

J Component Final

Name: Yash Vardhan Sharma

Registration number: 19BCE1097

Choose any data set and make it tidy and suitable for further processing. Use .Rmd file for processing and providing your justification for cleaning individual columns. knit and submit it in html format.

```
#Loading packages  
library(tidyr)
```

```
## Warning: package 'tidyr' was built under R version 4.0.5
```

```
library(dplyr)
```

```
## Warning: package 'dplyr' was built under R version 4.0.5
```

```
##  
## 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(ggplot2)
```

```
## Warning: package 'ggplot2' was built under R version 4.0.5
```

```
#Data Pre-processing
#importing dataset
dataset = read.csv("time-series-19-covid-combined.csv")
dataset <- na.omit(dataset)
#the null values of Province/State are substituted by respective #Country/Region values
#the null values of Confirmed, Recovered and Deaths are filled with 0
dataset$Province.State <- ifelse(dataset$Province.State == "", dataset$Country.Region, dataset$Province.State)
dataset$Confirmed <- ifelse(is.na(dataset$Confirmed), 0, dataset$Confirmed)
dataset$Recovered <- ifelse(is.na(dataset$Recovered), 0, dataset$Recovered)
dataset$Deaths <- ifelse(is.na(dataset$Deaths),0, dataset$Deaths)

sum(is.na(dataset$Recovered))
```

```
## [1] 0
```

```
sum(is.na(dataset$Confirmed))
```

```
## [1] 0
```

```
sum(is.na(dataset$Deaths))
```

```
## [1] 0
```

```
summary(dataset)
```

```
##      Date      Country.Region Province.State      Lat
## Length:26857 Length:26857      Length:26857      Min.   :-51.796
## Class :character Class :character Class :character 1st Qu.:  6.428
## Mode  :character Mode  :character Mode  :character Median : 21.694
##                                     Mean  : 19.854
##                                     3rd Qu.: 39.305
##                                     Max.   : 71.707
##      Long      Confirmed      Recovered      Deaths
## Min.   :-102.553 Min.    :      0 Min.    :      0 Min.    :      0.0
## 1st Qu.:  -7.692 1st Qu.:      0 1st Qu.:      0 1st Qu.:      0.0
## Median :  23.881 Median :     12 Median :      0 Median :      0.0
## Mean    :  28.704 Mean    :   3625 Mean    :   1009 Mean    :   239.7
## 3rd Qu.:  88.092 3rd Qu.:    307 3rd Qu.:    71 3rd Qu.:     4.0
## Max.    : 178.065 Max.    :1257023 Max.    :195036 Max.    :75662.0
```

```
sapply(dataset,class)
```

```
##      Date Country.Region Province.State      Lat      Long
## "character" "character" "character" "numeric" "numeric"
## Confirmed Recovered Deaths
## "integer" "integer" "integer"
```

```
# convert date column from character to date class
dataset$Date <- as.Date(dataset$Date, format = "%m/%d/%Y")

sapply(dataset,class)
```

```
##           Date Country.Region Province.State           Lat           Long
##           "Date"      "character"    "character"    "numeric"    "numeric"
##    Confirmed      Recovered          Deaths
##    "integer"      "integer"      "integer"
```

```
# Extract specific country: India
india <- dataset %>% filter(Country.Region=="India")
```

```
# SUMMARY STATISTICS
summary(dataset)
```

```
##           Date           Country.Region Province.State           Lat
## Min.      :2020-01-22 Length:26857      Length:26857      Min.      : -51.796
## 1st Qu.:2020-02-17   Class :character Class :character 1st Qu.:   6.428
## Median :2020-03-15   Mode  :character Mode  :character Median : 21.694
## Mean     :2020-03-15                               Mean     : 19.854
## 3rd Qu.:2020-04-11                               3rd Qu.: 39.305
## Max.     :2020-05-07                               Max.     : 71.707
##           Long           Confirmed           Recovered           Deaths
## Min.      : -102.553 Min.      :      0 Min.      :      0 Min.      :      0.0
## 1st Qu.:  -7.692 1st Qu.:      0 1st Qu.:      0 1st Qu.:      0.0
## Median : 23.881 Median :     12 Median :      0 Median :      0.0
## Mean     : 28.704 Mean     :   3625 Mean     :   1009 Mean     :   239.7
## 3rd Qu.: 88.092 3rd Qu.:    307 3rd Qu.:    71 3rd Qu.:      4.0
## Max.     : 178.065 Max.     :1257023 Max.     :195036 Max.     :75662.0
```

```
by(dataset$Confirmed, dataset$Country.Region, summary)
```

```

## dataset$Country.Region: Afghanistan
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.0      0.0    16.0   458.3   538.0   3563.0
## -----
## dataset$Country.Region: Albania
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.0      0.0    42.0   219.9   424.5   842.0
## -----
## dataset$Country.Region: Algeria
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.0      0.0    48.0   999.2  1793.0   5182.0
## -----
## dataset$Country.Region: Andorra
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.0      0.0     1.0   253.6   601.0   752.0
## -----
## dataset$Country.Region: Angola
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##  0.000  0.000  0.000    8.336  19.000   36.000
## -----
## dataset$Country.Region: Antigua and Barbuda
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##  0.000  0.000  1.000    7.972  20.000   25.000
## -----
## dataset$Country.Region: Argentina
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0         0      45   1108   1975   5371
## -----
## dataset$Country.Region: Armenia
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0         0      26    544    952   2884
## -----
## dataset$Country.Region: Australia
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.0      1.0    15.0   318.1   355.0  3047.0
## -----
## dataset$Country.Region: Austria
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0         0    860   5715  13680  15752
## -----
## dataset$Country.Region: Azerbaijan
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.0      0.0    23.0   479.8  1024.5  2204.0
## -----
## dataset$Country.Region: Bahamas
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##  0.00  0.00  0.00   21.31   44.00   92.00
## -----
## dataset$Country.Region: Bahrain
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.0      0.0   214.0   764.8   982.5  4199.0
## -----
## dataset$Country.Region: Bangladesh
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0         0      5   1332    453  12425

```

```

## -----
## dataset$Country.Region: Barbados
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00    0.00    0.00   27.08   67.50   82.00
## -----
## dataset$Country.Region: Belarus
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0         0       27   2553   2104   20168
## -----
## dataset$Country.Region: Belgium
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0         1     886   13403   27343   51420
## -----
## dataset$Country.Region: Belize
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##  0.000    0.000    0.000    5.187   11.500   18.000
## -----
## dataset$Country.Region: Benin
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00    0.00    0.00   18.17   35.00   140.00
## -----
## dataset$Country.Region: Bhutan
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##  0.000    0.000    1.000    2.449    5.000    7.000
## -----
## dataset$Country.Region: Bolivia
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0.0     0.0    10.0   254.4   271.5   2081.0
## -----
## dataset$Country.Region: Bosnia and Herzegovina
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0.0     0.0    24.0   463.5   923.5   2027.0
## -----
## dataset$Country.Region: Botswana
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##  0.000    0.000    0.000    5.654   13.000   23.000
## -----
## dataset$Country.Region: Brazil
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0         0     162   17413   20183   135773
## -----
## dataset$Country.Region: Brunei
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00    0.00   50.00   63.06   136.00   141.00
## -----
## dataset$Country.Region: Bulgaria
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0.0     0.0    51.0   384.1   648.0   1829.0
## -----
## dataset$Country.Region: Burkina Faso
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0.0     0.0     3.0   204.9   463.5   736.0
## -----
## dataset$Country.Region: Burma
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00    0.00    0.00   33.45   32.50   176.00

```

```

## -----
## dataset$Country.Region: Burundi
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.000  0.000  0.000  2.673  4.000 15.000
## -----
## dataset$Country.Region: Cabo Verde
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00  0.00  0.00  25.06  7.50 218.00
## -----
## dataset$Country.Region: Cambodia
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00  1.00  7.00  53.23 119.50 122.00
## -----
## dataset$Country.Region: Cameroon
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.0  0.0  2.0  432.6  820.0 2267.0
## -----
## dataset$Country.Region: Central African Republic
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.000  0.000  1.000  9.897  8.000 94.000
## -----
## dataset$Country.Region: Chad
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00  0.00  0.00  17.28  11.00 253.00
## -----
## dataset$Country.Region: Chile
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0  0  74  3996  6714 24581
## -----
## dataset$Country.Region: China
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.0  87.5 219.0 2060.2  631.0 68128.0
## -----
## dataset$Country.Region: Colombia
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0  0  34  1538  2591  9456
## -----
## dataset$Country.Region: Comoros
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.0000  0.0000  0.0000  0.2804  0.0000  8.0000
## -----
## dataset$Country.Region: Congo (Brazzaville)
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00  0.00  1.00  48.63  60.00 264.00
## -----
## dataset$Country.Region: Congo (Kinshasa)
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.0  0.0  2.0  133.5  219.0  863.0
## -----
## dataset$Country.Region: Costa Rica
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.0  0.0  27.0  243.7  567.5  765.0
## -----
## dataset$Country.Region: Cote d'Ivoire
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.0  0.0  1.0  299.6  488.5 1571.0

```

```

## -----
## dataset$Country.Region: Croatia
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0.0     0.0    49.0   661.6  1514.5  2125.0
## -----
## dataset$Country.Region: Cuba
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0.0     0.0     4.0   355.5   592.0  1729.0
## -----
## dataset$Country.Region: Cyprus
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0.0     0.0    26.0   262.2   605.5   889.0
## -----
## dataset$Country.Region: Czechia
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##     0         0    253   2476   5782   8031
## -----
## dataset$Country.Region: Denmark
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0.0     0.0    10.0   951.4   184.0 10083.0
## -----
## dataset$Country.Region: Diamond Princess
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0.0   498.0   706.0   545.7   712.0   712.0
## -----
## dataset$Country.Region: Djibouti
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0.0     0.0     0.0   226.4   168.5  1133.0
## -----
## dataset$Country.Region: Dominica
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##  0.000  0.000  0.000   6.084  16.000  16.000
## -----
## dataset$Country.Region: Dominican Republic
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##     0         0     11   1678   2690   9095
## -----
## dataset$Country.Region: Ecuador
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##     0         0     28   5111   7209  31881
## -----
## dataset$Country.Region: Egypt
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##     0         1    110   1296   1866   7981
## -----
## dataset$Country.Region: El Salvador
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##  0.00  0.00  0.00   87.09  117.50  695.00
## -----
## dataset$Country.Region: Equatorial Guinea
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##  0.00  0.00  1.00   50.93   18.00  439.00
## -----
## dataset$Country.Region: Eritrea
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##  0.00  0.00  0.00   12.76   34.00   39.00

```

```

## -----
## dataset$Country.Region: Estonia
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0.0     0.0   171.0   564.2 1281.0  1720.0
## -----
## dataset$Country.Region: Eswatini
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0.0     0.0     1.0    16.4   12.0   153.0
## -----
## dataset$Country.Region: Ethiopia
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00    0.00    1.00   35.51   67.00  191.00
## -----
## dataset$Country.Region: Fiji
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.000    0.000    0.000    5.953  16.000  18.000
## -----
## dataset$Country.Region: Finland
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0         1     244   1405   2837   5673
## -----
## dataset$Country.Region: France
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0         0         3   4526     57 173040
## -----
## dataset$Country.Region: Gabon
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00    0.00    1.00   54.23   45.00  504.00
## -----
## dataset$Country.Region: Gambia
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.000    0.000    0.000    3.579   6.500  18.000
## -----
## dataset$Country.Region: Georgia
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0.0     0.0    33.0   141.9   238.0   615.0
## -----
## dataset$Country.Region: Germany
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0         16   5795   53244 123540 169430
## -----
## dataset$Country.Region: Ghana
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0.0     0.0     6.0   403.8   393.0  3091.0
## -----
## dataset$Country.Region: Greece
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0.0     0.0   331.0   899.1  2046.0  2678.0
## -----
## dataset$Country.Region: Grenada
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00    0.00    0.00    5.86   14.00   21.00
## -----
## dataset$Country.Region: Guatemala
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0.0     0.0     1.0   119.7   131.5   832.0

```



```

## -----
## dataset$Country.Region: Guinea
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.0      0.0      1.0   262.4   231.0  1927.0
## -----
## dataset$Country.Region: Guinea-Bissau
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00      0.00      0.00   39.04   37.00  564.00
## -----
## dataset$Country.Region: Guyana
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00      0.00      4.00   21.68   41.00   93.00
## -----
## dataset$Country.Region: Haiti
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00      0.00      0.00   20.09   32.00  129.00
## -----
## dataset$Country.Region: Holy See
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.000      0.000      1.000    3.589    8.000  12.000
## -----
## dataset$Country.Region: Honduras
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.0      0.0      3.0   211.1   387.0  1685.0
## -----
## dataset$Country.Region: Hungary
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.0      0.0     32.0   687.2  1250.0  3150.0
## -----
## dataset$Country.Region: Iceland
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.0      0.0   171.0   691.9  1682.0  1801.0
## -----
## dataset$Country.Region: India
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0         3     113    7314    8022   56351
## -----
## dataset$Country.Region: Indonesia
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0         0     117    2415    3677   12776
## -----
## dataset$Country.Region: Iran
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0         0   13938   32489   69111  103135
## -----
## dataset$Country.Region: Iraq
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.0      0.0   116.0   610.6  1298.5  2543.0
## -----
## dataset$Country.Region: Ireland
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0         0     129    5057    8508   22385
## -----
## dataset$Country.Region: Israel
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0         0     213    4741   10576   16381

```

```

## -----
## dataset$Country.Region: Italy
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##      0      3   24747   71237  149924  215858
## -----
## dataset$Country.Region: Jamaica
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##      0      0    10      81     64    488
## -----
## dataset$Country.Region: Japan
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##      2      70    839   3620   5768   15477
## -----
## dataset$Country.Region: Jordan
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.0    0.0    8.0   163.7   376.5   494.0
## -----
## dataset$Country.Region: Kazakhstan
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.0    0.0    9.0   717.6   838.5  4578.0
## -----
## dataset$Country.Region: Kenya
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.0    0.0    3.0   104.3   190.0   607.0
## -----
## dataset$Country.Region: Korea, South
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    1.0    30.5  8162.0  6057.3  10465.0  10822.0
## -----
## dataset$Country.Region: Kosovo
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.0    0.0    0.0   182.6   266.5   861.0
## -----
## dataset$Country.Region: Kuwait
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.0    0.0  112.0   874.9  1073.5  6567.0
## -----
## dataset$Country.Region: Kyrgyzstan
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.0    0.0    0.0   183.2   318.5   895.0
## -----
## dataset$Country.Region: Laos
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##  0.000  0.000  0.000   6.411  17.000  19.000
## -----
## dataset$Country.Region: Latvia
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.0    0.0   30.0   277.1   621.0   909.0
## -----
## dataset$Country.Region: Lebanon
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.0    0.0  110.0   274.3   614.0   784.0
## -----
## dataset$Country.Region: Liberia
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.0    0.0    0.0   30.5   42.5   189.0

