S.R.O..... (I) / 2019: - In exercise of the powers conferred by Section 6(2)(r) of Oil and
## Gas Regulatory Authority Ordinance, 2002 (XVII of 2002), and clause(4) and (4A) of Section
## 2 of the Petroleum Products (Petroleum Levy) Ordinance 1961(XXV of 1961), rule 3, sub-
## rule (1) of rule 6 and rule 7 of Petroleum Products (Petroleum Development Levy) Rules
## 1967 read with the Ministry of Energy (Petroleum Division) S.R.O. No. 254(1)/2006, dated
## March 15, 2006 and in supersession of the Oil and Gas Regulatory Authority's notification
## S.R.O. No. 799 (1)/2019, dated June 30, 2019, Oil and Gas Regulatory Authority does
## hereby, in respect of the petroleum products, refined by the refineries in Pakistan and
## imports, specified in column (1) of the table below, determine the prescribed price specified
## in column (2) of the said table, including the rate of Petroleum Levy as notified vide the
## Ministry of Energy (Petroleum Division) S.R.O. No..... dated July 31, 2019 and specified in
## column (3) and inland freight equalization margin (IFEM) as provisionally determined by
## OGRA specified in column (4) of the table, notify the dealers commission specified in
## column (5) of the table, distributors margin specified in column (6) of the table, general
## sales tax specified in column (7) of the table and declare the maximum ex-depot sale price
## specified in column (8) of the table, thereof:
## TABLE
## Products Prescribed Petroleum Rate of inland Rate of Rateofdistributors' General Sales Maximum
## Price Levy included freight margin dealers margin of oil Tax included Ex-Depot
## (Note 1) in Prescribed included commission marketingcompany in Maximum Sales Price
## Price inMaximum included in included in Ex Depot Sale (Note 2)
## Ex-Depot Prescribed Prescribed Price
## Sales Price Price Price
## 8) Fe Be _-__000sas/ oa
## 1. E-10 Gasoline
## (i) For sale through retail 98.03 16.54 0.54 3.47 2.64 16.76 115.33
## outlets / others, and
## Gp for directsaleto consumers 98.03 20.01 0.54 - 2.64 16.76 115.33

```



```

## Notes:
##
## (1) Prescribed price includes ex-refinery import parity price, petroleum levy, distributor margin
## and dealer margin.
##
## (2) Maximum ex-depot sale prices specified in column 8 of the above table are applicable on 22
## locations/depots of the OMCs and cover primary freight only. However, beyond 22
## specified locations and in special areas of Balochistan, Azad Kashmir and Northern Areas,
## the OMCs are allowed to charge secondary freight also up to the respective retail outlets, per
## GoP policy.
##
## (3) Direct Sales of E-10 Gasoline by OMCs will be per GoP policy.
##
## (4) This Notification shall come into force with effect from August 01, 2019.
##
## Reference No. 10-12(30)/2019 ,
## (Muhamm urtaza Ch.)
## Executive Director (F)
## Rows: 52
## Columns: 3
## $ Date <chr> "10 be published in the gazette of Pakistan extra-ordinary Part~
## $ Price <chr> NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA,~
## $ Change <chr> NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA,~
## [1] "/E-10/e_10_gasoline_price_notification_effective_dated_december_01_2017.pdf"
## Converting page 1 to e_10_gasoline_price_notification_effective_dated_december_01_2017_1.png... done
## Converting page 2 to e_10_gasoline_price_notification_effective_dated_december_01_2017_2.png... done
## To be published in the gazette of Pakistan extra-ordinary Part -I
## OIL AND GAS REGULATORY AUTHORITY
## HENAEAEEL ARE REA RERREREERES
## Islamabad, the November 30, 2017
## NOTIFICATION
## S.R.O..... (I) / 2017: - In exercise of the powers conferred by Section 6(2)(r) of Oil and
## Gas Regulatory Authority Ordinance, 2002 (XVII of 2002), and clause(4) and (4A) of Section
## 2 of the Petroleum Products (Petroleum Levy) Ordinance 1961(XXV of 1961), rule 3, sub-
## rule (1) of rule 6 and rule 7 of Petroleum Products (Petroleum Development Levy) Rules
## 1967 read with the Ministry of Petroleum and Natural Resources S.R.O. No. 254(I)/2006,
## dated March 15, 2006 and in supersession of the Oil and Gas Regulatory Authority's
## notification S.R.O. No. 1143 (1)/2017, dated October 31, 2017, Oil and Gas Regulatory
## Authority does hereby, in respect of the petroleum products, refined by the refineries in
## Pakistan and imports, specified in column (1) of the table below, determine the prescribed
## price specified in column (2) of the said table, including the rate of Petroleum Levy as
## notified vide the Ministry of Petroleum and Natural Resources S.R.O. No..... dated
## November 30, 2017 and specified in column (3) and inland freight equalization margin
## (IFEM) as provisionally determined by OGRA specified in column (4) of the table, notify
## the dealers commission specified in column (5) of the table, distributors margin specified in
## column (6) of the table, general sales tax specified in column (7) of the table and declare the
## maximum ex-depot sale price specified in column (8) of the table, thereof;
## TABLE
## Products Prescribed Petroleum Rateofinland Rateof Rateofdistributors' GeneralSales Maximum
## Price Levy included freight margin dealers margin of oil Tax included Ex-Depot
## (Note 1) in Prescribed included commission marketingcompany inMaximum Sales Price
## Price in Maximum included in included in Ex Depot Sale (Note 2)
## Ex-Depot Prescribed Prescribed Price
## Sales Price Price Price

```

