Week 3 Quiz

Contents

1 Week 3 Quiz

```r
df1 <- read.csv("data/getdata_data_ss06hid.csv")
```

```r
head(df1)
```

RT	SERIALNO	DIVISION	...
H	186	700 4	16 10 856 751 1 NA 4 2 2 NA 180 2 3 3 600 1 NA 1 1300 1 1 9 NA NA NA 1 1 NA 17 3 840 5 2 105 260 NA NA
H	306	700 4	16 10 356 751 NA NA 1 7 NA NA 600 2 3 3 NA 1 NA NA NA NA NA 1 2 2 600 NA 1 3 NA NA 1 1 3 NA NA 660 231
H	395	100 4	16 10 156 751 1 NA 3 2 2 NA 70 0 2 30 1 200 1 NA NA NA NA 3 1 7 NA NA NA 1 2 NA 18 2 50 5 7 940 0 NA NA
H	506	700 4	16 10 256 751 1 NA 4 2 2 NA 40 0 2 80 1 200 1 NA 1 86 0 1 1 6 NA NA 400 1 NA 19 3 50 2 1 660 100 NA NA
H	835	800 4	16 10 156 751 2 1 5 2 2 NA 250 2 3 3 700 1 NA 1 1900 1 1 7 NA NA 650 1 NA 20 5 2 3 1 930 200 NA NA
H	989	700 4	16 10 156 751 1 NA 3 2 2 NA 130 2 3 3 250 1 NA 1 700 1 1 6 NA NA 400 1 NA 15 2 120 5 2 610 100 NA NA

```r
library(plyr)
library(dplyr)
```

```
##
## Attaching package: 'dplyr'

## The following objects are masked from 'package:plyr':
##
##     arrange, count, desc, failwith, id, mutate, rename, summarise,
##     summarize

## The following objects are masked from 'package:stats':
##
##     filter, lag

## The following objects are masked from 'package:base':
##
##     intersect, setdiff, setequal, union
```

```r
df1 %>%
  filter(ACR == 3 & AGS ==6)
```

RT	SERIALNO	DIVISION	...
H	303	46400 4	16 10 156 751 3 6 3 2 2 NA 150 2 3 3 600 1 NA 1 1400 1 1 5 NA NA NA 1 1 NA 20 2 2 3 1 626 200 NA NA
H	532	923004	16 10 256 751 3 6 2 3 2 NA 120 10 30 6 1500 1 NA 2 1400 1 1 4 NA NA NA 1 1 NA 11 3 100 5 1 120 200 NA NA
H	562	899804	16 10 956 751 3 6 2 2 2 NA 80 0 2 110 1 NA 1 NA NA NA NA NA 1 5 NA NA NA 1 4 NA NA 2 2 9 2 232 200 NA NA
H	1018	28200 4	16 10 756 751 3 6 3 2 2 NA 70 0 850 3 4 860 1 NA 2 600 2 1 1 9 NA NA NA 1 1 NA 44 2 9 1 275 100 NA NA

H	12835800	4	16 10 15 16 75 1	3	6	5	2	2	NA	80 0	2	10 2	0	1	NA NA NA NA	3	1	9	NA NA NA	1	2	NA	24 2	2	1	2	41500	NA NA
H	12280200	4	16 10 16 36 75 1	3	6	3	2	2	NA	150 0	2	3 3	480 0	NA	2	110 2	1	1	6	NA NA NA	1	1	NA	24 3	2	5	1	5260	NA NA
H	13381280	4	16 10 11 56 75 1	3	6	1	2	2	NA	100 0	770 3	4	200 0	NA	2	870 2	1	1	5	NA NA NA	1	1	NA	22 4	2	9	2	32200	NA NA
H	14089600	4	16 10 17 26 75 1	3	6	4	2	2	NA	130 0	2	3 2	80 1	NA NA NA NA	3	1	9	NA NA NA	1	2	NA	17 2	2	8	2	32040	NA NA
H	16980600	4	16 10 16 26 75 1	3	6	4	2	2	NA	100 0	2	3 3	150 0	NA NA NA NA	3	1	8	NA NA NA	1	2	NA	24 2	2	6	NA	NA NA NA NA
H	17301500	4	16 10 17 56 75 1	3	6	3	2	2	NA	50 0	2	70 3	20 1	NA	1	90 2	1	1	6	NA NA NA	1	NA	20 5	2	2	2	120400	NA NA
H	17688900	4	16 10 18 56 75 1	3	6	4	2	2	NA	30 0	350 3	4	30 1	NA NA NA NA	3	1	9	NA NA NA	1	2	NA	10 2	2	8	NA	NA NA NA NA
H	18384350	4	16 10 15 56 75 1	3	6	3	2	2	NA	200 0	50 3	6	50 0	NA NA NA NA	3	1	5	NA NA NA	1	2	NA	14 3	2	9	4	12040	NA NA
H	20357800	4	16 10 17 36 75 1	3	6	3	2	2	NA	50 0	60 3	5	20 1	NA NA NA NA	3	1	5	NA NA NA	1	2	NA	15 2	2	9	2	244430	NA NA
H	20482620	4	16 10 12 56 75 1	3	6	3	2	2	NA	80 0	50 3	3	60 0	NA NA NA NA	3	1	6	NA NA NA	1	2	NA	13 2	2	9	4	460400	NA NA
H	22318140	4	16 10 12 56 75 1	3	6	3	2	2	NA	160 0	2	3 6	87 1	NA	1	170 0	1	1	6	NA NA	340	1	NA	23 4	2	3	2	887200	NA NA
H	27088430	4	16 10 16 56 75 1	3	6	4	2	2	NA	140 0	2	3 6	60 1	NA NA NA NA	3	1	8	NA NA NA	1	2	NA	16 3	2	7	2	280460	NA NA
H	27282580	4	16 10 12 56 75 1	3	6	3	2	2	NA	180 0	2	3 3	80 0	NA NA NA NA	3	1	7	NA NA NA	1	2	NA	14 3	2	8	1	357200	NA NA
H	27833300	4	16 10 11 56 35 1	3	6	5	2	2	NA	70 0	74 3	5	45 1	NA NA NA NA	3	1	9	NA NA NA	1	2	NA	14 3	2	9	1	440400	NA NA
H	29360300	4	16 10 17 36 75 1	3	6	5	2	2	NA	110 0	2	3 3	80 0	NA	1	110 0	1	1	8	NA NA NA	1	NA	15 2	40 9	1	227240	NA NA
H	34826900	4	16 10 15 16 75 1	3	6	4	2	2	NA	180 0	2	3 3	100 0	NA	2	390 2	1	1	8	NA NA	40	1	1	NA	17 2	2	4	1	788470	NA NA
H	34736900	4	16 10 11 56 75 1	3	6	3	2	2	NA	80 0	2	180 2	33 1	NA NA NA NA	3	1	9	NA NA NA	1	2	NA	11 1	2	9	4	546400	NA NA