```

```

## -----
## dataset$Country.Region: Libya
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00    0.00    0.00   15.48   24.00   64.00
## -----
## dataset$Country.Region: Liechtenstein
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00    0.00    4.00   34.01   79.00   82.00
## -----
## dataset$Country.Region: Lithuania
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.0    0.0    12.0   439.5  1012.5  1449.0
## -----
## dataset$Country.Region: Luxembourg
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0         0       59   1340   3246   3859
## -----
## dataset$Country.Region: Madagascar
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00    0.00    0.00   41.88   97.50  193.00
## -----
## dataset$Country.Region: Malawi
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00    0.00    0.00    7.57   10.50   43.00
## -----
## dataset$Country.Region: Malaysia
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0        22     428   2032   4438   6467
## -----
## dataset$Country.Region: Maldives
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00    0.00   13.00   62.84   19.00   648.00
## -----
## dataset$Country.Region: Mali
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00    0.00    0.00   94.32   87.00  650.00
## -----
## dataset$Country.Region: Malta
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0.0     0.0    21.0   150.9   360.0   486.0
## -----
## dataset$Country.Region: Mauritania
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00    0.00    1.00    2.86    7.00    8.00
## -----
## dataset$Country.Region: Mauritius
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0.0     0.0     0.0   112.9   318.5   334.0
## -----
## dataset$Country.Region: Mexico
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0         0       53   3852   4032  29616
## -----
## dataset$Country.Region: Moldova
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0.0     0.0    23.0   886.8  1499.0  4605.0

```

```

## -----
## dataset$Country.Region: Monaco
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00    0.00    2.00   34.63   91.00   95.00
## -----
## dataset$Country.Region: Mongolia
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00    0.00    1.00   11.34   16.00   41.00
## -----
## dataset$Country.Region: Montenegro
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.0    0.0    0.0   104.2   259.0   324.0
## -----
## dataset$Country.Region: Morocco
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0         0        28   1038   1496   5548
## -----
## dataset$Country.Region: Mozambique
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00    0.00    0.00   15.69   20.00   81.00
## -----
## dataset$Country.Region: MS Zaandam
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##  0.000  0.000  0.000   3.187   9.000   9.000
## -----
## dataset$Country.Region: Namibia
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##  0.000  0.000  2.000   6.364  16.000  16.000
## -----
## dataset$Country.Region: Nepal
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.0    1.0    1.0   13.4    9.0   101.0
## -----
## dataset$Country.Region: Netherlands
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.0    0.0    0.0  2311.2   41.5 41774.0
## -----
## dataset$Country.Region: New Zealand
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.0    0.0    8.0   494.5  1297.5  1490.0
## -----
## dataset$Country.Region: Nicaragua
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##  0.000  0.000  0.000   3.813   7.500  16.000
## -----
## dataset$Country.Region: Niger
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.0    0.0    0.0   191.4   464.5   781.0
## -----
## dataset$Country.Region: Nigeria
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.0    0.0    2.0   372.8   311.5  3526.0
## -----
## dataset$Country.Region: North Macedonia
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.0    0.0   14.0   394.6   735.5  1572.0

```

```

## -----
## dataset$Country.Region: Norway
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##     0       0    1221    2870    6362    8034
## -----
## dataset$Country.Region: Oman
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.0     0.0    22.0   492.1   515.0  2958.0
## -----
## dataset$Country.Region: Pakistan
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##     0       0     53    3692    4853   24644
## -----
## dataset$Country.Region: Panama
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##     0       0     43    1600    2863    7868
## -----
## dataset$Country.Region: Papua New Guinea
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##  0.000  0.000  0.000   1.935   2.000   8.000
## -----
## dataset$Country.Region: Paraguay
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00    0.00    6.00   78.87  131.00  462.00
## -----
## dataset$Country.Region: Peru
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##     0       0     43    7098    6372   58526
## -----
## dataset$Country.Region: Philippines
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##     0         3    140    2258    4312   10343
## -----
## dataset$Country.Region: Poland
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##     0       0    119    3270    6156   15047
## -----
## dataset$Country.Region: Portugal
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##     0       0    245    7102   15730   26715
## -----
## dataset$Country.Region: Qatar
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##     0       0    401    2634    2620   18890
## -----
## dataset$Country.Region: Romania
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##     0       0    131    3104    5728   14499
## -----
## dataset$Country.Region: Russia
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##     0         2     63   20174   12750  177160
## -----
## dataset$Country.Region: Rwanda
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00    0.00    1.00   62.32  119.00   271.00

```

```

## -----
## dataset$Country.Region: Saint Kitts and Nevis
##   Min. 1st Qu.  Median    Mean 3rd Qu.  Max.
##   0.000   0.000   0.000   4.813  12.000  15.000
## -----
## dataset$Country.Region: Saint Lucia
##   Min. 1st Qu.  Median    Mean 3rd Qu.  Max.
##   0.000   0.000   2.000   5.907  15.000  18.000
## -----
## dataset$Country.Region: Saint Vincent and the Grenadines
##   Min. 1st Qu.  Median    Mean 3rd Qu.  Max.
##   0.000   0.000   1.000   4.327  12.000  17.000
## -----
## dataset$Country.Region: San Marino
##   Min. 1st Qu.  Median    Mean 3rd Qu.  Max.
##   0.0    0.0   101.0   183.7   350.0   622.0
## -----
## dataset$Country.Region: Sao Tome and Principe
##   Min. 1st Qu.  Median    Mean 3rd Qu.  Max.
##   0.000   0.000   0.000   6.766   4.000  187.000
## -----
## dataset$Country.Region: Saudi Arabia
##   Min. 1st Qu.  Median    Mean 3rd Qu.  Max.
##   0          0     103   4444    3842   33731
## -----
## dataset$Country.Region: Senegal
##   Min. 1st Qu.  Median    Mean 3rd Qu.  Max.
##   0.0    0.0    24.0   208.6   271.5  1492.0
## -----
## dataset$Country.Region: Serbia
##   Min. 1st Qu.  Median    Mean 3rd Qu.  Max.
##   0          0     48   2080    3242   9848
## -----
## dataset$Country.Region: Seychelles
##   Min. 1st Qu.  Median    Mean 3rd Qu.  Max.
##   0.000   0.000   2.000   4.794  11.000  11.000
## -----
## dataset$Country.Region: Sierra Leone
##   Min. 1st Qu.  Median    Mean 3rd Qu.  Max.
##   0.00    0.00    0.00   22.42    8.00  231.00
## -----
## dataset$Country.Region: Singapore
##   Min. 1st Qu.  Median    Mean 3rd Qu.  Max.
##   0          79     226   3124    2204  20939
## -----
## dataset$Country.Region: Slovakia
##   Min. 1st Qu.  Median    Mean 3rd Qu.  Max.
##   0.0    0.0    54.0   389.1   721.5  1445.0
## -----
## dataset$Country.Region: Slovenia
##   Min. 1st Qu.  Median    Mean 3rd Qu.  Max.
##   0.0    0.0   219.0   516.9  1174.0  1449.0
## -----
## dataset$Country.Region: Somalia
##   Min. 1st Qu.  Median    Mean 3rd Qu.  Max.
##   0.0    0.0    0.0   100.3    21.0   928.0

```

```

## -----
## dataset$Country.Region: South Africa
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##     0       0      51    1384    2016    8232
## -----
## dataset$Country.Region: South Sudan
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##  0.000  0.000  0.000   5.206   4.000  74.000
## -----
## dataset$Country.Region: Spain
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##     0       2    7798   70150  160650  221447
## -----
## dataset$Country.Region: Sri Lanka
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0.0     1.0    18.0   147.9   194.0   824.0
## -----
## dataset$Country.Region: Sudan
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0.00    0.00    1.00   74.93   18.00  930.00
## -----
## dataset$Country.Region: Suriname
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0.00    0.00    1.00    4.28   10.00   10.00
## -----
## dataset$Country.Region: Sweden
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##     0       1   1022   5444   9918   24623
## -----
## dataset$Country.Region: Switzerland
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##     0       0   2200   10585   24829   30126
## -----
## dataset$Country.Region: Syria
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0.00    0.00    0.00   11.99   22.00   45.00
## -----
## dataset$Country.Region: Taiwan*
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    1.0    22.0   59.0   182.1   383.5   440.0
## -----
## dataset$Country.Region: Tajikistan
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0.00    0.00    0.00   14.93    0.00  461.00
## -----
## dataset$Country.Region: Tanzania
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0.00    0.00    0.00   75.68   32.00  480.00
## -----
## dataset$Country.Region: Thailand
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##     2      35    114   1051   2496   2992
## -----
## dataset$Country.Region: Timor-Leste
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##  0.000  0.000  0.000   5.075   2.000  24.000

```

```

## -----
## dataset$Country.Region: Togo
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.0      0.0      1.0    32.5   76.0   135.0
## -----
## dataset$Country.Region: Trinidad and Tobago
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00      0.00      2.00   45.64  110.50  116.00
## -----
## dataset$Country.Region: Tunisia
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.0      0.0     18.0   305.1   678.0  1026.0
## -----
## dataset$Country.Region: Turkey
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0         0         6   28527   49598  133721
## -----
## dataset$Country.Region: Uganda
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00      0.00      0.00   24.92   53.00  101.00
## -----
## dataset$Country.Region: Ukraine
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0         0         3   2118   2357   13691
## -----
## dataset$Country.Region: United Arab Emirates
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0         9        98   2657   3548   16240
## -----
## dataset$Country.Region: United Kingdom
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0         0         0   3870     13  206715
## -----
## dataset$Country.Region: Uruguay
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.0      0.0      4.0   208.6   476.5   684.0
## -----
## dataset$Country.Region: US
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    1        13   3499  269819  511466 1257023
## -----
## dataset$Country.Region: Uzbekistan
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.0      0.0      1.0   480.3   695.5  2298.0
## -----
## dataset$Country.Region: Venezuela
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00      0.00   10.00   99.59  173.00  381.00
## -----
## dataset$Country.Region: Vietnam
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.0      16.0   56.0   117.9   257.5   288.0
## -----
## dataset$Country.Region: West Bank and Gaza
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.0      0.0   38.0   116.8   267.5   375.0

```



```
## -----  
## dataset$Country.Region: Western Sahara  
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.  
##   0.00    0.00    0.00    1.72   4.00    6.00  
## -----  
## dataset$Country.Region: Yemen  
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.  
##   0.000    0.000    0.000    1.327   1.000   25.000  
## -----  
## dataset$Country.Region: Zambia  
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.  
##   0.00    0.00    0.00   26.86   40.00  153.00  
## -----  
## dataset$Country.Region: Zimbabwe  
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.  
##   0.000    0.000    0.000    8.551  13.500  40.000
```

```
by(dataset$Deaths, dataset$Country.Region, summary)
```

```

## dataset$Country.Region: Afghanistan
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.0      0.0      0.0    14.1   16.5   106.0
## -----
## dataset$Country.Region: Albania
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.000  0.000   1.000   9.682  23.000  31.000
## -----
## dataset$Country.Region: Algeria
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.0      0.0      4.0   119.5   265.5   483.0
## -----
## dataset$Country.Region: Andorra
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00      0.00      0.00   11.89   26.00   47.00
## -----
## dataset$Country.Region: Angola
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.0000  0.0000  0.0000   0.7477   2.0000   2.0000
## -----
## dataset$Country.Region: Antigua and Barbuda
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.0000  0.0000  0.0000   0.7757   2.0000   3.0000
## -----
## dataset$Country.Region: Argentina
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00      0.00      2.00   50.72   82.50  282.00
## -----
## dataset$Country.Region: Armenia
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.000  0.000   0.000   7.486  12.500  42.000
## -----
## dataset$Country.Region: Australia
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.000  0.000   0.000   3.126   3.250  44.000
## -----
## dataset$Country.Region: Austria
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.0      0.0      1.0   154.2   328.0   609.0
## -----
## dataset$Country.Region: Azerbaijan
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.000  0.000   1.000   6.065  10.500  28.000
## -----
## dataset$Country.Region: Bahamas
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.000  0.000   0.000   2.916   8.000  11.000
## -----
## dataset$Country.Region: Bahrain
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.000  0.000   0.000   2.682   6.000   8.000
## -----
## dataset$Country.Region: Bangladesh
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00      0.00      0.00   32.47   28.50  199.00

```

```

## -----
## dataset$Country.Region: Barbados
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.000  0.000  0.000   1.598   4.000   7.000
## -----
## dataset$Country.Region: Belarus
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00  0.00  0.00   17.75   21.00  116.00
## -----
## dataset$Country.Region: Belgium
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0      0      4   1793   3182   8415
## -----
## dataset$Country.Region: Belize
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##  0.0000  0.0000  0.0000  0.5607  2.0000  2.0000
## -----
## dataset$Country.Region: Benin
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##  0.0000  0.0000  0.0000  0.3645  1.0000  2.0000
## -----
## dataset$Country.Region: Bhutan
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0      0      0      0      0      0
## -----
## dataset$Country.Region: Bolivia
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00  0.00  0.00   13.76   19.50  102.00
## -----
## dataset$Country.Region: Bosnia and Herzegovina
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00  0.00  0.00   17.51   36.50   90.00
## -----
## dataset$Country.Region: Botswana
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##  0.0000  0.0000  0.0000  0.3551  1.0000  1.0000
## -----
## dataset$Country.Region: Brazil
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0      0      0   1129   1090   9190
## -----
## dataset$Country.Region: Brunei
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##  0.0000  0.0000  0.0000  0.3832  1.0000  1.0000
## -----
## dataset$Country.Region: Bulgaria
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00  0.00  2.00   16.08   26.50   84.00
## -----
## dataset$Country.Region: Burkina Faso
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00  0.00  0.00   12.43   25.50   48.00
## -----
## dataset$Country.Region: Burma
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00  0.00  0.00    1.43    3.00    6.00

```

```

## -----
## dataset$Country.Region: Burundi
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##  0.0000  0.0000  0.0000  0.2336  0.0000  1.0000
## -----
## dataset$Country.Region: Cabo Verde
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##  0.0000  0.0000  0.0000  0.4766  1.0000  2.0000
## -----
## dataset$Country.Region: Cambodia
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##      0      0      0      0      0      0
## -----
## dataset$Country.Region: Cameroon
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00   0.00   0.00  12.92  12.00  108.00
## -----
## dataset$Country.Region: Central African Republic
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##      0      0      0      0      0      0
## -----
## dataset$Country.Region: Chad
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##  0.0000  0.0000  0.0000  0.9813  0.0000  27.0000
## -----
## dataset$Country.Region: Chile
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00   0.00   0.00  48.37  69.00  285.00
## -----
## dataset$Country.Region: China
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00   0.00   2.00  83.98   4.00 4512.00
## -----
## dataset$Country.Region: Colombia
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00   0.00   0.00  63.76  90.00  407.00
## -----
## dataset$Country.Region: Comoros
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##  0.000000  0.000000  0.000000  0.01869  0.000000  1.00000
## -----
## dataset$Country.Region: Congo (Brazzaville)
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.000   0.000   0.000   2.093   5.000  10.000
## -----
## dataset$Country.Region: Congo (Kinshasa)
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.000   0.000   0.000   8.757  20.000  36.000
## -----
## dataset$Country.Region: Costa Rica
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.000   0.000   0.000   1.757   3.000   6.000
## -----
## dataset$Country.Region: Cote d'Ivoire
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.000   0.000   0.000   3.262   3.500  20.000

```

```

## -----
## dataset$Country.Region: Croatia
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00    0.00    0.00   15.36   21.00   86.00
## -----
## dataset$Country.Region: Cuba
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00    0.00    0.00   12.78   15.50   73.00
## -----
## dataset$Country.Region: Cyprus
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.000    0.000    0.000    4.673   11.000   15.000
## -----
## dataset$Country.Region: Czechia
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00    0.00    0.00   60.43   124.00   270.00
## -----
## dataset$Country.Region: Denmark
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00    0.00    0.00   40.72    0.00   514.00
## -----
## dataset$Country.Region: Diamond Princess
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.000    0.000    7.000    6.738   11.000   13.000
## -----
## dataset$Country.Region: Djibouti
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.0000    0.0000    0.0000    0.5327   1.5000   3.0000
## -----
## dataset$Country.Region: Dominica
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0         0         0         0         0         0
## -----
## dataset$Country.Region: Dominican Republic
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00    0.00    0.00   76.44   130.50   373.00
## -----
## dataset$Country.Region: Ecuador
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0.0     0.0     2.0   218.9   306.0   1654.0
## -----
## dataset$Country.Region: Egypt
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00    0.00    2.00   88.26   140.50   482.00
## -----
## dataset$Country.Region: El Salvador
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.000    0.000    0.000    2.533    6.000   15.000
## -----
## dataset$Country.Region: Equatorial Guinea
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.000    0.000    0.000    0.243    0.000    4.000
## -----
## dataset$Country.Region: Eritrea
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0         0         0         0         0         0