```

## _ Y &Qg @®) ® #32, °&4,.© £4.) 8) _
## Rs /Liter Rs / Liter Rs/Liter Rs / Liter Rs / Liter Rs / Liter Rs / Liter
## 1. E-10 Gasoline
## (i) For sale through retail 63.54 8.28 0.54 3.35 2.55 10.89 74.97
## outlets / others, and
## {I for direct sale to consumers 63,54 11.63 0.54 : 2.55 10.89 74.97
## by oil companies (Note-3).
## Notes:
##
## (1) Prescribed price includes ex-refinery import parity price, petroleum levy, distributor margin
## and dealer margin.
##
## (2) Maximum ex-depot sale prices specified in column 8 of the above table are applicable on 22
## locations/depots of the OMCs and cover primary freight only. However, beyond 22
## specified locations and in special areas of Balochistan, Azad Kashmir and Northern Areas,
## the OMCs are allowed to charge secondary freight also up to the respective retail outlets, per
## GoP policy.
##
## (3) Direct Sales of E-10 Gasoline by OMCs will be per GoP policy.
##
## (4) This Notification shall come into force with effect from December 01, 2017.
##
## Reference No. 10-12(30)/2017
## tl
## ib Y
## Misbgh Yaqub
## Executive Director (F&A)
## Rows: 56
## Columns: 3
## $ Date <chr> "To be published in the gazette of Pakistan extra-ordinary Part~
## $ Price <chr> NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA,~
## $ Change <chr> NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA,~
## [1] "/E-10/e_10_gasoline_price_notification_effective_dated_december_01_2018.pdf"
## Converting page 1 to e_10_gasoline_price_notification_effective_dated_december_01_2018_1.png... done
## Converting page 2 to e_10_gasoline_price_notification_effective_dated_december_01_2018_2.png... done
## To be published in the gazette of Pakistan extra-ordinary Part -II
## OIL AND GAS REGULATORY AUTHORITY
## KHER EEA RER EEEEE EERE ERE
## Islamabad, the November 30, 2018
## NOTIFICATION
## S.R.O..... (I) / 2018: - In exercise of the powers conferred by Section 6(2)(r) of Oil and
## Gas Regulatory Authority Ordinance, 2002 (XVII of 2002), and clause(4) and (4A) of Section
## 2 of the Petroleum Products (Petroleum Levy) Ordinance 1961(XXV of 1961), rule 3, sub-
## rule (1) of rule 6 and rule 7 of Petroleum Products (Petroleum Development Levy) Rules
## 1967 read with the Ministry of Energy (Petroleum Division) S.R.O. No. 254(1)/2006, dated
## March 15, 2006 and in supersession of the Oil and Gas Regulatory Authority's notification
## S.R.O. No. 1335 (1)/2018, dated October 31, 2018, Oil and Gas Regulatory Authority does
## hereby, in respect of the petroleum products, refined by the refineries in Pakistan and
## imports, specified in column (1) of the table below, determine the prescribed price specified
## in column (2) of the said table, including the rate of Petroleum Levy as notified vide the
## Ministry of Energy (Petroleum Division) S.R.O. No..... dated November 30, 2018 and
## specified in column (3) and inland freight equalization margin (IFEM) as provisionally
## determined by OGRA specified in column (4) of the table, notify the dealers commission
## specified in column (5) of the table, distributors margin specified in column (6) of the table,

```

