IE421 Midterm

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Installing Required Packages

```
library(knitr)
library(ggplot2)
library(rmarkdown)
library(dplyr)
library(readr)
```

Note : All messages and warnings are suspended to prevent reader to be disturbed !

Importing Dataset

Question 1.1

```
load("C:/Users/Selimhan/Desktop/files/IE-421 Data Science/owid_covid_data_4Dec2021.Rdata")
```

Question 1.2

```
d2 <- owid_covid_data_4Dec2021 %>%
  group_by(location) %>%
  summarize(
    total_cases = sum(new_cases , na.rm = TRUE) ,
    total_deaths = sum(new_deaths , na.rm = TRUE) ,
    total_tests = sum(new_tests , na.rm = TRUE),
    iso_code = iso_code[1],
    continent = continent[1],
  population  = max(population,na.rm = TRUE) ,
   gdp_per_capita = max(gdp_per_capita,na.rm = TRUE),
   total_boosters = max(total_boosters , na.rm = TRUE) ,
    total_vaccinations = max(total_vaccinations , na.rm = TRUE) ,
   people_vaccinated = max(people_vaccinated , na.rm = TRUE) ,
   people_fully_vaccinated = max(people_fully_vaccinated , na.rm = TRUE)
  )
```

1.4

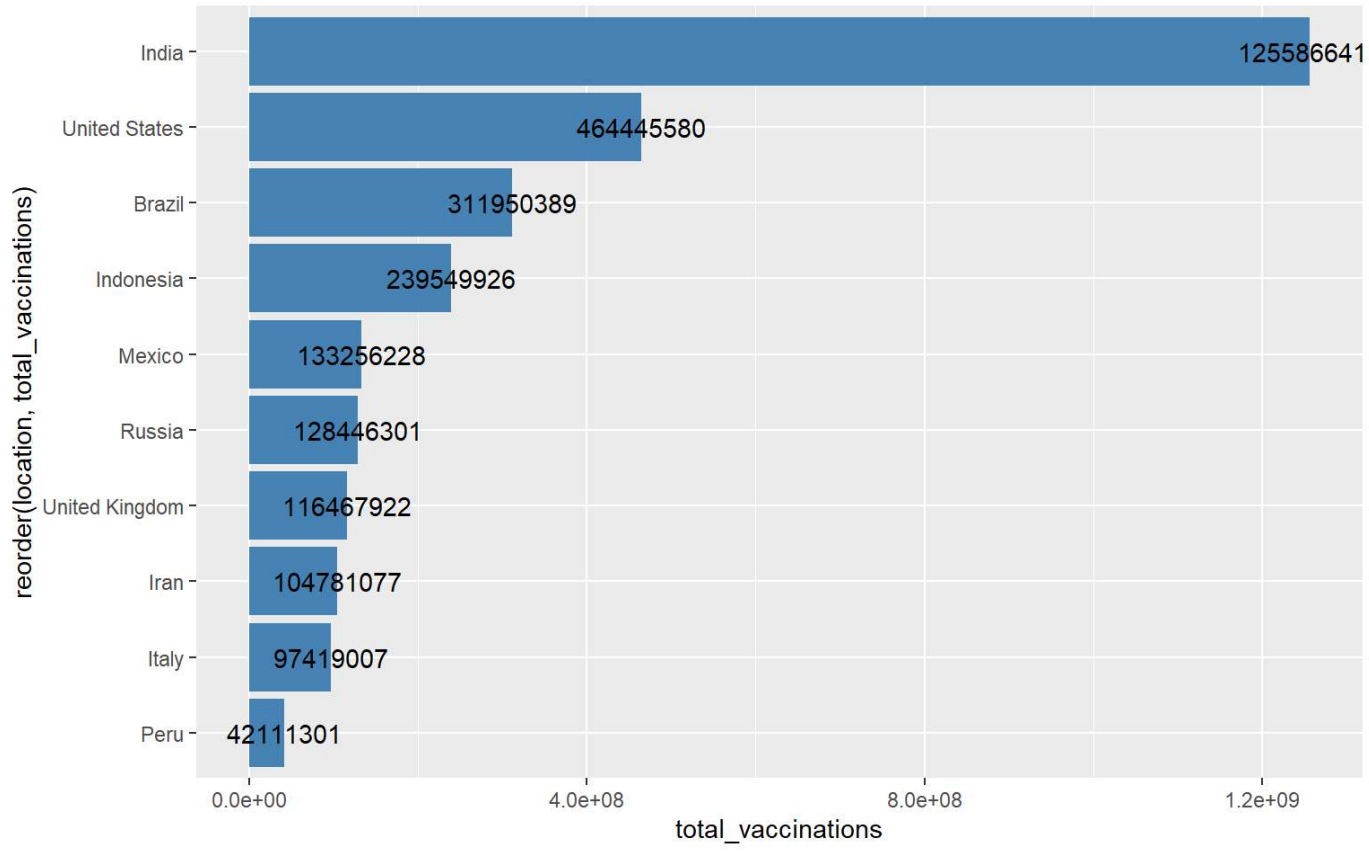
```
str(d2)
```

```
## tibble [158 x 12] (S3: tbl_df/tbl/data.frame)
##  $ location              : Factor w/ 237 levels "Afghanistan",..: 1 3 4 6 9 10 13 14 15 1
7 ...
##  $ total_cases           : num [1:158] 157412 201045 211112 65223 5337692 ...
##  $ total_deaths          : num [1:158] 7311 3108 6089 1735 116639 ...
##  $ total_tests           : num [1:158] 0 737014 0 0 26166076 ...
##  $ iso_code              : Factor w/ 237 levels "ABW","AFG","AGO",..: 2 5 57 3 8 9 11 12
13 21 ...
##  $ continent             : Factor w/ 7 levels "","Africa","Asia",..: 3 4 2 2 7 3 6 4 3 3
...
##  $ population            : num [1:158] 39835428 2872934 44616626 33933611 45605823 ...
##  $ gdp_per_capita        : num [1:158] 1804 11803 13914 5819 18934 ...
##  $ total_boosters        : num [1:158] -Inf 70501 20340 -Inf 2274519 ...
##  $ total_vaccinations    : num [1:158] 5116767 2111797 12076870 9847459 69269878 ...
##  $ people_vaccinated     : num [1:158] 4285440 1075332 6716299 6774984 36850139 ...
##  $ people_fully_vaccinated: num [1:158] 3454113 965964 5340231 3072475 30005276 ...
```

Question 2.1

```
top_10 =d2 %>%
 top_n(n=10 , wt = total_deaths)
```

```
ggplot(top_10, aes(x = reorder(location ,total_vaccinations   ) , y = total_vaccinations)) +
geom_bar(fill = "steelblue" , stat = "identity") + geom_text(aes(label = total_vaccinations))
+ coord_flip()
```



2.2

```
top_6 = d2 %>%
  top_n(n=10 , wt = total_deaths)
```

Out of time :(

ggplot(top_6) + geom_bar(mapping = aes(x = reorder(location , total_deaths) , y = total_deaths))