```

```

## -----
## dataset$Country.Region: Estonia
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00    0.00    0.00   12.83   24.00   56.00
## -----
## dataset$Country.Region: Eswatini
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.0000  0.0000  0.0000  0.2243  0.0000  2.0000
## -----
## dataset$Country.Region: Ethiopia
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.0000  0.0000  0.0000  0.9065  3.0000  4.0000
## -----
## dataset$Country.Region: Fiji
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0         0         0         0         0         0
## -----
## dataset$Country.Region: Finland
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00    0.00    0.00   42.93   48.50  255.00
## -----
## dataset$Country.Region: France
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0         0         0     582         0  25949
## -----
## dataset$Country.Region: Gabon
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.0000  0.0000  0.0000  0.8972  1.0000  8.0000
## -----
## dataset$Country.Region: Gambia
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.0000  0.0000  0.0000  0.4299  1.0000  1.0000
## -----
## dataset$Country.Region: Georgia
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.000  0.000  0.000  1.533  3.000  9.000
## -----
## dataset$Country.Region: Germany
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0         0        11   1572   2752   7392
## -----
## dataset$Country.Region: Ghana
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.000  0.000  0.000  3.897  7.000  18.000
## -----
## dataset$Country.Region: Greece
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0.0     0.0     4.0   41.5   92.5  148.0
## -----
## dataset$Country.Region: Grenada
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0         0         0         0         0         0
## -----
## dataset$Country.Region: Guatemala
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.000  0.000  0.000  3.299  3.000  23.000

```

```

## -----
## dataset$Country.Region: Guinea
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.000  0.000  0.000   1.364  0.000  11.000
## -----
## dataset$Country.Region: Guinea-Bissau
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.0000  0.0000  0.0000  0.1308  0.0000  2.0000
## -----
## dataset$Country.Region: Guyana
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.000  0.000  1.000   2.523  6.000  10.000
## -----
## dataset$Country.Region: Haiti
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.000  0.000  0.000   1.533  2.000  12.000
## -----
## dataset$Country.Region: Holy See
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0         0         0         0         0         0
## -----
## dataset$Country.Region: Honduras
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00  0.00  0.00   16.26  23.50  105.00
## -----
## dataset$Country.Region: Hungary
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00  0.00  1.00   66.07  81.00  383.00
## -----
## dataset$Country.Region: Iceland
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.000  0.000  0.000   3.093  7.500  10.000
## -----
## dataset$Country.Region: India
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.0  0.0  2.0  238.4  267.0  1889.0
## -----
## dataset$Country.Region: Indonesia
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.0  0.0  5.0  197.1  316.5  930.0
## -----
## dataset$Country.Region: Iran
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0         0      724   2053  4294  6486
## -----
## dataset$Country.Region: Iraq
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00  0.00  10.00   32.47  71.00  102.00
## -----
## dataset$Country.Region: Ireland
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.0  0.0  2.0  245.3  303.5  1403.0
## -----
## dataset$Country.Region: Israel
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.0  0.0  0.0   53.2  98.0  240.0

```

```

## -----
## dataset$Country.Region: Italy
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##     0       0    1809    9015   19159   29958
## -----
## dataset$Country.Region: Jamaica
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##  0.000  0.000  0.000   2.065   4.000   9.000
## -----
## dataset$Country.Region: Japan
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00    1.00   22.00   98.57   99.00  577.00
## -----
## dataset$Country.Region: Jordan
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##  0.000  0.000  0.000   2.589   7.000   9.000
## -----
## dataset$Country.Region: Kazakhstan
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##  0.000  0.000  0.000   6.047  10.000  30.000
## -----
## dataset$Country.Region: Kenya
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##  0.000  0.000  0.000   4.421   7.000  29.000
## -----
## dataset$Country.Region: Korea, South
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0.0     0.0   75.0   102.8   209.5   256.0
## -----
## dataset$Country.Region: Kosovo
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##  0.000  0.000  0.000   4.729   7.000  27.000
## -----
## dataset$Country.Region: Kuwait
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##  0.000  0.000  0.000   4.682   1.000  44.000
## -----
## dataset$Country.Region: Kyrgyzstan
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##  0.000  0.000  0.000   2.103   5.000  12.000
## -----
## dataset$Country.Region: Laos
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##     0       0       0       0       0       0
## -----
## dataset$Country.Region: Latvia
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##  0.000  0.000  0.000   2.813   3.000  18.000
## -----
## dataset$Country.Region: Lebanon
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##  0.000  0.000   3.000   8.411  20.000  25.000
## -----
## dataset$Country.Region: Liberia
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##  0.000  0.000  0.000   3.121   5.000  20.000

```



```

## -----
## dataset$Country.Region: Libya
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##  0.0000  0.0000  0.0000  0.5514  1.0000  3.0000
## -----
## dataset$Country.Region: Liechtenstein
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##  0.0000  0.0000  0.0000  0.3178  1.0000  1.0000
## -----
## dataset$Country.Region: Lithuania
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00    0.00    0.00   11.38   22.50   49.00
## -----
## dataset$Country.Region: Luxembourg
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00    0.00    1.00   25.93   58.00  100.00
## -----
## dataset$Country.Region: Madagascar
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0         0         0         0         0         0
## -----
## dataset$Country.Region: Malawi
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##  0.0000  0.0000  0.0000  0.6916  1.5000  3.0000
## -----
## dataset$Country.Region: Malaysia
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00    0.00    0.00   31.71   71.50  107.00
## -----
## dataset$Country.Region: Maldives
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##  0.0000  0.0000  0.0000  0.1215  0.0000  3.0000
## -----
## dataset$Country.Region: Mali
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.000  0.000  0.000  5.523  7.000  32.000
## -----
## dataset$Country.Region: Malta
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##  0.0000  0.0000  0.0000  0.9533  2.5000  5.0000
## -----
## dataset$Country.Region: Mauritania
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##  0.0000  0.0000  0.0000  0.3645  1.0000  1.0000
## -----
## dataset$Country.Region: Mauritius
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00    0.00    0.00    3.28    9.00   10.00
## -----
## dataset$Country.Region: Mexico
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0.0     0.0     0.0   337.9   253.0  2961.0
## -----
## dataset$Country.Region: Moldova
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00    0.00    0.00   23.73   29.50  145.00

```

```

## -----
## dataset$Country.Region: Monaco
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
## 0.0000 0.0000 0.0000 0.9439 1.0000 4.0000
## -----
## dataset$Country.Region: Mongolia
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##      0      0      0      0      0      0
## -----
## dataset$Country.Region: Montenegro
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
## 0.000 0.000 0.000 1.748 2.000 8.000
## -----
## dataset$Country.Region: Morocco
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
## 0.00 0.00 1.00 47.19 109.00 183.00
## -----
## dataset$Country.Region: Mozambique
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##      0      0      0      0      0      0
## -----
## dataset$Country.Region: MS Zaandam
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
## 0.0000 0.0000 0.0000 0.6916 2.0000 2.0000
## -----
## dataset$Country.Region: Namibia
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##      0      0      0      0      0      0
## -----
## dataset$Country.Region: Nepal
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##      0      0      0      0      0      0
## -----
## dataset$Country.Region: Netherlands
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
## 0.0 0.0 0.0 255.1 1.0 5288.0
## -----
## dataset$Country.Region: New Zealand
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
## 0.000 0.000 0.000 3.907 3.000 21.000
## -----
## dataset$Country.Region: Nicaragua
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
## 0.0000 0.0000 0.0000 0.8131 1.0000 5.0000
## -----
## dataset$Country.Region: Niger
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
## 0.000 0.000 0.000 7.299 11.000 42.000
## -----
## dataset$Country.Region: Nigeria
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
## 0.00 0.00 0.00 11.46 8.50 107.00
## -----
## dataset$Country.Region: North Macedonia
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
## 0.00 0.00 0.00 17.93 33.00 89.00

```

```

## -----
## dataset$Country.Region: Norway
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00   0.00   3.00   55.94  116.00  217.00
## -----
## dataset$Country.Region: Oman
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.000   0.000   0.000   2.364   3.000  15.000
## -----
## dataset$Country.Region: Pakistan
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00   0.00   0.00   75.54   76.00  585.00
## -----
## dataset$Country.Region: Panama
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00   0.00   1.00   43.57   70.00  225.00
## -----
## dataset$Country.Region: Papua New Guinea
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0         0         0         0         0         0
## -----
## dataset$Country.Region: Paraguay
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.000   0.000   0.000   2.804   6.000  10.000
## -----
## dataset$Country.Region: Peru
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0         0         0       194       175    1627
## -----
## dataset$Country.Region: Philippines
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0.0        1.0     11.0    141.9    234.0    685.0
## -----
## dataset$Country.Region: Poland
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0.0        0.0        3.0    134.9    194.5    755.0
## -----
## dataset$Country.Region: Portugal
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0.0        0.0        0.0    245.0    452.5   1105.0
## -----
## dataset$Country.Region: Qatar
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.000   0.000   0.000   2.841   6.000  12.000
## -----
## dataset$Country.Region: Romania
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0.0        0.0        0.0    165.0    280.5    888.0
## -----
## dataset$Country.Region: Russia
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0.0        0.0        0.0    185.2    100.0   1625.0
## -----
## dataset$Country.Region: Rwanda
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0         0         0         0         0         0

```

```

## -----
## dataset$Country.Region: Saint Kitts and Nevis
##   Min. 1st Qu.  Median    Mean 3rd Qu.  Max.
##     0       0       0       0       0       0
## -----
## dataset$Country.Region: Saint Lucia
##   Min. 1st Qu.  Median    Mean 3rd Qu.  Max.
##     0       0       0       0       0       0
## -----
## dataset$Country.Region: Saint Vincent and the Grenadines
##   Min. 1st Qu.  Median    Mean 3rd Qu.  Max.
##     0       0       0       0       0       0
## -----
## dataset$Country.Region: San Marino
##   Min. 1st Qu.  Median    Mean 3rd Qu.  Max.
##   0.00   0.00   5.00  15.88  34.50  41.00
## -----
## dataset$Country.Region: Sao Tome and Principe
##   Min. 1st Qu.  Median    Mean 3rd Qu.  Max.
## 0.0000 0.0000 0.0000 0.1495 0.0000 4.0000
## -----
## dataset$Country.Region: Saudi Arabia
##   Min. 1st Qu.  Median    Mean 3rd Qu.  Max.
##   0.00   0.00   0.00  36.21  49.50 219.00
## -----
## dataset$Country.Region: Senegal
##   Min. 1st Qu.  Median    Mean 3rd Qu.  Max.
##   0.000 0.000 0.000 1.785 2.000 13.000
## -----
## dataset$Country.Region: Serbia
##   Min. 1st Qu.  Median    Mean 3rd Qu.  Max.
##   0.00   0.00   0.00  42.03  72.50 206.00
## -----
## dataset$Country.Region: Seychelles
##   Min. 1st Qu.  Median    Mean 3rd Qu.  Max.
##     0       0       0       0       0       0
## -----
## dataset$Country.Region: Sierra Leone
##   Min. 1st Qu.  Median    Mean 3rd Qu.  Max.
## 0.0000 0.0000 0.0000 0.9439 0.0000 16.0000
## -----
## dataset$Country.Region: Singapore
##   Min. 1st Qu.  Median    Mean 3rd Qu.  Max.
##   0.000 0.000 0.000 4.056 7.500 20.000
## -----
## dataset$Country.Region: Slovakia
##   Min. 1st Qu.  Median    Mean 3rd Qu.  Max.
##   0.000 0.000 0.000 4.075 2.000 26.000
## -----
## dataset$Country.Region: Slovenia
##   Min. 1st Qu.  Median    Mean 3rd Qu.  Max.
##    0.0    0.0    1.0   23.4   47.5   99.0
## -----
## dataset$Country.Region: Somalia
##   Min. 1st Qu.  Median    Mean 3rd Qu.  Max.
##   0.000 0.000 0.000 4.607 1.000 44.000

```

```

## -----
## dataset$Country.Region: South Africa
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00    0.00    0.00   21.92  24.50  161.00
## -----
## dataset$Country.Region: South Sudan
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0         0         0         0         0         0
## -----
## dataset$Country.Region: Spain
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0         0      289    7295  16344  26070
## -----
## dataset$Country.Region: Sri Lanka
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##  0.000  0.000  0.000   2.383   7.000   9.000
## -----
## dataset$Country.Region: Sudan
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##  0.000  0.000  1.000   5.682   2.000  52.000
## -----
## dataset$Country.Region: Suriname
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
## 0.0000 0.0000 0.0000  0.3271  1.0000  1.0000
## -----
## dataset$Country.Region: Sweden
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0.0     0.0     3.0   559.7   878.5  3040.0
## -----
## dataset$Country.Region: Switzerland
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0.0     0.0    14.0   477.6  1019.0  1810.0
## -----
## dataset$Country.Region: Syria
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
## 0.0000 0.0000 0.0000  0.9159  2.0000  3.0000
## -----
## dataset$Country.Region: Taiwan*
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##  0.000   1.000   1.000   2.579   6.000   6.000
## -----
## dataset$Country.Region: Tajikistan
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
## 0.0000 0.0000 0.0000  0.2991  0.0000 12.0000
## -----
## dataset$Country.Region: Tanzania
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##  0.000  0.000  0.000   2.654   3.000  16.000
## -----
## dataset$Country.Region: Thailand
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0.00    0.00    1.00   15.27   34.00   55.00
## -----
## dataset$Country.Region: Timor-Leste
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0         0         0         0         0         0

```

```

## -----
## dataset$Country.Region: Togo
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.000  0.000  0.000   1.879   3.000   9.000
## -----
## dataset$Country.Region: Trinidad and Tobago
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.000  0.000  0.000   2.813   8.000   8.000
## -----
## dataset$Country.Region: Tunisia
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00  0.00  0.00  12.17  26.50  44.00
## -----
## dataset$Country.Region: Turkey
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.0  0.0  0.0  698.7 1053.5 3641.0
## -----
## dataset$Country.Region: Uganda
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0  0  0  0  0  0
## -----
## dataset$Country.Region: Ukraine
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00  0.00  1.00  54.55  71.00 340.00
## -----
## dataset$Country.Region: United Arab Emirates
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00  0.00  0.00  20.21  18.00 165.00
## -----
## dataset$Country.Region: United Kingdom
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.0  0.0  0.0  571.3  0.0 30615.0
## -----
## dataset$Country.Region: Uruguay
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.000  0.000  0.000   3.729   7.000 17.000
## -----
## dataset$Country.Region: US
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0  0  73 14289 23338 75662
## -----
## dataset$Country.Region: Uzbekistan
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.000  0.000  0.000   2.065   3.500 10.000
## -----
## dataset$Country.Region: Venezuela
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.000  0.000  0.000   3.243   9.000 16.000
## -----
## dataset$Country.Region: Vietnam
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0  0  0  0  0  0
## -----
## dataset$Country.Region: West Bank and Gaza
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.0000  0.0000  0.0000  0.6636  2.0000  2.0000