```

## general sales tax specified in column (7) of the table and declare the maximum ex-depot
## sale price specified in column (8) of the table, thereof;
## TABLE
## Products Prescribed Petroleum Rate of inland Rateof Rateofdistributors' General Sales Maximum
## Price Levy included freight margin dealers margin of oil Tax included Ex-Depot
## (Note 1) in Prescribed included commission marketingcompany in Maximum Sales Price
## Price in Maximum included in included in Ex Depot Sale {Note 2}
## Ex-Depot Prescribed Prescribed Price
## Sales Price Price Price
## -hy),_oED S-0/aS) COULM|)COTTCOMUm®S)COCOCCOS Fe)
## Rs f/ Liter Rs / Liter Rs / Liter Rs / Liter Rs / Liter Rs / Liter Rs / Liter
## 1. E-10 Gasoline
## (i) Forsale through retail - 79.23 3.34 0.54 3.47 2.64 13.56 93.33
## outlets / others, and
## GH) for direct sate to nl 79.23 6.81 0.54 2.64 13.56 93.33
## Notes:
##
## (1) Prescribed price includes ex-refinery import parity price, petroleum levy, distributor margin
## and dealer margin.
##
## (2) Maximum ex-depot sale prices specified in column 8 of the above table are applicable on 22
## locations/depots of the OMCs and cover primary freight only. However, beyond 22
## specified locations and in special areas of Balochistan, Azad Kashmir and Northern Areas,
## the OMCs are allowed to charge secondary freight also up to the respective retail outlets, per
## GoP policy.
##
## (3) Direct Sales of E-10 Gasoline by OMCs will be per GoP policy.
##
## (4) This Notification shall come into force with effect from December 01, 2018.
## ee
## Reference No. 10-12(30)/ 2018
##
## )
## fat)
## isp Yaqub)
## Executive Director (F&A)
## Rows: 56
## Columns: 3
## $ Date <chr> "To be published in the gazette of Pakistan extra-ordinary Part~
## $ Price <chr> NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA,~
## $ Change <chr> NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA,~

```

```

##*****
# Task 2:

```

```
library(pdftools)
```

```
## Using poppler version 21.04.0
```

```
files <- list.files('./E-10',pattern = ".pdf$")
files
```

```
## [1] "e_10_gasoline_price_notification_effective_dated_april_01_2017.pdf"
```