H	35284080	4	16 10 15 56 75 1	3	6	3	2	2	NA	60 0	2	3 3	0	1	NA NA NA NA	3	1	5	NA NA NA	1	2	NA	8	2	2	9	2	433200	NA NA
H	39570300	4	16 10 14 56 75 1	3	6	3	2	2	NA	60 0	2	3 6	50 0	NA NA NA NA	3	1	8	NA NA NA	1	2	NA	24 5	2	9	1	261400	NA NA
H	40940800	4	16 10 12 56 75 1	3	6	3	2	2	NA	50 0	60 5	6	65 1	NA	2	140 0	1	1	6	NA NA NA	1	NA	22 4	2	9	1	472200	NA NA
H	44481680	4	16 10 13 56 75 1	3	6	4	2	2	NA	110 0	2	3 3	480 0	NA	1	480 0	1	1	8	NA NA NA	1	NA	23 3	2	5	1	264400	NA NA
H	46587620	4	16 10 12 56 75 1	3	6	4	2	2	NA	80 0	2	250 2	NA	1	NA NA NA NA	1	7	NA NA NA	1	4	NA NA	4	2	9	1	273240	NA NA
H	51087540	4	16 10 12 56 35 1	3	6	3	2	2	NA	120 0	38 3	4	140 0	NA NA NA NA	3	1	8	NA NA NA	1	2	NA	14 5	2	6	4	416400	NA NA
H	51991800	4	16 10 14 56 75 1	3	6	2	2	2	NA	40 0	2	3 3	24 1	NA NA NA NA	3	1	7	NA NA NA	1	2	NA	11 3	2	9	4	253400	NA NA
H	53796700	4	16 10 18 56 75 1	3	6	3	2	2	NA	100 0	2	3 3	50 1	NA	1	580 1	1	1	9	NA NA NA	1	NA	18 3	2	5	1	102440	NA NA
H	54684020	4	16 10 12 56 75 1	3	6	3	2	2	NA	200 0	50 3	6	20 1	NA NA NA NA	3	1	9	NA NA NA	1	2	NA	14 3	2	6	2	281400	NA NA
H	56324250	4	16 10 12 56 75 1	3	6	3	2	2	NA	60 0	60 3	4	NA	1	NA NA NA NA	1	9	NA NA NA	1	4	NA NA	2	2	9	NA	NA NA NA NA
H	56819800	4	16 10 15 56 75 1	3	6	4	2	2	NA	100 0	120 0	4	480 0	NA NA NA NA	3	1	6	NA NA NA	1	2	NA	23 0	2	6	3	25880	NA NA
H	58286580	4	16 10 12 56 35 1	3	6	3	2	2	NA	150 0	2	3 3	100 0	NA NA NA NA	3	1	5	NA NA NA	1	2	NA	21 3	2	6	3	527200	NA NA
H	60284520	4	16 10 12 56 75 1	3	6	5	2	2	NA	130 0	10 80 2	2	130 0	NA	2	850 2	1	1	9	NA NA NA	1	NA	17 4	2	9	1	421460	NA NA
H	62938500	4	16 10 18 16 75 1	3	6	4	2	2	NA	130 0	30 3	6	NA	1	NA NA NA NA	1	7	2	400	NA	1	3	NA NA	4	2	8	2	4080055516
H	66387200	4	16 10 11 56 75 1	3	6	4	2	2	NA	90 0	150 0	4	25 1	NA NA NA NA	3	1	7	NA NA NA	1	2	NA	16 3	2	3	1	465420	NA NA
H	66398200	4	16 10 12 56 75 1	3	6	4	2	2	NA	190 0	10 3	4	73 1	NA	2	140 0	1	1	7	NA NA NA	1	NA	20 2	2	2	1	730200	NA NA
H	66926900	4	16 10 12 86 75 1	3	6	5	2	2	NA	60 0	2	80 2	85 1	NA	2	750 2	1	1	9	NA NA NA	1	NA	15 3	2	9	1	535200	NA NA
H	69759900	4	16 10 19 66 75 1	3	6	2	2	2	NA	50 0	60 3	5	0	2	NA NA NA NA	3	1	4	NA NA NA	2	2	NA	2	2	2	9	NA NA NA NA
H	71382670	4	16 10 17 56 75 1	3	6	3	2	1	NA	40 0	2	3 3	50 1	NA	1	50 2	1	1	8	NA NA NA	1	NA	20 2	2	1	NA	NA NA NA NA
H	71983270	4	16 10 16 16 75 1	3	6	4	2	2	NA	40 0	180 10 0	4	0	1	NA NA NA NA	3	1	7	NA NA NA	1	2	NA	10 2	41 9	4	735400	NA NA
H	75356500	4	16 10 17 56 75 1	3	6	3	2	2	NA	70 0	180 90 2	2	140 0	NA	2	200 2	1	1	9	NA NA NA	1	NA	24 3	2	3	2	530460	NA NA
H	76889700	4	16 10 11 56 75 1	3	6	3	2	1	NA	1	0	210 3	4	480 0	NA	2	660 2	1	1	5	NA NA NA	1	NA	16 2	2	7	2	239400	NA NA
H	81844200	4	16 10 18 56 75 1	3	6	3	2	2	NA	90 0	200 3	4	NA	1	NA NA NA NA	1	8	NA NA NA	1	4	NA NA	3	2	8	5	503200	NA NA
H	81450900	4	16 10 11 56 75 1	3	6	3	2	2	NA	180 0	15 3	4	200 0	NA NA NA NA	3	1	8	NA NA NA	1	2	NA	22 2	2	9	4	195400	NA NA
H	82434200	4	16 10 12 66 75 1	3	6	2	1	2	NA	110 0	10 3	4	13 1	700	NA NA	3	1	5	NA NA NA	1	2	NA	9	2	78 5	NA NA NA NA
H	85187200	4	16 10 12 56 75 1	3	6	3	2	2	NA	40 0	400 10 5	2	40 1	NA NA NA NA	3	1	5	NA NA NA	1	2	NA	12 3	2	9	NA	NA NA NA NA
H	85689780	4	16 10 13 56 75 1	3	6	3	2	2	NA	130 0	2	3 6	50 1	NA	1	110 2	1	1	6	NA NA NA	1	NA	22 2	2	7	1	455200	NA NA
H	86874200	4	16 10 15 16 75 1	3	6	4	1	2	NA	180 0	20 3	6	63 1	51	2	160 0	1	1	7	NA NA NA	1	NA	23 2	2	3	1	830400	NA NA
H	87081020	4	16 10 17 56 75 1	3	6	2	2	2	NA	190 0	60 3	6	480 0	NA NA NA NA	3	1	7	NA NA NA	1	2	NA	18 2	2	9	4	280400	NA NA
H	87890200	4	16 10 17 56 75 1	3	6	4	2	1	NA	70 0	2	50 2	40 1	NA	2	50 2	1	1	9	NA NA	200	1	NA	16 2	2	5	2	599470	NA NA
H	88681380	4	16 10 12 56 75 1	3	6	3	2	2	NA	70 0	2	100 2	20 1	NA	2	50 2	1	1	9	NA NA NA	1	NA	14 5	2	9	2	168410	NA NA
H	88992300	4	16 10 19 56 75 1	3	6	3	1	2	NA	110 0	2	3 3	150 0	NA	700 2	110 0	1	1	5	NA NA NA	1	NA	22 2	2	3	1	550400	NA NA