```

```
## -----  
## dataset$Country.Region: Western Sahara  
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.  
##      0      0      0      0      0      0  
## -----  
## dataset$Country.Region: Yemen  
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.  
## 0.0000 0.0000 0.0000 0.2243 0.0000 5.0000  
## -----  
## dataset$Country.Region: Zambia  
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.  
## 0.0000 0.0000 0.0000 0.7944 2.0000 4.0000  
## -----  
## dataset$Country.Region: Zimbabwe  
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.  
##   0.00   0.00   0.00   1.15   3.00   4.00
```

```
by(dataset$Recovered, dataset$Country.Region, summary)
```

```

## dataset$Country.Region: Afghanistan
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00    0.00    0.00   53.11   32.00   468.00
## -----
## dataset$Country.Region: Albania
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.0    0.0    0.0   112.1   189.5   605.0
## -----
## dataset$Country.Region: Algeria
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.0    0.0   12.0   363.4   432.5   2323.0
## -----
## dataset$Country.Region: Andorra
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00    0.00    1.00   85.66   71.00   526.00
## -----
## dataset$Country.Region: Angola
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.000    0.000    0.000    1.935    3.000   11.000
## -----
## dataset$Country.Region: Antigua and Barbuda
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.000    0.000    0.000    2.178    0.000   16.000
## -----
## dataset$Country.Region: Argentina
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.0    0.0    1.0   284.8   407.5   1601.0
## -----
## dataset$Country.Region: Armenia
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.0    0.0    0.0   185.5   161.0   1185.0
## -----
## dataset$Country.Region: Australia
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.0    0.0    3.0   158.2    59.0   2486.0
## -----
## dataset$Country.Region: Austria
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0    0    6   3160   6334   13698
## -----
## dataset$Country.Region: Azerbaijan
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.0    0.0    6.0   248.3   179.5   1551.0
## -----
## dataset$Country.Region: Bahamas
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.000    0.000    0.000    4.336    5.000   26.000
## -----
## dataset$Country.Region: Bahrain
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0    0    60   357    547   2000
## -----
## dataset$Country.Region: Bangladesh
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00    0.00    0.00   89.06   34.50  1910.00

```



```

## -----
## dataset$Country.Region: Barbados
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.000   0.000   0.000   7.953  11.000  53.000
## -----
## dataset$Country.Region: Belarus
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.0      0.0      3.0   416.4   170.5  5067.0
## -----
## dataset$Country.Region: Belgium
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0         1         1   2925   5777  12980
## -----
## dataset$Country.Region: Belize
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.000   0.000   0.000   1.514   0.000  16.000
## -----
## dataset$Country.Region: Benin
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.000   0.000   0.000   7.626   5.000  53.000
## -----
## dataset$Country.Region: Bhutan
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.000   0.000   0.000   1.009   2.000   5.000
## -----
## dataset$Country.Region: Bolivia
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00    0.00    0.00   20.33    2.00  219.00
## -----
## dataset$Country.Region: Bosnia and Herzegovina
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.0      0.0      0.0   142.4   134.0   954.0
## -----
## dataset$Country.Region: Botswana
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##  0.0000  0.0000  0.0000   0.6262   0.0000   9.0000
## -----
## dataset$Country.Region: Brazil
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0         0         0   6765    173  55350
## -----
## dataset$Country.Region: Brunei
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00    0.00    0.00   38.68  101.50  131.00
## -----
## dataset$Country.Region: Bulgaria
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00    0.00    0.00   55.53   58.00  384.00
## -----
## dataset$Country.Region: Burkina Faso
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.0      0.0      0.0   110.3   150.5   562.0
## -----
## dataset$Country.Region: Burma
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.000   0.000   0.000   4.664   2.000  62.000

```

```

## -----
## dataset$Country.Region: Burundi
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##  0.0000  0.0000  0.0000  0.8411  0.0000  7.0000
## -----
## dataset$Country.Region: Cabo Verde
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.000   0.000   0.000   2.327   1.000  38.000
## -----
## dataset$Country.Region: Cambodia
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00   1.00   1.00   33.46   73.50  120.00
## -----
## dataset$Country.Region: Cameroon
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0.0    0.0    0.0   149.1    98.0  1002.0
## -----
## dataset$Country.Region: Central African Republic
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.000   0.000   0.000   1.879   0.000  10.000
## -----
## dataset$Country.Region: Chad
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.000   0.000   0.000   4.542   2.000  50.000
## -----
## dataset$Country.Region: Chile
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0         0         0    1689    1718  11664
## -----
## dataset$Country.Region: China
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0         28        144   1493    517   64435
## -----
## dataset$Country.Region: Colombia
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0.0    0.0    0.0   284.1   205.5  2300.0
## -----
## dataset$Country.Region: Comoros
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0         0         0         0         0         0
## -----
## dataset$Country.Region: Congo (Brazzaville)
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.000   0.000   0.000   4.514   5.000  30.000
## -----
## dataset$Country.Region: Congo (Kinshasa)
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00   0.00   0.00   12.98   14.50  103.00
## -----
## dataset$Country.Region: Costa Rica
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00   0.00   0.00   59.04   45.50  445.00
## -----
## dataset$Country.Region: Cote d'Ivoire
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0.0    0.0    0.0   103.7    55.0   742.0

```

```

## -----
## dataset$Country.Region: Croatia
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.0      0.0      1.0   265.3   277.0  1641.0
## -----
## dataset$Country.Region: Cuba
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.0      0.0      0.0   120.4    64.0  1031.0
## -----
## dataset$Country.Region: Cyprus
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00      0.00      0.00   45.19   59.50  400.00
## -----
## dataset$Country.Region: Czechia
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.0      0.0      0.0   589.4   378.5  4371.0
## -----
## dataset$Country.Region: Denmark
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.0      0.0      0.0   492.5    38.0  7711.0
## -----
## dataset$Country.Region: Diamond Princess
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0         0      325     304     619     645
## -----
## dataset$Country.Region: Djibouti
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00      0.00      0.00   90.92   36.00  799.00
## -----
## dataset$Country.Region: Dominica
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.000      0.000      0.000    2.748    5.000  14.000
## -----
## dataset$Country.Region: Dominican Republic
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.0      0.0      0.0   221.6   103.0  2064.0
## -----
## dataset$Country.Region: Ecuador
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.0      0.0      0.0   416.8   389.5  3433.0
## -----
## dataset$Country.Region: Egypt
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0         0      27     312     405   1887
## -----
## dataset$Country.Region: El Salvador
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00      0.00      0.00   23.08   17.00  252.00
## -----
## dataset$Country.Region: Equatorial Guinea
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.000      0.000      0.000    2.056    3.000  13.000
## -----
## dataset$Country.Region: Eritrea
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.000      0.000      0.000    3.131    0.000  30.000

```

```

## -----
## dataset$Country.Region: Estonia
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.0      0.0      1.0    56.5   93.0   273.0
## -----
## dataset$Country.Region: Eswatini
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.000  0.000  0.000   2.673   7.000  12.000
## -----
## dataset$Country.Region: Ethiopia
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00      0.00   0.00   10.51    7.00   93.00
## -----
## dataset$Country.Region: Fiji
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00      0.00   0.00    1.85    0.00   14.00
## -----
## dataset$Country.Region: Finland
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.0        1.0   10.0   568.3   300.0  3500.0
## -----
## dataset$Country.Region: France
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0          0        0   1155    13   54076
## -----
## dataset$Country.Region: Gabon
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00      0.00   0.00    9.85    1.00  110.00
## -----
## dataset$Country.Region: Gambia
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.000  0.000  0.000    1.477   2.000   9.000
## -----
## dataset$Country.Region: Georgia
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00      0.00   0.00   40.63   57.00  275.00
## -----
## dataset$Country.Region: Germany
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0.0        6.5   46.0  29864.2  55656.5 141700.0
## -----
## dataset$Country.Region: Ghana
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00      0.00   0.00   38.55   31.00  303.00
## -----
## dataset$Country.Region: Greece
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0.0        0.0    8.0   196.7   269.0  1374.0
## -----
## dataset$Country.Region: Grenada
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.000  0.000  0.000    1.841   0.000  13.000
## -----
## dataset$Country.Region: Guatemala
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00      0.00   0.00   12.89   18.00   90.00

```

```

## -----
## dataset$Country.Region: Guinea
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##     0       0       0      57     16     629
## -----
## dataset$Country.Region: Guinea-Bissau
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##  0.000  0.000  0.000  2.262  0.000  25.000
## -----
## dataset$Country.Region: Guyana
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##  0.000  0.000  0.000  4.028  8.000  27.000
## -----
## dataset$Country.Region: Haiti
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##  0.000  0.000  0.000  1.262  0.000  16.000
## -----
## dataset$Country.Region: Holy See
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##  0.0000  0.0000  0.0000  0.5607  2.0000  2.0000
## -----
## dataset$Country.Region: Honduras
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00   0.00   0.00  15.24   7.00  154.00
## -----
## dataset$Country.Region: Hungary
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0.0    0.0    1.0  112.8  113.5  801.0
## -----
## dataset$Country.Region: Iceland
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0.0    0.0    1.0  416.4  796.0  1755.0
## -----
## dataset$Country.Region: India
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0.0    3.0   13.0  1667.0  871.5  16776.0
## -----
## dataset$Country.Region: Indonesia
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0.0    0.0    8.0   305.3  284.0  2381.0
## -----
## dataset$Country.Region: Iran
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0       0   4590  20201  38706  82744
## -----
## dataset$Country.Region: Iraq
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0.0    0.0   26.0   339.1  575.5  1626.0
## -----
## dataset$Country.Region: Ireland
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0       0       0   1894    25  17110
## -----
## dataset$Country.Region: Israel
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0       0       4   1597   1262  10873

```

```

## -----
## dataset$Country.Region: Italy
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##     0       0    2335   18782   31495   96276
## -----
## dataset$Country.Region: Jamaica
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##  0.000  0.000  0.000   8.477  13.000  58.000
## -----
## dataset$Country.Region: Japan
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0.0    12.5   118.0   623.3   723.5  4918.0
## -----
## dataset$Country.Region: Jordan
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0.0     0.0     1.0    89.3   173.5   381.0
## -----
## dataset$Country.Region: Kazakhstan
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0.0     0.0     0.0   169.9    72.5  1518.0
## -----
## dataset$Country.Region: Kenya
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0.00    0.00    0.00   26.37   23.00  197.00
## -----
## dataset$Country.Region: Korea, South
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##     0      11     510   3248   7180   9484
## -----
## dataset$Country.Region: Kosovo
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0.00    0.00    0.00   54.48   55.00  562.00
## -----
## dataset$Country.Region: Kuwait
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0.0     0.0     5.0   243.7   128.0  2381.0
## -----
## dataset$Country.Region: Kyrgyzstan
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0.0     0.0     0.0    81.8    39.5   637.0
## -----
## dataset$Country.Region: Laos
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##  0.000  0.000  0.000   1.234   0.000  10.000
## -----
## dataset$Country.Region: Latvia
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0.00    0.00    1.00   53.76   16.00  464.00
## -----
## dataset$Country.Region: Lebanon
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0.00    0.00    1.00   42.14   76.50  220.00
## -----
## dataset$Country.Region: Liberia
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##  0.000  0.000  0.000   7.234   3.000  79.000

```

```

## -----
## dataset$Country.Region: Libya
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.000  0.000  0.000  4.271  8.000  24.000
## -----
## dataset$Country.Region: Liechtenstein
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00  0.00  0.00  16.45  55.00  55.00
## -----
## dataset$Country.Region: Lithuania
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.0  0.0  1.0  102.3  54.0  739.0
## -----
## dataset$Country.Region: Luxembourg
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.0  0.0  0.0  537.7  500.0  3505.0
## -----
## dataset$Country.Region: Madagascar
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00  0.00  0.00  15.95  11.00  101.00
## -----
## dataset$Country.Region: Malawi
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.000  0.000  0.000  1.159  0.000  14.000
## -----
## dataset$Country.Region: Malaysia
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0  10  42  1044  1912  4776
## -----
## dataset$Country.Region: Maldives
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00  0.00  0.00  6.15  13.00  20.00
## -----
## dataset$Country.Region: Mali
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00  0.00  0.00  28.24  22.00  271.00
## -----
## dataset$Country.Region: Malta
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.0  0.0  1.0  57.4  16.0  413.0
## -----
## dataset$Country.Region: Mauritania
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.000  0.000  0.000  1.458  2.000  6.000
## -----
## dataset$Country.Region: Mauritius
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00  0.00  0.00  58.03  25.50  320.00
## -----
## dataset$Country.Region: Mexico
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0  0  4  1856  633  17781
## -----
## dataset$Country.Region: Moldova
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.0  0.0  0.0  201.5  65.5  1747.0

```

```

## -----
## dataset$Country.Region: Monaco
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00    0.00    0.00   10.82    5.00   82.00
## -----
## dataset$Country.Region: Mongolia
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.000    0.000    0.000    2.393    4.000   13.000
## -----
## dataset$Country.Region: Montenegro
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0.0     0.0     0.0    35.3     4.5   265.0
## -----
## dataset$Country.Region: Morocco
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0.0     0.0     1.0   197.2   134.0  2179.0
## -----
## dataset$Country.Region: Mozambique
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.000    0.000    0.000    2.645    2.000   24.000
## -----
## dataset$Country.Region: MS Zaandam
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0         0         0         0         0         0
## -----
## dataset$Country.Region: Namibia
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.000    0.000    0.000    2.019    3.000    9.000
## -----
## dataset$Country.Region: Nepal
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.000    1.000    1.000    3.047    1.000   22.000
## -----
## dataset$Country.Region: Netherlands
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00    0.00    0.00   16.07    2.00   250.00
## -----
## dataset$Country.Region: New Zealand
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0.0     0.0     0.0   280.7   397.5  1347.0
## -----
## dataset$Country.Region: Nicaragua
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.000    0.000    0.000    1.505    0.000    7.000
## -----
## dataset$Country.Region: Niger
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00    0.00    0.00   75.08   41.00  586.00
## -----
## dataset$Country.Region: Nigeria
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00    0.00    0.00   67.41   64.00  601.00
## -----
## dataset$Country.Region: North Macedonia
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0.0     0.0     1.0   118.6   41.0  1079.0

```



```

## -----
## dataset$Country.Region: Norway
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00    0.00    1.00   11.62   32.00   32.00
## -----
## dataset$Country.Region: Oman
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.0    0.0    9.0   107.9   109.0   980.0
## -----
## dataset$Country.Region: Pakistan
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.0    0.0    2.0   809.5   744.5  6464.0
## -----
## dataset$Country.Region: Panama
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00    0.00    0.00   91.43   16.50   886.00
## -----
## dataset$Country.Region: Papua New Guinea
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##  0.0000  0.0000  0.0000  0.2991  0.0000  8.0000
## -----
## dataset$Country.Region: Paraguay
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00    0.00    0.00   20.19   18.00   148.00
## -----
## dataset$Country.Region: Peru
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0         0         0    2257    1654   18388
## -----
## dataset$Country.Region: Philippines
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.0    1.0    2.0   212.8   148.5  1618.0
## -----
## dataset$Country.Region: Poland
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.0    0.0    0.0   564.7   346.5  4862.0
## -----
## dataset$Country.Region: Portugal
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.0    0.0    2.0   295.7   249.5  2258.0
## -----
## dataset$Country.Region: Qatar
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.0    0.0    4.0   264.5   237.0  2286.0
## -----
## dataset$Country.Region: Romania
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.0    0.0    9.0   797.9   743.5  6144.0
## -----
## dataset$Country.Region: Russia
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0         2         8   2099    920   23803
## -----
## dataset$Country.Region: Rwanda
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00    0.00    0.00   22.01   12.50   133.00