```

## [2] "e_10_gasoline_price_notification_effective_dated_april_01_2018.pdf"
## [3] "e_10_gasoline_price_notification_effective_dated_april_01_2019.pdf"
## [4] "e_10_gasoline_price_notification_effective_dated_august_01_2017.pdf"
## [5] "e_10_gasoline_price_notification_effective_dated_august_01_2018.pdf"
## [6] "e_10_gasoline_price_notification_effective_dated_august_01_2019.pdf"
## [7] "e_10_gasoline_price_notification_effective_dated_december_01_2017.pdf"
## [8] "e_10_gasoline_price_notification_effective_dated_december_01_2018.pdf"
## [9] "e_10_gasoline_price_notification_effective_dated_december_01_2019.pdf"
## [10] "e_10_gasoline_price_notification_effective_dated_february_01_2017.pdf"
## [11] "e_10_gasoline_price_notification_effective_dated_february_01_2018.pdf"
## [12] "e_10_gasoline_price_notification_effective_dated_february_01_2019.pdf"
## [13] "e_10_gasoline_price_notification_effective_dated_february_01_2020.pdf"
## [14] "e_10_gasoline_price_notification_effective_dated_february_16_2017.pdf"
## [15] "e_10_gasoline_price_notification_effective_dated_january_01_2017.pdf"
## [16] "e_10_gasoline_price_notification_effective_dated_january_01_2018.pdf"
## [17] "e_10_gasoline_price_notification_effective_dated_january_01_2019.pdf"
## [18] "e_10_gasoline_price_notification_effective_dated_january_01_2020.pdf"
## [19] "e_10_gasoline_price_notification_effective_dated_january_16_2017.pdf"
## [20] "e_10_gasoline_price_notification_effective_dated_july_01_2017.pdf"
## [21] "e_10_gasoline_price_notification_effective_dated_july_01_2018.pdf"
## [22] "e_10_gasoline_price_notification_effective_dated_july_01_2019.pdf"
## [23] "e_10_gasoline_price_notification_effective_dated_july_08_2018.pdf"
## [24] "e_10_gasoline_price_notification_effective_dated_june_01_2017.pdf"
## [25] "e_10_gasoline_price_notification_effective_dated_june_01_2018.pdf"
## [26] "e_10_gasoline_price_notification_effective_dated_june_01_2019.pdf"
## [27] "e_10_gasoline_price_notification_effective_dated_june_01_2020.pdf"
## [28] "e_10_gasoline_price_notification_effective_dated_june_12_2018.pdf"
## [29] "e_10_gasoline_price_notification_effective_dated_june_26_2020.pdf"
## [30] "e_10_gasoline_price_notification_effective_dated_march_01_2017.pdf"
## [31] "e_10_gasoline_price_notification_effective_dated_march_01_2018.pdf"
## [32] "e_10_gasoline_price_notification_effective_dated_march_01_2019.pdf"
## [33] "e_10_gasoline_price_notification_effective_dated_march_01_2020.pdf"
## [34] "e_10_gasoline_price_notification_effective_dated_march_25_2020.pdf"
## [35] "e_10_gasoline_price_notification_effective_dated_may_01_2017.pdf"
## [36] "e_10_gasoline_price_notification_effective_dated_may_01_2018.pdf"
## [37] "e_10_gasoline_price_notification_effective_dated_may_01_2019.pdf"
## [38] "e_10_gasoline_price_notification_effective_dated_may_01_2020.pdf"
## [39] "e_10_gasoline_price_notification_effective_dated_may_05_2019.pdf"
## [40] "e_10_gasoline_price_notification_effective_dated_november_01_2017.pdf"
## [41] "e_10_gasoline_price_notification_effective_dated_november_01_2018.pdf"
## [42] "e_10_gasoline_price_notification_effective_dated_november_01_2019.pdf"
## [43] "e_10_gasoline_price_notification_effective_dated_october_01_2017.pdf"
## [44] "e_10_gasoline_price_notification_effective_dated_october_01_2018.pdf"
## [45] "e_10_gasoline_price_notification_effective_dated_october_01_2019.pdf"
## [46] "e_10_gasoline_price_notification_effective_dated_september_01_2017.pdf"
## [47] "e_10_gasoline_price_notification_effective_dated_september_01_2018.pdf"
## [48] "e_10_gasoline_price_notification_effective_dated_september_01_2019.pdf"

```

```

for(i in 1:6){
  if(i == 1){
    month <- "*january*"
  }
  else if( i == 2 ){
    month <- "*february*"
  }
}

```

```

}
else if(i == 3) {
  month <- "*march*"
}
else if (i == 4){
  month <- "*april*"
}
else if(i == 5) {
  month <- "*may*"
}

else if(i == 6){
  month <- "*june*"
}

else if( i == 7 ){
  month <- "*july*"
}

else if(i == 8) {
  month <- "*august*"
}

else if(i == 9){
  month <- "*september*"
}

else if( i == 10){
  month <- "*october*"
}

else if(i == 11){
  month <- "*november*"
}

else if( i == 12)
{
  month <- "*december*"
}

k <- grep(month, files, value = TRUE)

length(k)

if(length(k) < 8){
for(j in 2017:2020){
  print(j)
  date_wildCard = paste("?", j, ".pdf*", sep="")
  x <- grep(date_wildCard, k, value = TRUE)
  print(x)

  if(length(x) < 2){
    cat( month, "_", j, "missing files")

```

```

# create a missing file
# x[1].copy krny k bd rename

}
if(length(x) == 2){
  strng <- strsplit(x[1], split = "_")
  print(strng)
}
}
}