H	91813900	4	16 10 11 56 75 1	3	6	4	2	2	NA	300 0	2	20 6	60 1	NA NA NA NA	3	1	6	NA NA NA	1	2	NA	18 6	2	9	1	203250	NA NA
H	91781160	4	16 10 11 56 36 75 1	3	6	3	2	2	NA	120 0	2	4 6	250 0	NA NA NA NA	3	1	5	NA NA NA	1	2	NA	22 3	2	3	1	244460	NA NA
H	91984350	4	16 10 12 56 75 1	3	6	3	2	2	NA	130 0	2	3 3	160 0	NA	2	100 0	1	1	5	NA NA NA	1	NA	12 4	2	5	1	42200	NA NA

RTSERIALDIVISIONPUMAREGIONSTADJUSTWGTPNPTYPEACRAGSBDSBLDBUSCONPELEPFSFULPGASPHFLINSPKITMHPMRGIMRGPMRGTMRGXPLMRMSRNTMRNTPSMPTELTENVACSVALVEHWATPYBLFESFINCPFPARCGR
H 935538004 16 1018867751 3 6 4 2 2 NA1000 2 3 9 13010 NA1 6101 1 1 8 NANANA1 1 NA15 3 2 9 1 650400NANA
H 936834004 16 1011566751 3 6 5 2 2 NA2400 2 3 3 7001 NA2 18020 1 1 9 NANANA1 1 NA22 5 2 9 2 601300NANA
H 937867004 16 1019567751 3 6 2 2 2 NA40 0 2 4 2 20010 NANANANA3 1 5 NANANA1 2 NA22 2 2 2 2 273400NANA
H 989849004 16 1012564751 3 6 3 2 2 NA2000 12050 3 4001 NA1 5001 1 1 6 NANANA1 1 NA16 5 2 8 3 1254500NANA
H 1018269504 16 1011587751 3 6 4 2 2 NA60 0 2 3802 48010 NA2 3302 1 1 9 NANANA1 1 NA24 1 2 9 2 278400NANA
H 1018778204 16 1013561751 3 6 1 2 2 NA20 0 7003 6 0 1 NANANANA3 1 5 NANANA1 2 NA21 1 2 9 NANANANANA
H 1031781004 16 1013887751 3 6 3 2 2 NA1100 18030 4 5901 NANANANA3 1 8 NANANA1 2 NA16 3 2 6 4 361400NANA
H 1078302404 16 1011576751 3 6 5 2 2 NA1700 7003 5 NA1 NANANANANA1 9 NANANA1 4 NANA3 2 9 1 970200NANA
H 1088508304 16 1011567751 3 6 3 2 2 NA2000 2 3 3 7001 NA1 8301 1 1 5 NANANA1 1 NA16 4 2 5 1 142100NANA
H 1098569204 16 1011367751 3 6 5 2 2 NA30 0 2 1002 8001 NANANANA3 1 8 NANANA1 2 NA17 2 1607 1 394121NANA
H 1118452404 16 1012267751 3 6 2 2 2 NA1900 120002 NA1 NANANANANA1 5 NANANA1 4 NANA2 2 9 4 173400NANA
H 1138448004 16 1018667751 3 6 3 2 2 NA2500 2 3 3 4001 NANANANA3 1 7 NANANA1 2 NA18 3 2 6 1 521402NANA
H 1158697604 16 1011564751 3 6 3 2 1 NA1700 18080 2 14010 NANANANA3 1 7 NANANA1 2 NA19 2 2 4 4 308401NANA
H 1168395904 16 1017367751 3 6 5 2 2 NA70 0 8203 5 0 1 NANANANA3 1 9 NANANA1 2 NA15 6 2 9 4 281400NANA
H 1228279004 16 1012267751 3 6 5 2 2 NA80 0 2 3 3 3001 NANANANA3 1 9 NANANA1 2 NA17 3 2 5 1 578400NANA
H 1268129304 16 1011867751 3 6 3 2 2 NA1300 2 80 2 12010 NA1 4801 1 1 5 NANANA1 1 NA11 2 2 9 4 320400NANA
H 1268434204 16 1012537751 3 6 4 2 2 NA1200 10030 6 NA1 NANANANANA1 7 NANANA1 4 NANA2 2 9 6 90020 NANA
H 1278378504 16 1019667751 3 6 4 1 2 NA900 2 3 6 4501 0 NANANA3 1 9 NANANA1 2 NA10 2 2 5 2 410400NANA
H 1318408404 16 1016867751 3 6 4 2 2 NA1800 3003 3 7001 NANANANA3 1 7 NANANA1 2 NA16 4 2 6 1 410400NANA
H 1338413704 16 1017567751 3 6 4 2 1 NA80 0 2 3 2 4301 NA2 9002 1 1 8 NANA3001 1 NA16 5 2 8 2 747401NANA
H 1348389804 16 1012264751 3 6 5 2 2 NA90 0 2 306 10010 NA1 9901 1 1 7 NANANA1 1 NA24 2 3604 3 787260NANA

```
X[(X$var1 <= 3 & X$var3 > 11),] # get all rows that meets the condition
```

```r
agLogical <- df1$ACR == 3 & df1$AGS == 6
```

```r
which(agLogical)
```

```
##  [1]  125  238  262  470  555  568  608  643  787  808  824  849  952  955 1033
## [16] 1265 1275 1315 1388 1607 1629 1651 1856 1919 2101 2194 2403 2443 2539 2580
## [31] 2655 2680 2740 2838 2965 3131 3133 3163 3291 3370 3402 3585 3652 3852 3862
## [46] 3912 4023 4045 4107 4113 4117 4185 4198 4310 4343 4354 4448 4453 4461 4718
## [61] 4817 4835 4910 5140 5199 5236 5326 5417 5531 5574 5894 6033 6044 6089 6275
## [76] 6376 6420
```

```r
if(!file.exists("data")) {
  dir.create("data")
}

fileUrl <- "https://d396qusza40orc.cloudfront.net/getdata%2Fjeff.jpg"

download.file(fileUrl,destfile = "data/img.jpg", method = "curl")
```

```r
library(jpeg)
```

```r
img <- readJPEG("data/img.jpg",native = TRUE)
```

```r
head(img)
```

```