```

```

## -----
## dataset$Country.Region: Saint Kitts and Nevis
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##  0.0000  0.0000  0.0000  0.8598  0.0000 12.0000
## -----
## dataset$Country.Region: Saint Lucia
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.000   0.000   0.000   3.346   1.000  17.000
## -----
## dataset$Country.Region: Saint Vincent and the Grenadines
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.000   0.000   0.000   1.299   1.000   9.000
## -----
## dataset$Country.Region: San Marino
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00   0.00   4.00  21.21  51.50 106.00
## -----
## dataset$Country.Region: Sao Tome and Principe
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##  0.0000  0.0000  0.0000  0.3738  0.0000  4.0000
## -----
## dataset$Country.Region: Saudi Arabia
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.0   0.0   1.0  703.9  702.5 7798.0
## -----
## dataset$Country.Region: Senegal
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00   0.00   1.00  82.64 144.50 562.00
## -----
## dataset$Country.Region: Serbia
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.0   0.0   0.0  244.7   1.0 2160.0
## -----
## dataset$Country.Region: Seychelles
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.000   0.000   0.000   1.178   0.000   8.000
## -----
## dataset$Country.Region: Sierra Leone
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.000   0.000   0.000   3.533   0.000  54.000
## -----
## dataset$Country.Region: Singapore
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.0   26.5  105.0  330.2  510.0 1712.0
## -----
## dataset$Country.Region: Slovakia
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00   0.00   0.00  94.91  23.00 806.00
## -----
## dataset$Country.Region: Slovenia
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00   0.00   0.00  60.93 142.50 247.00
## -----
## dataset$Country.Region: Somalia
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.000   0.000   0.000   5.542   1.000 106.000

```

```

## -----
## dataset$Country.Region: South Africa
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.0      0.0      0.0   402.3  410.0  3153.0
## -----
## dataset$Country.Region: South Sudan
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0         0         0         0         0         0
## -----
## dataset$Country.Region: Spain
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0         2       517   28202   57389  128511
## -----
## dataset$Country.Region: Sri Lanka
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00      1.00    1.00   35.28   54.00  232.00
## -----
## dataset$Country.Region: Sudan
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.000      0.000    0.000    6.804   2.000  92.000
## -----
## dataset$Country.Region: Suriname
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.000      0.000    0.000    1.841   4.000   9.000
## -----
## dataset$Country.Region: Sweden
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0.0      0.0      1.0   334.5   381.0  4971.0
## -----
## dataset$Country.Region: Switzerland
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0         0         4    5841   11600   25900
## -----
## dataset$Country.Region: Syria
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.000      0.000    0.000    3.654   4.500  27.000
## -----
## dataset$Country.Region: Taiwan*
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00      2.00   20.00   73.39   95.00  347.00
## -----
## dataset$Country.Region: Tajikistan
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0         0         0         0         0         0
## -----
## dataset$Country.Region: Tanzania
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00      0.00    0.00   17.81    5.00  167.00
## -----
## dataset$Country.Region: Thailand
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0.0      15.0   35.0   652.8  1074.0  2772.0
## -----
## dataset$Country.Region: Timor-Leste
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.000      0.000    0.000    1.673   1.000  21.000

```

```

## -----
## dataset$Country.Region: Togo
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00   0.00   0.00   16.21  25.00   85.00
## -----
## dataset$Country.Region: Trinidad and Tobago
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00   0.00   0.00   13.11   6.50  103.00
## -----
## dataset$Country.Region: Tunisia
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00   0.00   0.00   56.37  34.00  600.00
## -----
## dataset$Country.Region: Turkey
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0         0         0   7993  2694  82984
## -----
## dataset$Country.Region: Uganda
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00   0.00   0.00    9.43   2.00   55.00
## -----
## dataset$Country.Region: Ukraine
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0.0     0.0     0.0   211.5   70.0  2396.0
## -----
## dataset$Country.Region: United Arab Emirates
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0.0     4.0    23.0   497.3  503.0  3572.0
## -----
## dataset$Country.Region: United Kingdom
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00   0.00   0.00   19.84   3.00  430.00
## -----
## dataset$Country.Region: Uruguay
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0.0     0.0     0.0   100.8  210.0  492.0
## -----
## dataset$Country.Region: US
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0         3        12  28498  30030  195036
## -----
## dataset$Country.Region: Uzbekistan
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0.0     0.0     0.0   179.6   42.0  1656.0
## -----
## dataset$Country.Region: Venezuela
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00   0.00   0.00   41.27   88.50  185.00
## -----
## dataset$Country.Region: Vietnam
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00   7.00  16.00   69.13  144.00  233.00
## -----
## dataset$Country.Region: West Bank and Gaza
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00   0.00   0.00   25.45   51.00  176.00

```

```
## -----
## dataset$Country.Region: Western Sahara
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##  0.0000  0.0000  0.0000  0.7009  0.0000  5.0000
## -----
## dataset$Country.Region: Yemen
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##  0.0000  0.0000  0.0000  0.1308  0.0000  1.0000
## -----
## dataset$Country.Region: Zambia
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   0.00   0.00   0.00   13.09   26.50  103.00
## -----
## dataset$Country.Region: Zimbabwe
##   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##  0.0000  0.0000  0.0000  0.7196  0.0000  5.0000
```

```
summary(india)
```

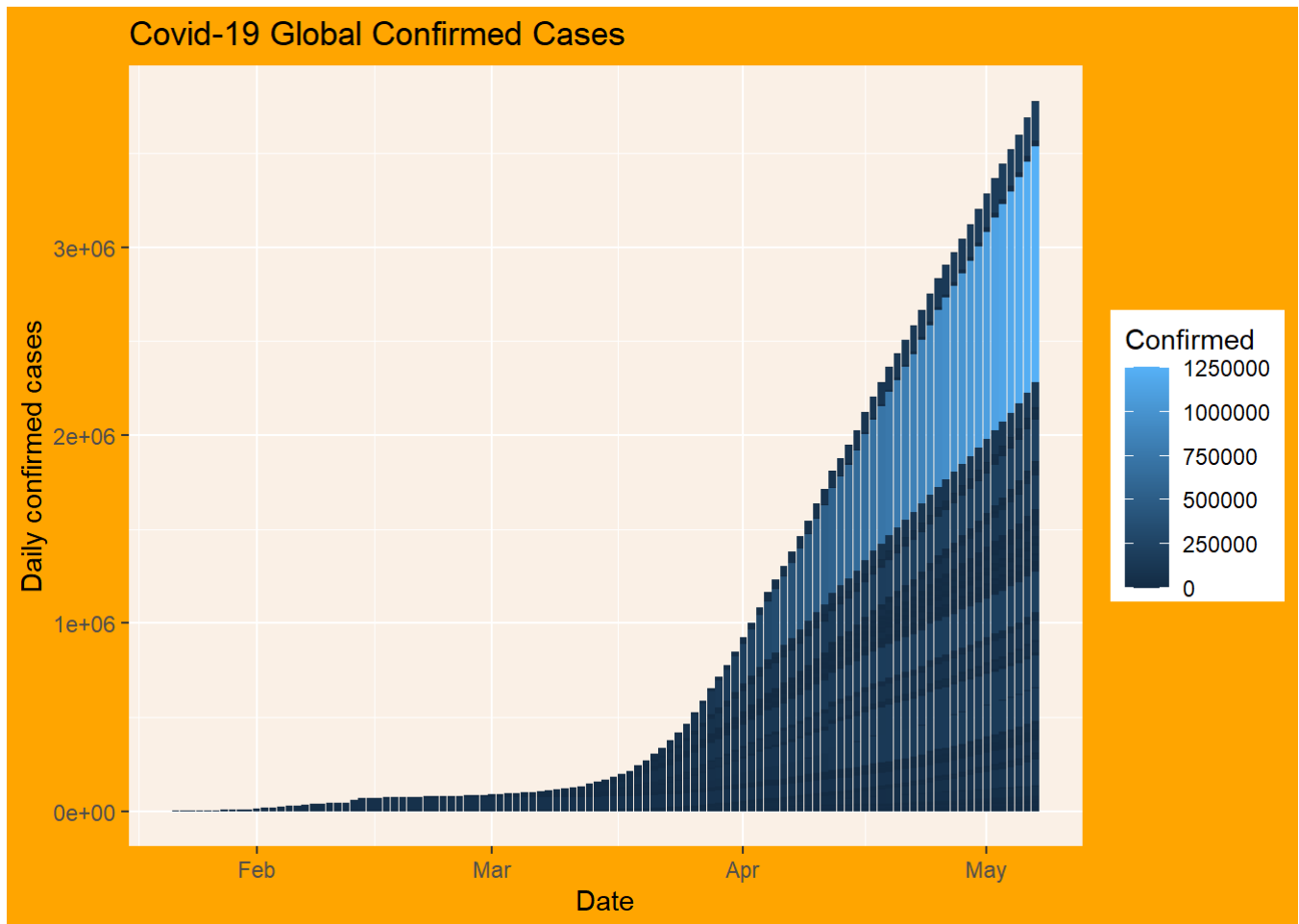
```
##      Date      Country.Region  Province.State      Lat
## Min.   :2020-01-22  Length:107      Length:107      Min.   :21
## 1st Qu.:2020-02-17  Class :character  Class :character 1st Qu.:21
## Median :2020-03-15  Mode  :character  Mode  :character Median :21
## Mean    :2020-03-15                                     Mean    :21
## 3rd Qu.:2020-04-10                                     3rd Qu.:21
## Max.    :2020-05-07                                     Max.    :21
##      Long      Confirmed      Recovered      Deaths
## Min.   :78   Min.   : 0   Min.   : 0.0   Min.   : 0.0
## 1st Qu.:78   1st Qu.: 3   1st Qu.: 3.0   1st Qu.: 0.0
## Median :78   Median : 113   Median : 13.0   Median : 2.0
## Mean    :78   Mean    : 7314   Mean    : 1667.0   Mean    : 238.4
## 3rd Qu.:78   3rd Qu.: 8022   3rd Qu.: 871.5   3rd Qu.: 267.0
## Max.    :78   Max.    :56351   Max.    :16776.0   Max.    :1889.0
```

```
# GRAPHS
```

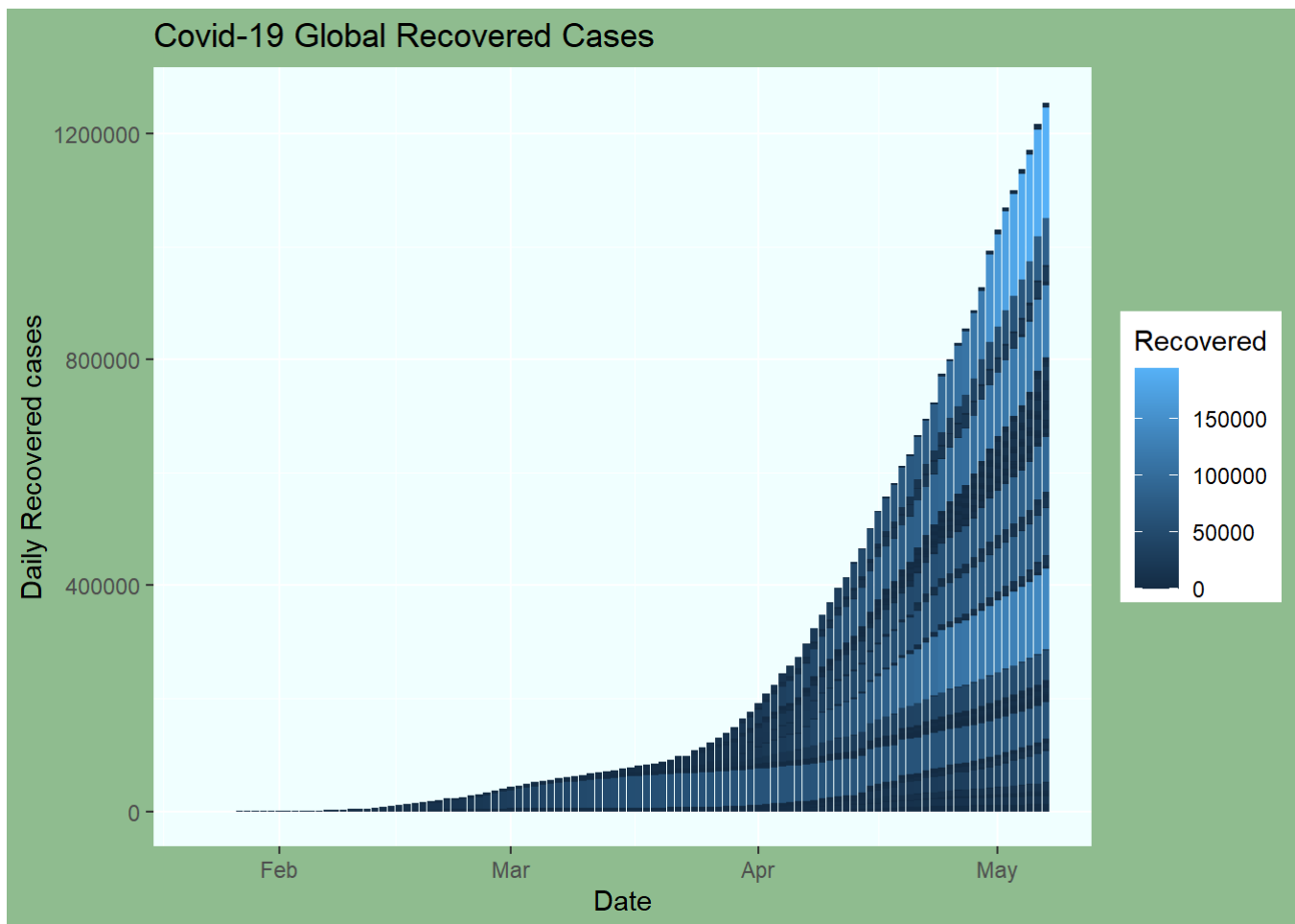
```
# Barchart of cases over time
```

```
# World confirmed
```