## [1] 2017
## [1] "e_10_gasoline_price_notification_effective_dated_january_01_2017.pdf"
## [2] "e_10_gasoline_price_notification_effective_dated_january_16_2017.pdf"
## [[1]]
## [1] "e"          "10"          "gasoline"    "price"       "notification"
## [6] "effective"   "dated"       "january"     "01"          "2017.pdf"
##
## [1] 2018
## [1] "e_10_gasoline_price_notification_effective_dated_january_01_2018.pdf"
## *january* _ 2018 missing files[1] 2019
## [1] "e_10_gasoline_price_notification_effective_dated_january_01_2019.pdf"
## *january* _ 2019 missing files[1] 2020
## [1] "e_10_gasoline_price_notification_effective_dated_january_01_2020.pdf"
## *january* _ 2020 missing files[1] 2017
## [1] "e_10_gasoline_price_notification_effective_dated_february_01_2017.pdf"
## [2] "e_10_gasoline_price_notification_effective_dated_february_16_2017.pdf"
## [[1]]
## [1] "e"          "10"          "gasoline"    "price"       "notification"
## [6] "effective"   "dated"       "february"    "01"          "2017.pdf"
##
## [1] 2018
## [1] "e_10_gasoline_price_notification_effective_dated_february_01_2018.pdf"
## *february* _ 2018 missing files[1] 2019
## [1] "e_10_gasoline_price_notification_effective_dated_february_01_2019.pdf"
## *february* _ 2019 missing files[1] 2020
## [1] "e_10_gasoline_price_notification_effective_dated_february_01_2020.pdf"
## *february* _ 2020 missing files[1] 2017
## [1] "e_10_gasoline_price_notification_effective_dated_march_01_2017.pdf"
## *march* _ 2017 missing files[1] 2018
## [1] "e_10_gasoline_price_notification_effective_dated_march_01_2018.pdf"
## *march* _ 2018 missing files[1] 2019
## [1] "e_10_gasoline_price_notification_effective_dated_march_01_2019.pdf"
## *march* _ 2019 missing files[1] 2020
## [1] "e_10_gasoline_price_notification_effective_dated_march_01_2020.pdf"
## [2] "e_10_gasoline_price_notification_effective_dated_march_25_2020.pdf"
## [[1]]
## [1] "e"          "10"          "gasoline"    "price"       "notification"
## [6] "effective"   "dated"       "march"       "01"          "2020.pdf"
##
## [1] 2017
## [1] "e_10_gasoline_price_notification_effective_dated_april_01_2017.pdf"

```

```

## *april* _ 2017 missing files[1] 2018
## [1] "e_10_gasoline_price_notification_effective_dated_april_01_2018.pdf"
## *april* _ 2018 missing files[1] 2019
## [1] "e_10_gasoline_price_notification_effective_dated_april_01_2019.pdf"
## *april* _ 2019 missing files[1] 2020
## character(0)
## *april* _ 2020 missing files[1] 2017
## [1] "e_10_gasoline_price_notification_effective_dated_june_01_2017.pdf"
## *june* _ 2017 missing files[1] 2018
## [1] "e_10_gasoline_price_notification_effective_dated_june_01_2018.pdf"
## [2] "e_10_gasoline_price_notification_effective_dated_june_12_2018.pdf"
## [[1]]
## [1] "e"          "10"          "gasoline"    "price"       "notification"
## [6] "effective"  "dated"       "june"        "01"          "2018.pdf"
##
## [1] 2019
## [1] "e_10_gasoline_price_notification_effective_dated_june_01_2019.pdf"
## *june* _ 2019 missing files[1] 2020
## [1] "e_10_gasoline_price_notification_effective_dated_june_01_2020.pdf"
## [2] "e_10_gasoline_price_notification_effective_dated_june_26_2020.pdf"
## [[1]]
## [1] "e"          "10"          "gasoline"    "price"       "notification"
## [6] "effective"  "dated"       "june"        "01"          "2020.pdf"

```

##Reference links: <https://cran.r-project.org/web/packages/tesseract/vignettes/intro.html>

<https://cran.r-project.org/web/packages/magick/vignettes/intro.html>

<https://stackoverflow.com/questions/42943533/r-get-last-element-from-str-split>