##           [,1]      [,2]      [,3]      [,4]      [,5]      [,6]      [,7]
## [1,] -11494710 -11494710 -11494710 -11494710 -11428917 -11428917 -11428917
## [2,] -11494710 -11494710 -11494710 -11494710 -11428917 -11428917 -11428917
## [3,] -11494710 -11494710 -11494710 -11494710 -11428917 -11428917 -11428917
## [4,] -11494710 -11494710 -11494710 -11494710 -11428917 -11428917 -11428917
```

```
## [5,] -11494710 -11494710 -11494710 -11494710 -11428917 -11428917 -11428917
## [6,] -11494710 -11494710 -11494710 -11494710 -11428917 -11428917 -11428917
##           [,8]      [,9]     [,10]     [,11]     [,12]     [,13]     [,14]
## [1,] -11428917 -11297592 -11166265 -11297592 -11297592 -11297592 -11297592
## [2,] -11428917 -11297592 -11297592 -11297592 -11297592 -11231799 -11231799
## [3,] -11428917 -11297592 -11297592 -11297592 -11297846 -11231799 -11231799
## [4,] -11428917 -11297592 -11297592 -11297592 -11297846 -11231799 -11231799
## [5,] -11428917 -11297592 -11297592 -11297592 -11297592 -11231799 -11231799
## [6,] -11428917 -11297592 -11297592 -11297592 -11297592 -11231799 -11231799
##          [,15]     [,16]     [,17]     [,18]     [,19]     [,20]     [,21]
## [1,] -11297592 -11297592 -11231799 -11231799 -11231799 -11231799 -11231799
## [2,] -11231799 -11166006 -11231799 -11231799 -11231799 -11231799 -11231799
## [3,] -11231799 -11231799 -11231799 -11231799 -11231799 -11231799 -11231799
## [4,] -11231799 -11362871 -11231799 -11231799 -11231799 -11231799 -11231799
## [5,] -11231799 -11231799 -11231799 -11231799 -11231799 -11231799 -11231799
## [6,] -11231799 -11231799 -11231799 -11231799 -11231799 -11231799 -11231799
##          [,22]     [,23]     [,24]     [,25]     [,26]     [,27]     [,28]
## [1,] -11231799 -11100727 -11100727 -11034934 -11034934 -11034934 -11034934
## [2,] -11231799 -11231799 -11100727 -11034934 -11034934 -11034934 -11034934
## [3,] -11231799 -11231799 -11231799 -11166006 -11166006 -11166006 -11034934
## [4,] -11231799 -11231799 -11231799 -11166006 -11166006 -11166006 -11166006
## [5,] -11231799 -11231799 -11231799 -11166006 -11166006 -11166006 -11166006
## [6,] -11231799 -11231799 -11231799 -11166006 -11166006 -11166006 -11166006
##          [,29]     [,30]     [,31]     [,32]     [,33]     [,34]     [,35]
## [1,] -11034934 -11034934 -11034934 -10904118 -11034934 -11034934 -11034934
## [2,] -11034934 -11034934 -11034934 -11034934 -11034934 -11034934 -11034934
## [3,] -11034934 -11034934 -11034934 -11034934 -10904118 -11034934 -11034934
## [4,] -11166006 -11166006 -11166006 -11166006 -10904118 -11034934 -11034934
## [5,] -11166006 -11166006 -11166006 -11166006 -11034934 -11034934 -11034934
## [6,] -11166006 -11166006 -11166006 -11166006 -11166006 -11034934 -11034934
##          [,36]     [,37]     [,38]     [,39]     [,40]     [,41]     [,42]
## [1,] -11034934 -11034934 -11034934 -11034934 -11034934 -11034934 -11034934
## [2,] -11034934 -11034934 -11034934 -11034934 -11034934 -11034934 -11034934
## [3,] -11034934 -11034934 -11034934 -11034934 -11034934 -11034934 -11034934
## [4,] -11034934 -11034934 -11034934 -11034934 -11034934 -11034934 -11034934
## [5,] -11034934 -11034934 -11034934 -11034934 -11034934 -11034934 -11034934
## [6,] -11034934 -11034934 -11034934 -11034934 -11034934 -11034934 -11034934
##          [,43]     [,44]     [,45]     [,46]     [,47]     [,48]     [,49]
## [1,] -11034934 -10969141 -10838325 -10838325 -10969141 -10969141 -10968886
## [2,] -10904118 -10838325 -10838325 -10838325 -10838325 -10969141 -10968886
## [3,] -10904118 -10772789 -10838325 -10838325 -10838325 -10838325 -11099958
## [4,] -10904118 -10838325 -10838325 -10838325 -10838325 -10969141 -11099958
## [5,] -11034934 -10969141 -10838325 -10838325 -10969141 -10969141 -10968886
## [6,] -11034934 -10969141 -10969141 -10838325 -10969141 -10969141 -10968886
##          [,50]     [,51]     [,52]     [,53]     [,54]     [,55]     [,56]
## [1,] -10968886 -10968886 -10968886 -10968886 -10968886 -10968886 -10903093
## [2,] -10968886 -10968886 -10968886 -10968886 -10968886 -10968886 -10903093
## [3,] -10968886 -10968886 -10968886 -10968886 -10968886 -10968886 -10837300
## [4,] -10968886 -10968886 -10968886 -10968886 -10968886 -10968886 -10706484
## [5,] -10968886 -10968886 -10968886 -10968886 -10968886 -10968886 -10706484
## [6,] -10968886 -10968886 -10968886 -10968886 -10968886 -10968886 -10706484
##          [,57]     [,58]     [,59]     [,60]     [,61]     [,62]     [,63]
## [1,] -10772277 -10772277 -10772277 -10706484 -10706484 -10706484 -10706484
## [2,] -10706484 -10706484 -10706484 -10706484 -10706484 -10706484 -10706484
```

```
## [3,]  -10706484 -10706484 -10706484 -10706484 -10706484 -10706484 -10706484
## [4,]  -10706484 -10706484 -10706484 -10706484 -10706484 -10706484 -10706484
## [5,]  -10706484 -10706484 -10706484 -10706484 -10706484 -10706484 -10706484
## [6,]  -10706484 -10706484 -10706484 -10706484 -10706484 -10706484 -10706484
##             [,64]      [,65]      [,66]      [,67]      [,68]      [,69]      [,70]
## [1,]  -10706484 -10706484 -10706484 -10706484 -10706484 -10706484 -10706484
## [2,]  -10706230 -10706484 -10706484 -10706484 -10706484 -10706484 -10706484
## [3,]  -10706230 -10706484 -10706484 -10706484 -10706484 -10706484 -10706484
## [4,]  -10706484 -10706484 -10706484 -10706484 -10706484 -10706484 -10706484
## [5,]  -10706484 -10706484 -10706484 -10706484 -10706484 -10706484 -10706484
## [6,]  -10706230 -10706484 -10706484 -10706484 -10706484 -10706484 -10706484
##             [,71]      [,72]      [,73]      [,74]      [,75]      [,76]      [,77]
## [1,]  -10706484 -10706230 -10705975 -10705976 -10705976 -10705976 -10705976
## [2,]  -10706484 -10706230 -10706230 -10706230 -10706230 -10706230 -10706230
## [3,]  -10706484 -10706484 -10706484 -10706484 -10706484 -10706484 -10706484
## [4,]  -10706484 -10706484 -10706484 -10706484 -10706484 -10706484 -10706484
## [5,]  -10706484 -10706484 -10706230 -10706230 -10706230 -10706230 -10706230
## [6,]  -10706484 -10706484 -10706484 -10706230 -10706230 -10706230 -10706230
##             [,78]      [,79]      [,80]      [,81]      [,82]      [,83]      [,84]
## [1,]  -10705976 -10705976 -10705976 -10640186 -10640187 -10640187 -10574393
## [2,]  -10706230 -10706230 -10705975 -10640694 -10640695 -10640695 -10640695
## [3,]  -10706484 -10706484 -10706484 -10706739 -10706739 -10706484 -10706739
## [4,]  -10706484 -10706484 -10706484 -10706739 -10706484 -10706484 -10706739
## [5,]  -10706230 -10706230 -10706230 -10837302 -10706230 -10706230 -10706484
## [6,]  -10706230 -10706230 -10706230 -10706230 -10706230 -10706230 -10706230
##             [,85]      [,86]      [,87]      [,88]      [,89]      [,90]      [,91]
## [1,]  -10574393 -10574393 -10574393 -10574393 -10574393 -10574647 -10574647
## [2,]  -10640695 -10640695 -10640440 -10574647 -10574647 -10574647 -10574647
## [3,]  -10772532 -10706741 -10640694 -10574902 -10574902 -10574902 -10574647
## [4,]  -10772532 -10772277 -10706230 -10574902 -10574647 -10574647 -10574647
## [5,]  -10706484 -10706484 -10705975 -10574902 -10574647 -10574647 -10574647
## [6,]  -10706230 -10706230 -10706230 -10640695 -10640440 -10640440 -10640440
##             [,92]      [,93]      [,94]      [,95]      [,96]      [,97]      [,98]
## [1,]  -10574647 -10574647 -10574393 -10574647 -10574647 -10574902 -10639929
## [2,]  -10574647 -10574647 -10574647 -10574647 -10574647 -10574902 -10639929
## [3,]  -10574647 -10574647 -10574902 -10640440 -10706233 -10640440 -10640186
## [4,]  -10574647 -10574647 -10574647 -10640440 -10640440 -10640440 -10640186
## [5,]  -10574393 -10574647 -10574647 -10640440 -10640440 -10640440 -10640186
## [6,]  -10574647 -10574647 -10574647 -10574647 -10640440 -10640440 -10640186
##             [,99]     [,100]     [,101]     [,102]     [,103]     [,104]     [,105]
## [1,]  -10574393 -10443830 -10443830 -10573881 -10837053  -9787431 -10711846
## [2,]  -10574393 -10574902 -10574647 -10639929 -10772026  -9722146 -11962164
## [3,]  -10639929 -10574647 -10574647 -10574393 -10509878 -10512171 -12750905
## [4,]  -10639929 -10574902 -10574902 -10574394 -10443577 -10511148 -13078073
## [5,]  -10574393 -10574901 -10574901 -10574394 -10573885 -10509360 -12353073
## [6,]  -10574647 -10640694 -10640694 -10640187 -10508607 -10903101 -11232554
##            [,106]     [,107]     [,108]     [,109]     [,110]     [,111]     [,112]
## [1,]  -13606714 -15575877 -15705414 -14458180 -13409610 -13280343 -13215326
## [2,]  -14526790 -15378245 -15178817 -13997120 -13079876 -12950353 -13213531
## [3,]  -14722624 -15245632 -14980669 -14193215 -13473093 -13342800 -13539929
## [4,]  -15116865 -15310905 -14914359 -14323769 -13865279 -13669449 -13735505
## [5,]  -14852924 -15180340 -14784049 -14388786 -14126904 -13865279 -13800260
## [6,]  -13734457 -14786870 -14522671 -14257709 -14388532 -13995831 -13602871
##            [,113]     [,114]     [,115]     [,116]     [,117]     [,118]     [,119]
```

```
## [1,] -12758124 -12956278 -13875837 -13542494 -13274683 -13930036 -13996859
## [2,] -12429159 -12955763 -13678456 -14728564 -13605959 -13734196 -14259256
## [3,] -12362596 -12758124 -13350515 -14402169 -14333282 -13670203 -14718519
## [4,] -12230493 -12691298 -12955497 -13548662 -14927484 -14001231 -14718519
## [5,] -12360016 -12558165 -12625758 -12430697 -14139517 -15055468 -14522428
## [6,] -12686150 -12687688 -12623957 -12363360 -13218415 -15517051 -14787147
##           [,120]     [,121]     [,122]     [,123]     [,124]     [,125]     [,126]
## [1,] -14063685 -13932874 -13999182 -14131027 -13999447 -14064471 -14194515
## [2,] -14325310 -14326085 -14195787 -13998928 -13801298 -13537614 -14062929
## [3,] -14717494 -14587195 -14326343 -13998414 -13866319 -13734734 -14062929
## [4,] -14979375 -14388529 -14062144 -13866314 -13537608 -13537354 -13801296
## [5,] -15176754 -14191404 -13798457 -13602881 -13471556 -13275206 -13539151
## [6,] -14783540 -14388783 -13797939 -13602107 -13537088 -13012544 -13342540
##           [,127]     [,128]     [,129]     [,130]     [,131]     [,132]     [,133]
## [1,] -13798978 -13732665 -14060850 -14125614 -13730857 -13798458 -13538126
## [2,] -13930823 -13733695 -13995572 -14322994 -13993771 -14061369 -13802060
## [3,] -13997900 -13931591 -14193210 -14388787 -14321706 -14390070 -14394442
## [4,] -13867343 -13932621 -14653252 -14782777 -14913329 -14981428 -15248714
## [5,] -13868116 -14196308 -14589002 -14980929 -15177015 -15244085 -15708488
## [6,] -13803351 -14329435 -14460500 -14851915 -15112252 -15178806 -15576900
##           [,134]     [,135]     [,136]     [,137]     [,138]     [,139]     [,140]
## [1,] -13540443 -13673313 -14396775 -15053931 -15381094 -15116119 -14984787
## [2,] -13607514 -13740132 -14398062 -15252598 -15711606 -15315560 -15117920
## [3,] -13937240 -13939048 -14531193 -14860160 -15319940 -15516031 -15055219
## [4,] -15054942 -14859889 -15058309 -14927756 -14993295 -15124108 -15386505
## [5,] -15646303 -15517560 -15518860 -15125395 -14796945 -14862738 -15256467
## [6,] -15647326 -15517813 -15453320 -15388306 -15060370 -14863252 -15060117
##           [,141]     [,142]     [,143]     [,144]     [,145]     [,146]     [,147]
## [1,] -15117918 -15383924 -15584134 -15585422 -15060109 -14994577 -14862997
## [2,] -15119720 -15187574 -15320193 -15715469 -15388303 -14993549 -14862224
## [3,] -14924402 -14794104 -15056767 -15779722 -15453326 -15190156 -14861452
## [4,] -15189125 -14925953 -14859650 -15516041 -15386765 -15189901 -15189387
## [5,] -15256208 -15320972 -15057031 -15253385 -14861450 -15058315 -15057801
## [6,] -15321748 -15452305 -15254153 -14991236 -14795657 -14927243 -15058061
##           [,148]     [,149]     [,150]     [,151]     [,152]     [,153]     [,154]
## [1,] -14993046 -15058071 -14926486 -14729366 -14795161 -14531994 -14334875
## [2,] -14992787 -15123091 -14991505 -14926485 -14861207 -14729882 -14598557
## [3,] -15057292 -15188109 -15188109 -15057807 -14926739 -14861207 -14795934
## [4,] -15122313 -15121799 -15187337 -15056523 -14860174 -14860693 -14992540
## [5,] -15319178 -15252616 -15252616 -15056266 -15056269 -15057300 -15254685
## [6,] -15319437 -15449995 -15383432 -15187337 -15056523 -15254418 -15386010
##           [,155]     [,156]     [,157]     [,158]     [,159]     [,160]     [,161]
## [1,] -14137757 -14071968 -13874332 -14005148 -13807769 -13413781 -13019286
## [2,] -14401184 -14401442 -14335395 -14071966 -13874587 -13874332 -13349020
## [3,] -14730402 -14598820 -14336163 -14204577 -14269602 -14269602 -13612192
## [4,] -14861474 -14730403 -14467234 -14204577 -14532774 -14664360 -13941152
## [5,] -15057824 -14664095 -14730403 -14533027 -14598821 -14599335 -14203809
## [6,] -15123356 -14861213 -14862243 -14927781 -14862246 -14731174 -14467235
##           [,162]     [,163]     [,164]     [,165]     [,166]     [,167]     [,168]
## [1,] -12886932 -11900038 -11703173 -10781557  -9331794  -9657410 -10904642
## [2,] -13282458 -13085081 -12492689 -12097931 -11241334 -10317142 -10051649
## [3,] -13480092 -13348251 -13085595 -12625558 -12427919 -11965566 -10448987
## [4,] -13743264 -13677216 -13414814 -13218204 -13152668 -12691605 -12360850
## [5,] -14005920 -13940643 -13611932 -13415322 -13547422 -13218206 -12429218
```

```
## [6,] -14532774 -14138531 -13743773 -13940382 -14005920 -13677985 -13022372
##            [,169]     [,170]     [,171]     [,172]     [,173]     [,174]     [,175]     [,176]
## [1,] -10970174 -10445379  -9526859  -8543066  -6902370  -5524588  -6447247  -6382490
## [2,] -10445377   -9723203  -9002836  -6770265  -4339030  -3486308  -2698600  -1712481
## [3,]   -9592911   -8804948  -6703958  -3944786  -2303324  -1054812   -594524   -924259
## [4,]   -8347235   -5059143  -3417680  -2039897  -1778792  -1385069  -1582450  -1911160
## [5,] -11312039   -6510714  -3749226  -3684988  -3620742  -3423877  -3489416  -3226244
## [6,] -11774885 -10526895  -6776462  -5262726  -5723799  -5527191  -5658777  -5526422
##            [,177]     [,178]     [,179]     [,180]
## [1,] -4475273 -2962548 -2042218 -2174318
## [2,]  -858967  -990813 -1122914 -1649004
## [3,]  -795745 -1058662 -1847410 -2504571
## [4,] -2242428 -2702465 -3490957 -4082837
## [5,] -3752595 -4081300 -4870555 -5396642
## [6,] -5920165 -5788832 -6381733 -7105454
```

```
quantile(img,0.3)
```

```
##       30%
## -15259150
```

```
quantile(img,0.8)
```

```
##       80%
## -10575416
```

```
# Unroll the matrix into a single vector
img_vector <- as.vector(img)
```

```
quantile(img_vector, 0.30)
```

```
##       30%
## -15259150
```

```
quantile(img_vector, 0.80)
```

```
##       80%
## -10575416
```

```
gdp <- read.csv("data/gdp.csv")
```

```
edu <- read.csv("data/edu.csv")
```

```
head(gdp)
```

X	Gross.domestic.product.2012	X.1	X.2	X.3	X.4	X.5	X.6	X.7	X.8
		NA				NA	NA	NA	NA
		NA		(millions of		NA	NA	NA	NA
	Ranking	NA	Economy	US dollars)		NA	NA	NA	NA
		NA				NA	NA	NA	NA
USA	1	NA	United States	16,244,600		NA	NA	NA	NA
CHN	2	NA	China	8,227,103		NA	NA	NA	NA

```
head(edu)
```

CountryCode	...																		