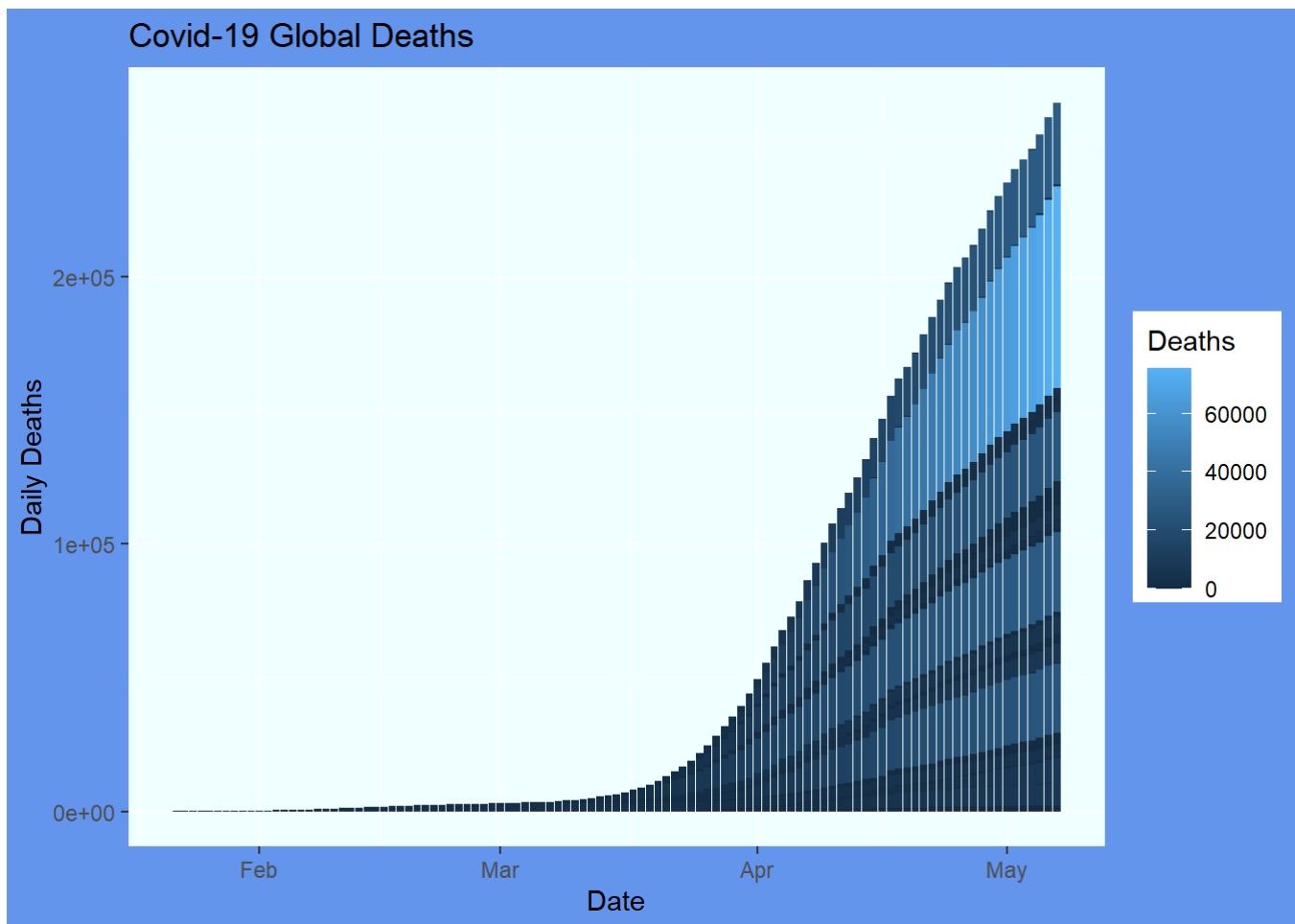
```
ggplot(dataset, aes(x=Date, y=Confirmed, fill = Confirmed)) + geom_bar(stat="identity", width
=0.9) +
  theme_gray() +
  labs(title = "Covid-19 Global Confirmed Cases", x= "Date", y= "Daily confirmed cases") +
  theme(plot.background=element_rect(fill="orange"))+theme(panel.background = element_rect(fi
ll = "linen"))
```



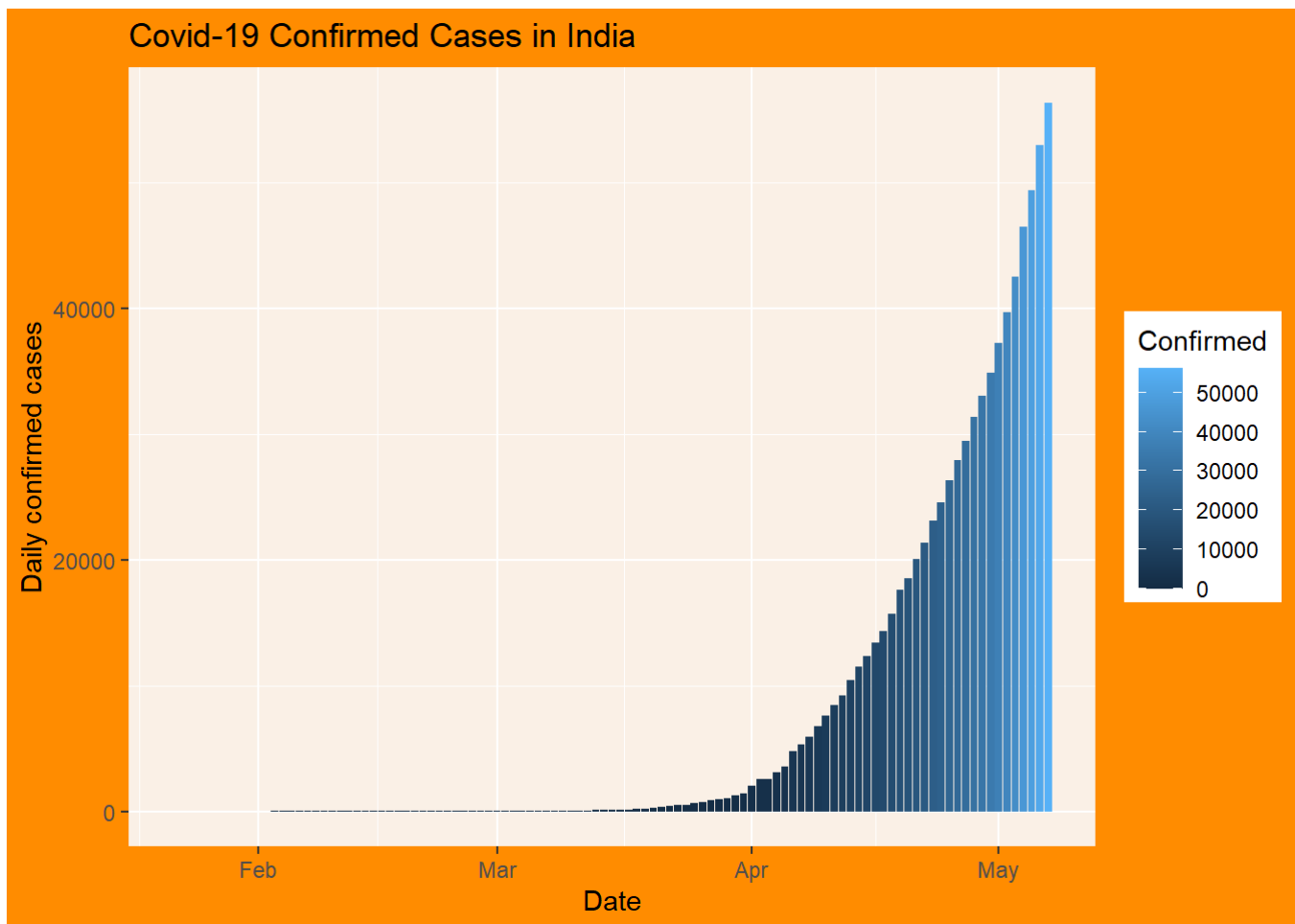
```
# World Recovered
ggplot(dataset, aes(x=Date, y=Recovered, fill = Recovered)) + geom_bar(stat="identity", width
=0.9) +
  theme_gray() +
  labs(title = "Covid-19 Global Recovered Cases", x= "Date", y= "Daily Recovered cases") +
  theme(plot.background=element_rect(fill="darkseagreen"))+theme(panel.background = element_r
ect(fill = "azure"))
```



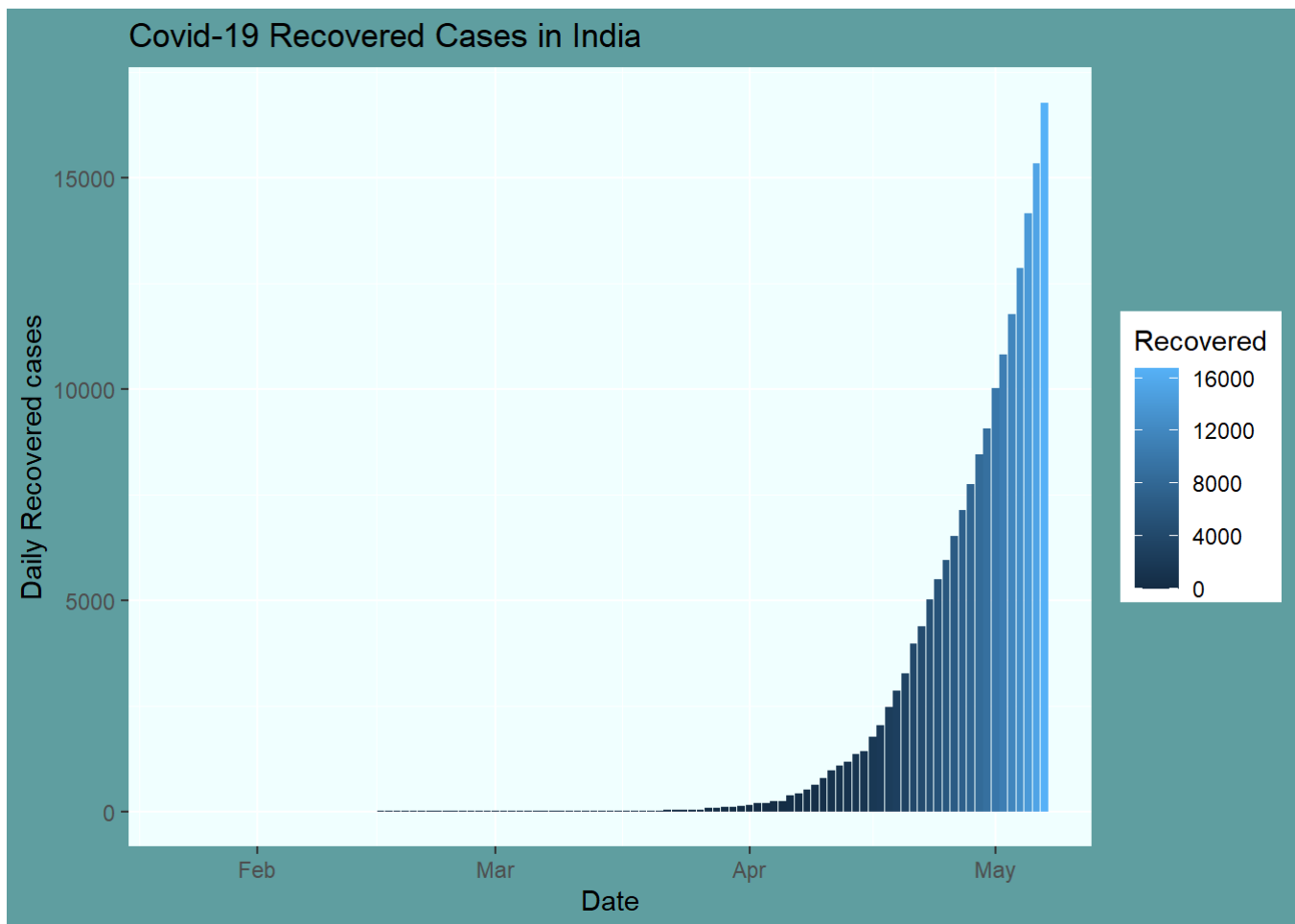
```
# World deaths
ggplot(dataset, aes(x=Date, y=Deaths, fill = Deaths)) + geom_bar(stat="identity", width=0.9)
+
  theme_gray() +
  labs(title = "Covid-19 Global Deaths", x= "Date", y= "Daily Deaths") +
  theme(plot.background=element_rect(fill="cornflowerblue"))+theme(panel.background = element
_rect(fill = "azure"))
```



```
#India confirmed
ggplot(india, aes(x=Date, y=Confirmed, fill = Confirmed)) + geom_bar(stat="identity", width=
0.9) +
  theme_gray() +
  labs(title = "Covid-19 Confirmed Cases in India", x= "Date", y= "Daily confirmed cases") +
  theme(plot.background=element_rect(fill="darkorange"))+theme(panel.background = element_rec
t(fill = "linen"))
```

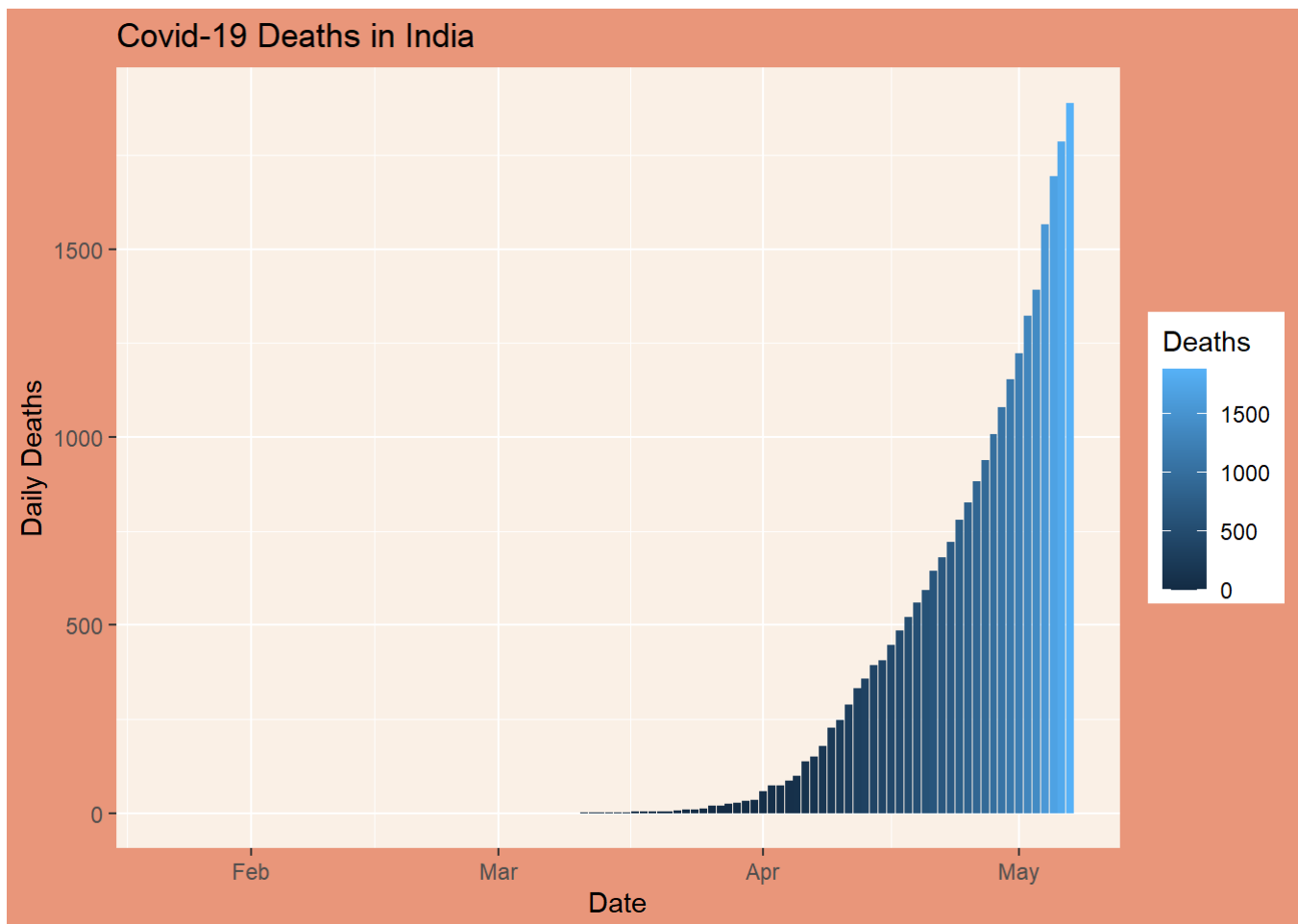



```
#India Recovered
ggplot(india, aes(x=Date, y=Recovered, fill = Recovered)) + geom_bar(stat="identity", width=
0.9) +
  theme_gray() +
  labs(title = "Covid-19 Recovered Cases in India", x= "Date", y= "Daily Recovered cases") +
  theme(plot.background=element_rect(fill="cadetblue"))+theme(panel.background = element_rect
(fill = "azure"))
```



#India Deaths

```
ggplot(india, aes(x=Date, y=Deaths, fill = Deaths)) + geom_bar(stat="identity", width=0.9) +
  theme_gray() +
  labs(title = "Covid-19 Deaths in India", x= "Date", y= "Daily Deaths") +
  theme(plot.background=element_rect(fill="darksalmon"))+theme(panel.background = element_rect(fill = "linen"))
```

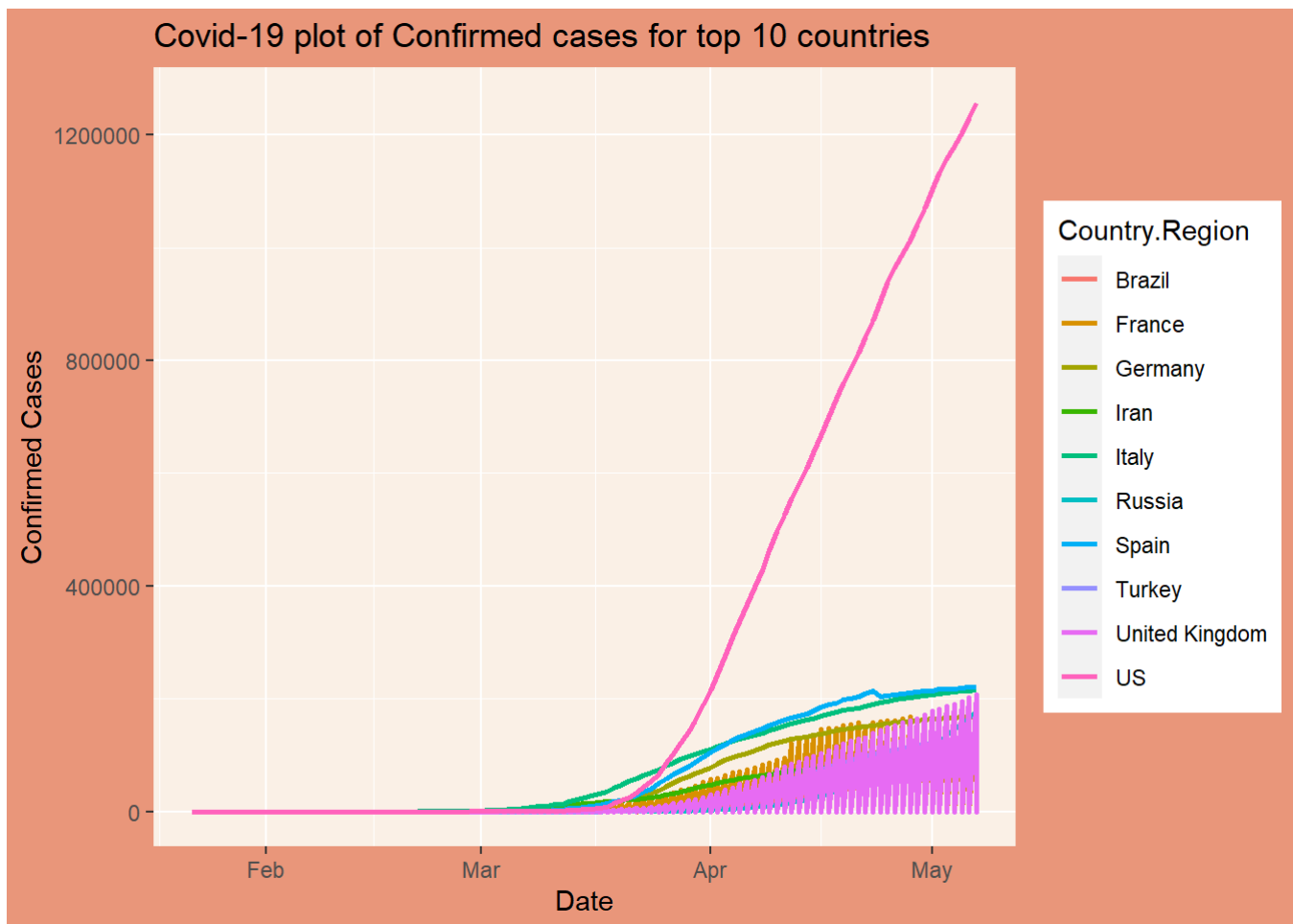


```
#top 10 country analysis
```

```
df = dataset[(dataset$Country.Region == "US" | dataset$Country.Region== "Spain" | dataset$Country.Region== "Italy" | dataset$Country.Region=="United Kingdom" | dataset$Country.Region=="Russia" | dataset$Country.Region=="France" | dataset$Country.Region=="Germany" | dataset$Country.Region=="Brazil" | dataset$Country.Region=="Turkey" | dataset$Country.Region=="Iran"),]
```

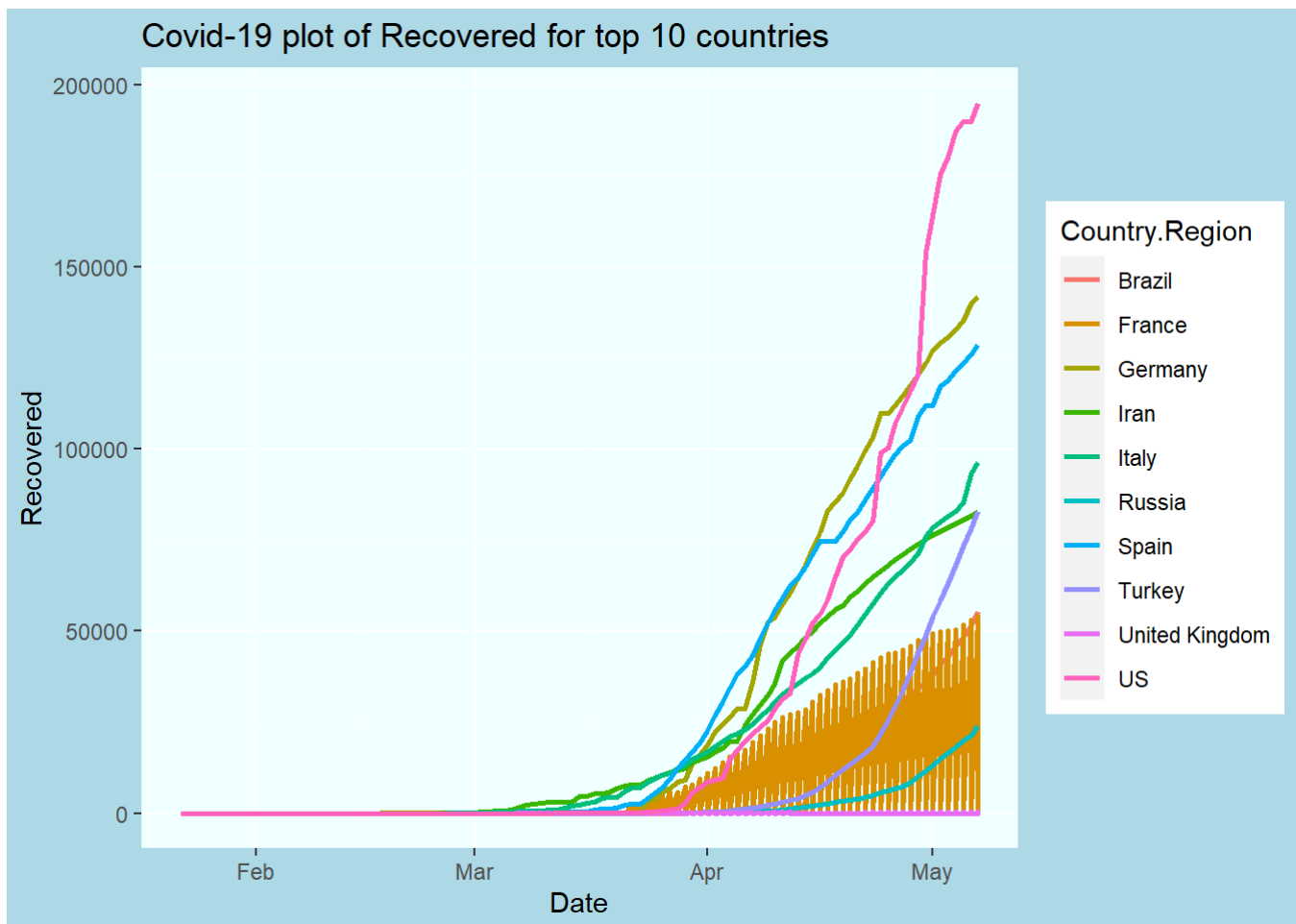
```
#plot of Confirmed cases
```

```
p = ggplot() + geom_line(data = df, aes(x = Date, y = Confirmed, color = Country.Region),size = 1) + theme_gray() + labs(title = "Covid-19 plot of Confirmed cases for top 10 countries",x = "Date", y = "Confirmed Cases")+theme(plot.background=element_rect(fill="darksalmon"))+theme(panel.background = element_rect(fill = "linen"))
print(p)
```



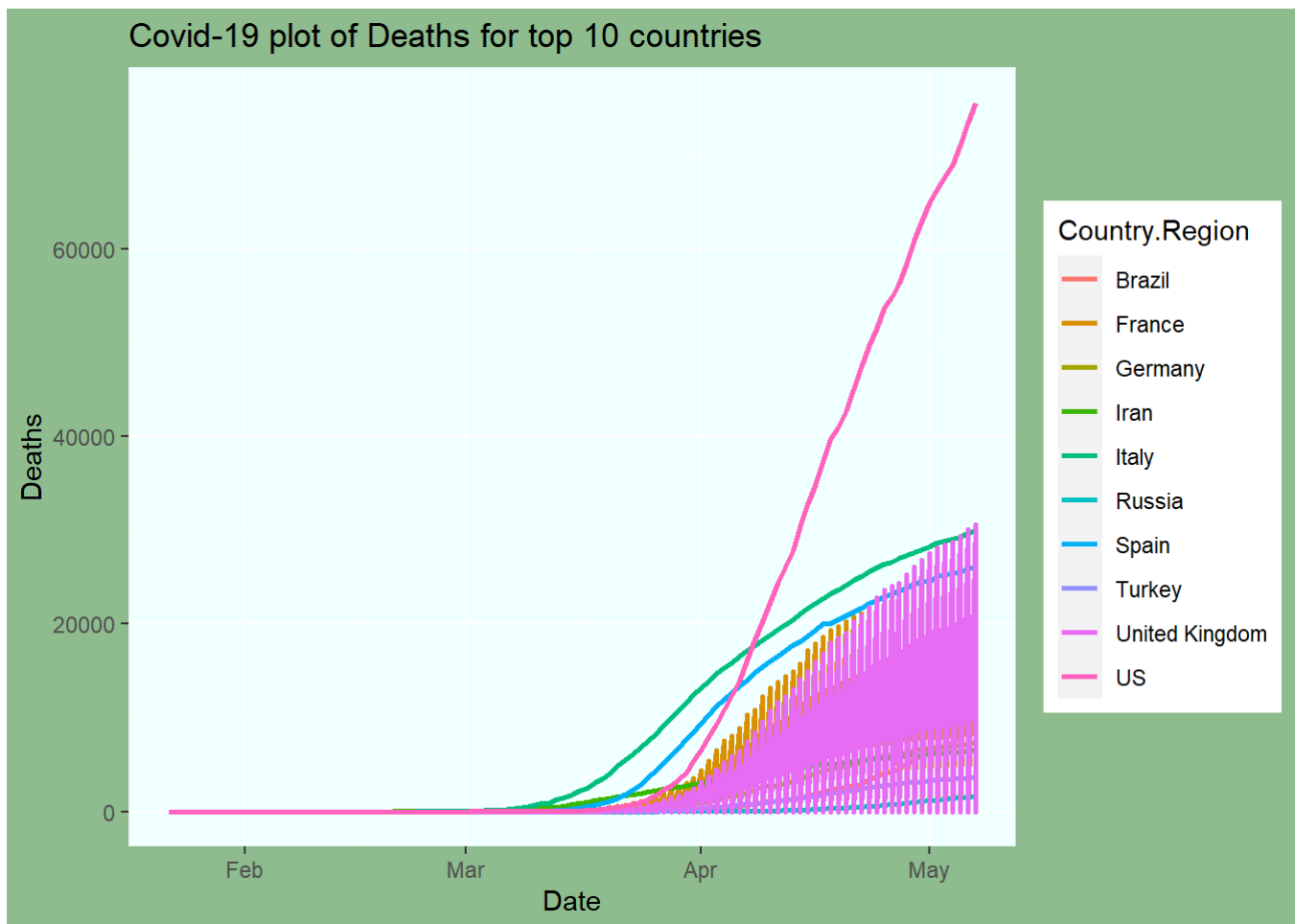
#plot of recovered cases

```
p = ggplot() + geom_line(data = df, aes(x = Date, y = Recovered, color = Country.Region), size = 1) + theme_gray() + labs(title = "Covid-19 plot of Recovered for top 10 countries", x = "Date", y = "Recovered") + theme(plot.background = element_rect(fill = "lightblue")) + theme(panel.background = element_rect(fill = "azure"))
print(p)
```



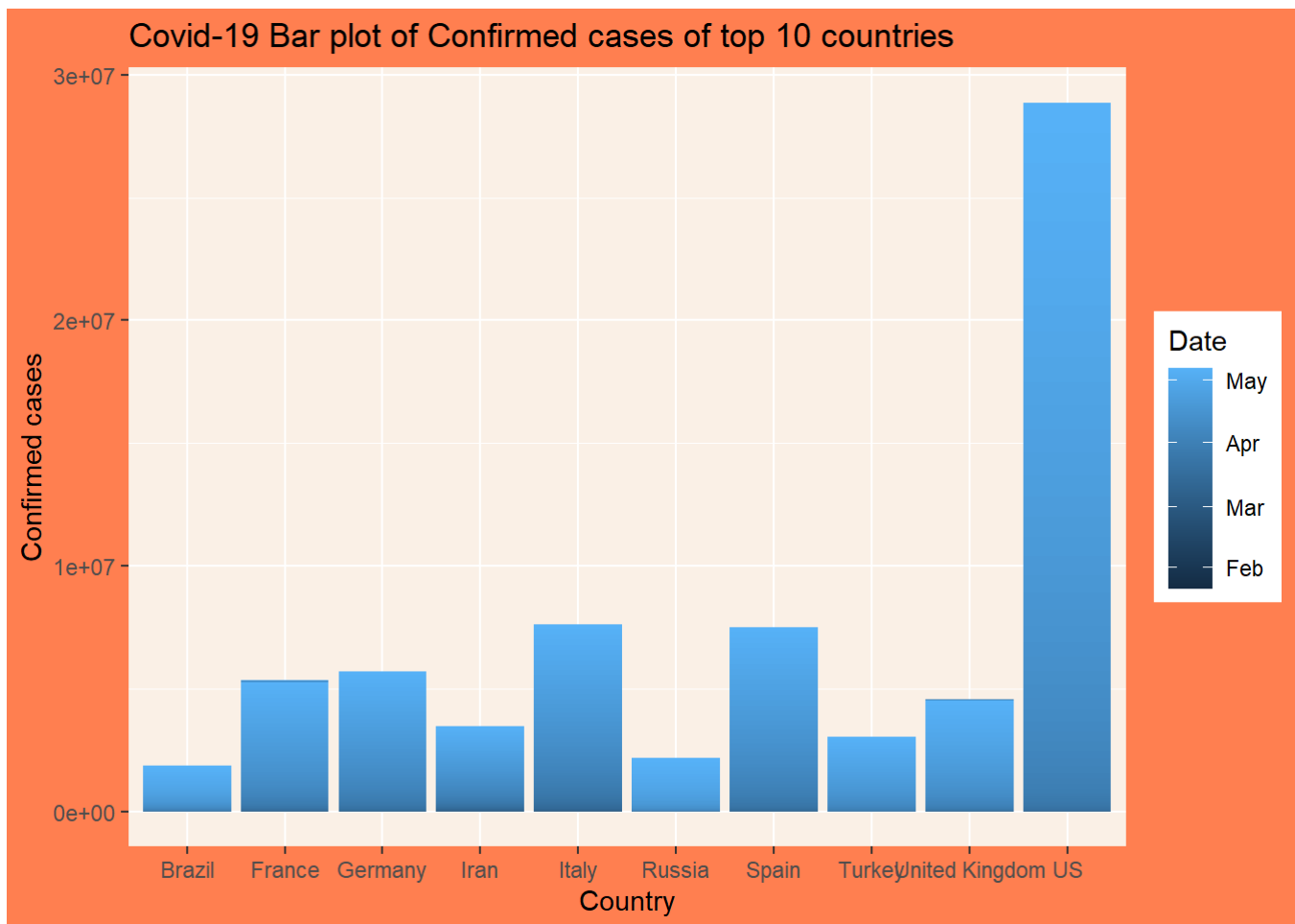
#plot of deaths

```
p = ggplot() + geom_line(data = df, aes(x = Date, y = Deaths, color = Country.Region), size = 1) + theme_gray() + labs(title = "Covid-19 plot of Deaths for top 10 countries", x = "Date", y = "Deaths") + theme(plot.background=element_rect(fill="darkseagreen"))+theme(panel.background = element_rect(fill = "azure"))
print(p)
```



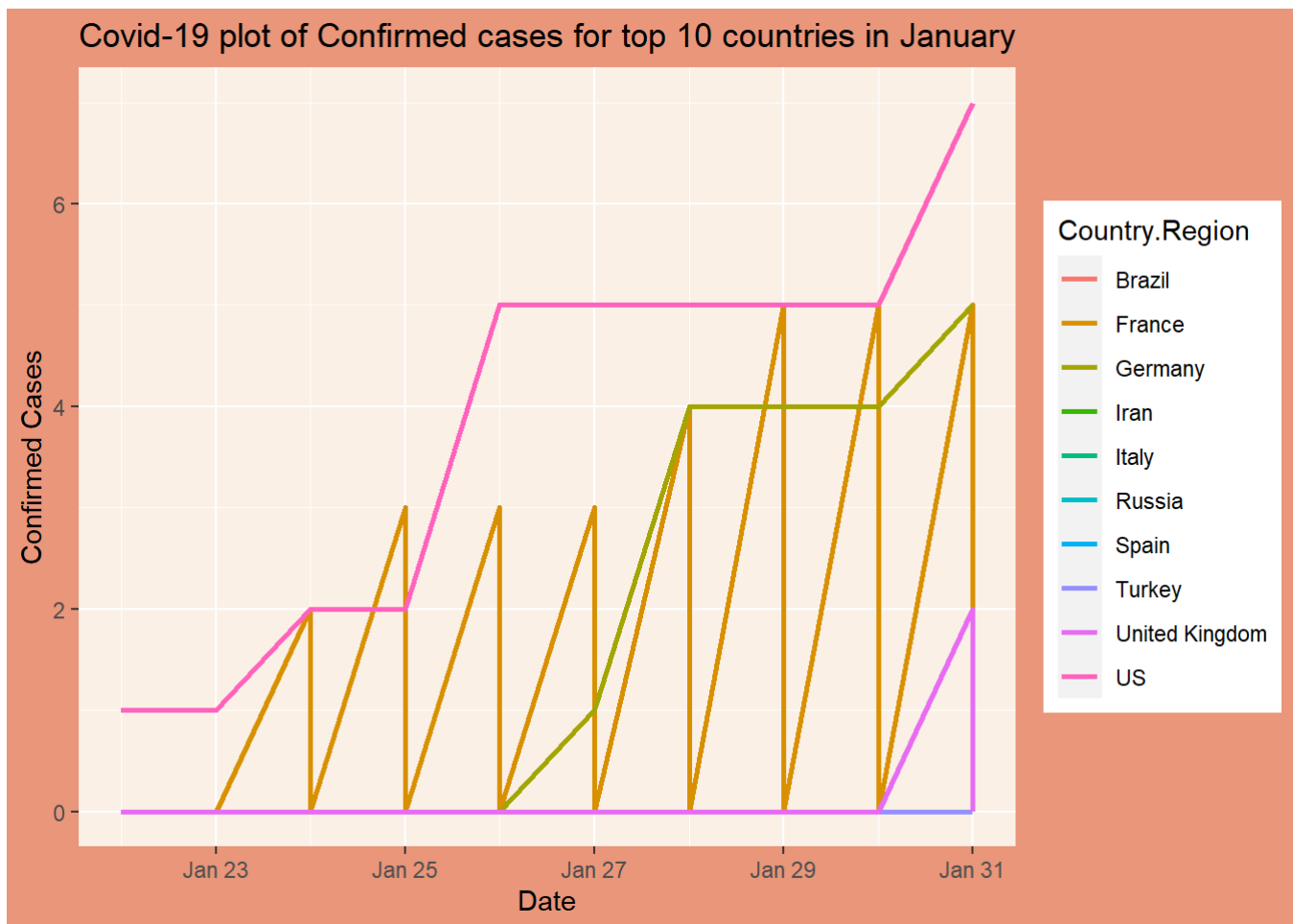
#Bar plot of Confirmed cases of top 10 countries

```
ggplot(df, aes(x=Country.Region, y=Confirmed, fill = Date)) + geom_bar(stat="identity", width =0.9) + theme_gray() + labs(title = "Covid-19 Bar plot of Confirmed cases of top 10 countries", x= "Country", y= "Confirmed cases") + theme(plot.background=element_rect(fill="coral"))+theme(panel.background = element_rect(fill = "linen"))
```



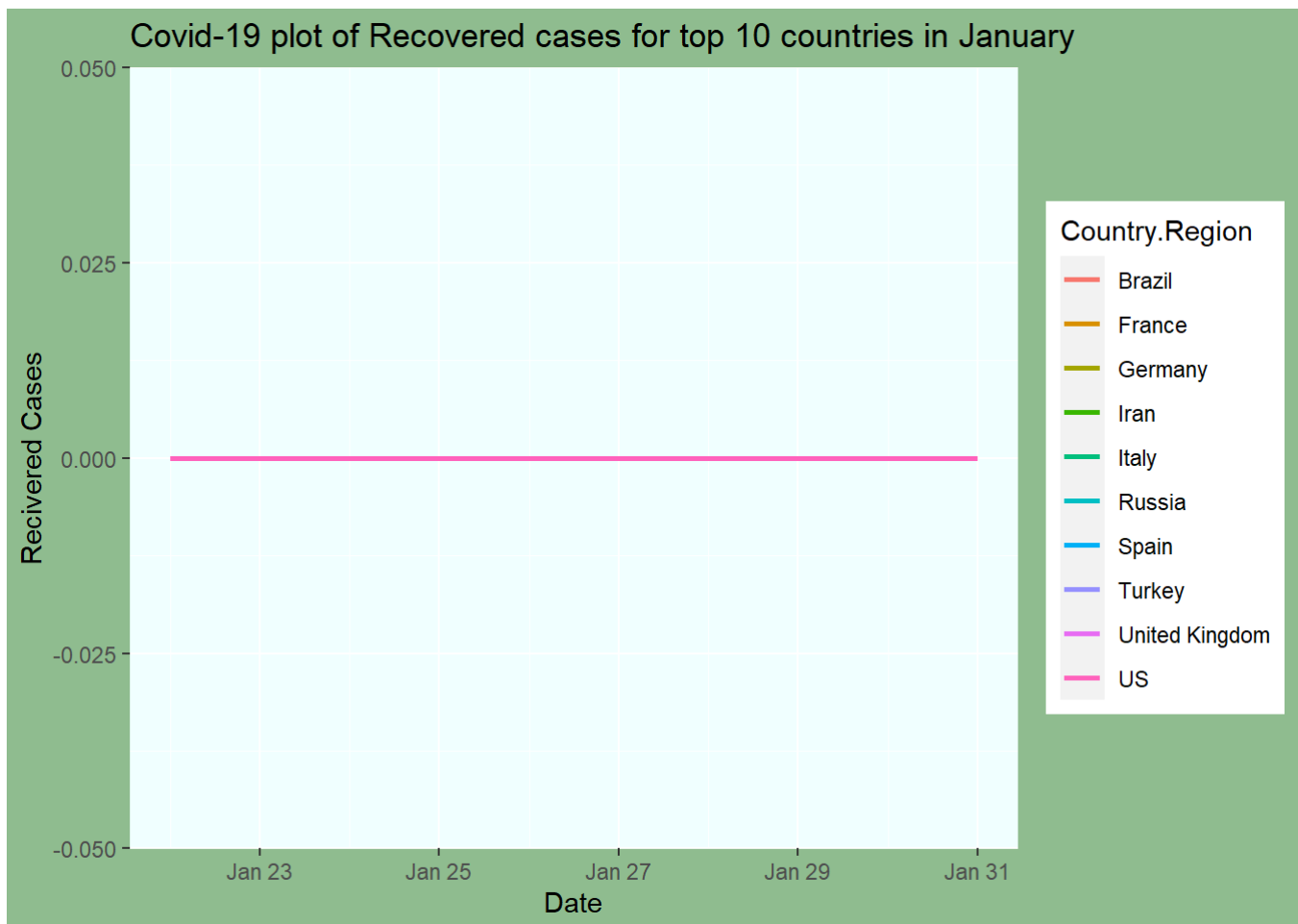
```
#Monthly analysis
#for january
df_jan = df[(df$Date<= '2020-01-31' & df$Date >= '2020-01-01'),]
```

```
#plot of Confirmed cases in january
p = ggplot() + geom_line(data = df_jan, aes(x = Date, y = Confirmed, color = Country.Region),
size = 1) + theme_gray() + labs(title = "Covid-19 plot of Confirmed cases for top 10 countries in January", x = "Date", y = "Confirmed Cases")+theme(plot.background=element_rect(fill="darksalmon"))+theme(panel.background = element_rect(fill = "linen"))
print(p)
```



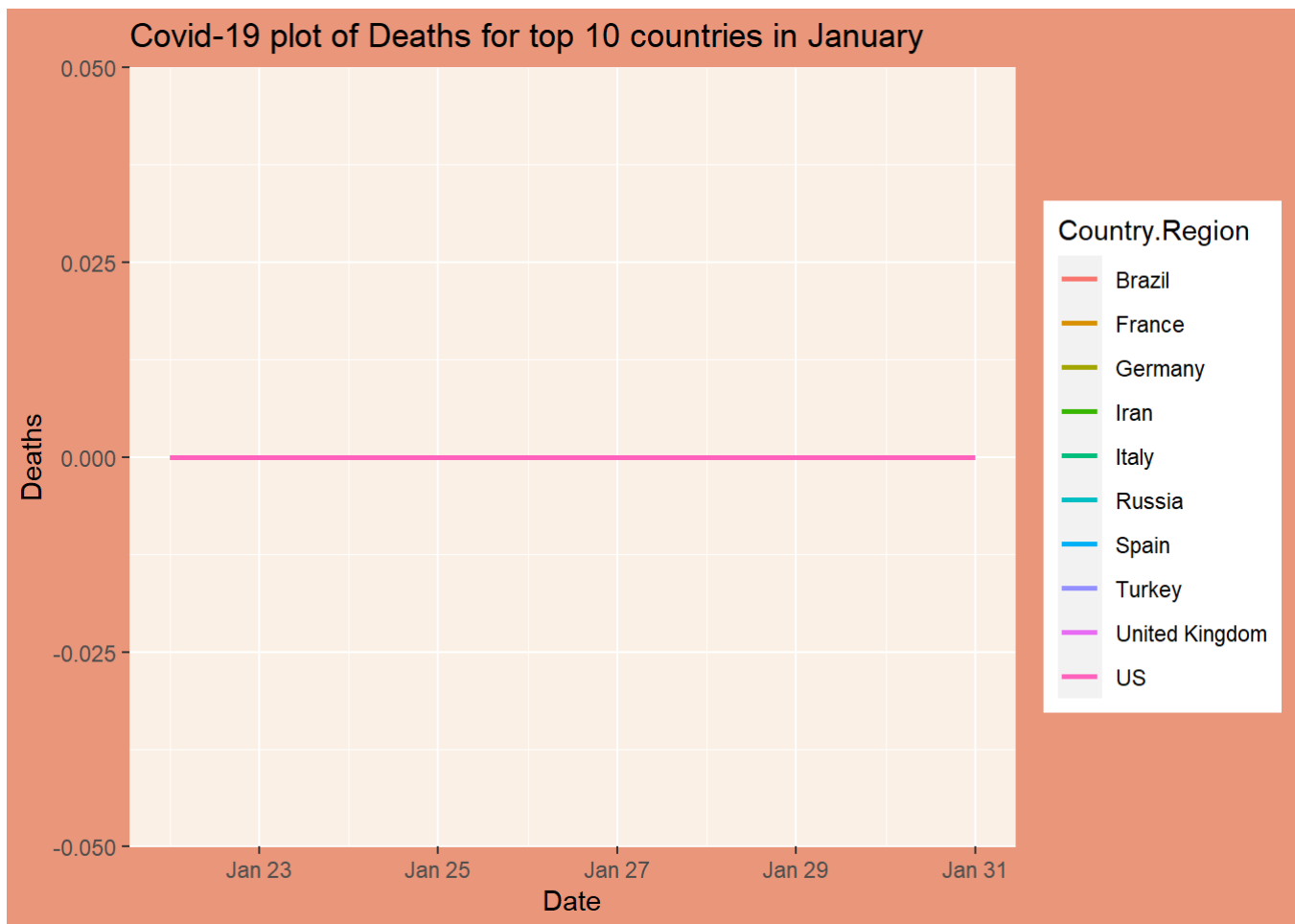
#plot of Recovered cases in january

```
p = ggplot() + geom_line(data = df_jan, aes(x = Date, y = Recovered, color = Country.Region),
size = 1) + theme_gray() + labs(title = "Covid-19 plot of Recovered cases for top 10 countries in January", x = "Date", y = "Recovered Cases") + theme(plot.background = element_rect(fill = "darkseagreen")) + theme(panel.background = element_rect(fill = "azure"))
print(p)
```

#plot of Deaths in january

```
p = ggplot() + geom_line(data = df_jan, aes(x = Date, y = Deaths, color = Country.Region), size = 1) + theme_gray() + labs(title = "Covid-19 plot of Deaths for top 10 countries in January", x = "Date", y = "Deaths") + theme(plot.background = element_rect(fill = "darksalmon")) + theme(panel.background = element_rect(fill = "linen"))
print(p)
```



#Bar plot of Confirmed cases of top 10 countries in January

```
ggplot(df_jan, aes(x=Country.Region, y=Confirmed, fill = Date)) + geom_bar(stat="identity", width=0.9) + theme_gray() + labs(title = "Covid-19 Bar plot of Confirmed cases of top 10 countries", x= "Country", y= "Confirmed cases") + theme(plot.background=element_rect(fill="coral"))+theme(panel.background = element_rect(fill = "linen"))
```