ABW	Aruba	High in-come: non-OECD	Latin Amer-ica & Caribbean	Aruban florin	2000		1995	NA	NA	NA	Special			NA	2008	NA	AW	AW	Aruba
ADO	Principality of An-dorra	High in-come: non-OECD	Europe & Cen-tral Asia	Euro	Register based		NA	NA	NA	General	Yes		NA	2006	NA	AD	AD	Andorra
AFG	Islamic State of Afghanistan	Low in-come	South Asia	Afghani afghani	1979	MICS, 2003	Fiscal year end: March 20; re-port-ing pe-riod for na-tional ac-counts data: FY.	2002/2003	VAB	NA	Act.	General GDDS		NA	2008	2000	AF	AF	Afghanistan
AGO	People's Re-pub-lic of An-gola	Lower mid-dle in-come	Sub-Saharan Africa	Angolan kwanza	1970	MICS, 2001, MIS, 2006/07	1997	NA	NA	VAB	1991 1996	2005	BPM5	Act. Special GDDS	DHS, 2000	1964 65	NA	1991	2000	AO	AO	Angola
ALB	Republic of Al-ba-nia	Upper mid-dle in-come	Europe & Cen-tral Asia	Albanian lek	2003	MICS, 2005	1996	1993	VAB	2005	BPM5	Act. General GDDS	DHS, 2005	Yes	1998	2003	2008	2000	AL	AL	Albania
ARE	United Arab Emi-rates	High in-come: non-OECD	Middle East & North Africa	U.A.E. dirham	2005		1995	NA	NA	VAB	NA	BPM4	General GDDS	Consolidated	1998	NA	2008	2005	AE	AE	United Arab Emi-rates

```
mergedData = merge(gdp,edu,by.x="X",by.y="CountryCode",all=TRUE)
head(mergedData)
```

X	Gross domestic product ...																				
	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

X	Gross.domestic.product.2012	...
NA	(millions of US dol- lars)	NA AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN A
Ranking	Angola	NA AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN A
NA	NA	AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN A
NA	NA	AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN A
NA	NA	AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN AN A

```r
names(gdp)[1] <- "CountryCode"
```

```r
names(gdp)
```

```
##  [1] "CountryCode"                "Gross.domestic.product.2012"
##  [3] "X.1"                        "X.2"
##  [5] "X.3"                        "X.4"
##  [7] "X.5"                        "X.6"
##  [9] "X.7"                        "X.8"
```

```r
names(edu)
```

```
##  [1] "CountryCode"
##  [2] "Long.Name"
##  [3] "Income.Group"
##  [4] "Region"
##  [5] "Lending.category"
##  [6] "Other.groups"
##  [7] "Currency.Unit"
##  [8] "Latest.population.census"
##  [9] "Latest.household.survey"
## [10] "Special.Notes"
## [11] "National.accounts.base.year"
## [12] "National.accounts.reference.year"
## [13] "System.of.National.Accounts"
## [14] "SNA.price.valuation"
## [15] "Alternative.conversion.factor"
## [16] "PPP.survey.year"
## [17] "Balance.of.Payments.Manual.in.use"
## [18] "External.debt.Reporting.status"
## [19] "System.of.trade"
## [20] "Government.Accounting.concept"
## [21] "IMF.data.dissemination.standard"
## [22] "Source.of.most.recent.Income.and.expenditure.data"
## [23] "Vital.registration.complete"
## [24] "Latest.agricultural.census"
## [25] "Latest.industrial.data"
## [26] "Latest.trade.data"
## [27] "Latest.water.withdrawal.data"
## [28] "X2.alpha.code"
## [29] "WB.2.code"
## [30] "Table.Name"
## [31] "Short.Name"
```

```r
merged <- merge(edu, gdp, by = "CountryCode")
```

```r
head(merged)
```

CountryCode	Long Name	Income Group	Currency Unit	Latest population census	...	X.2012
ABW	Aruba	High income: non-OECD	Aruban florin	2000	...	NA
ADO	Principality of Andorra	High income: non-OECD	Euro & Central Asia	Register based	...	NA
AFG	Islamic State of Afghanistan	Low income: South Asia	Afghan afghani	MICS 2002/2003	...	NA
AGO	People's Republic of Angola	Lower middle income: Sub-Saharan Africa	Angolan kwanza	MICS 1997, 2001, MIS, 2006/07	...	NA
ALB	Republic of Albania	Upper middle income: Europe & Central Asia	Albanian lek	MICS, 2005	...	NA
ARE	United Arab Emirates	High income: non-OECD Middle East & North Africa	U.A.E. dirham	2005	...	NA

```r
str(mergedData)
```

```
## 'data.frame':    340 obs. of  40 variables:
```

10

```
##  $ X                                            : chr  "" "" "" "" ...
##  $ Gross.domestic.product.2012                  : chr  "" "" "Ranking" "" ...
##  $ X.1                                          : logi  NA NA NA NA NA NA ...
##  $ X.2                                          : chr  "" "" "Economy" "" ...
##  $ X.3                                          : chr  "" "(millions of" "US dollars)" "" ...
##  $ X.4                                          : chr  "" "" "" "" ...
##  $ X.5                                          : logi  NA NA NA NA NA NA ...
##  $ X.6                                          : logi  NA NA NA NA NA NA ...
##  $ X.7                                          : logi  NA NA NA NA NA NA ...
##  $ X.8                                          : logi  NA NA NA NA NA NA ...
##  $ Long.Name                                    : chr  NA NA NA NA ...
##  $ Income.Group                                 : chr  NA NA NA NA ...
##  $ Region                                       : chr  NA NA NA NA ...
##  $ Lending.category                             : chr  NA NA NA NA ...
##  $ Other.groups                                 : chr  NA NA NA NA ...
##  $ Currency.Unit                                : chr  NA NA NA NA ...
##  $ Latest.population.census                     : chr  NA NA NA NA ...
##  $ Latest.household.survey                      : chr  NA NA NA NA ...
##  $ Special.Notes                                : chr  NA NA NA NA ...
##  $ National.accounts.base.year                  : chr  NA NA NA NA ...
##  $ National.accounts.reference.year             : int  NA NA NA NA NA NA NA NA NA NA ...
##  $ System.of.National.Accounts                  : int  NA NA NA NA NA NA NA NA NA NA ...
##  $ SNA.price.valuation                          : chr  NA NA NA NA ...
##  $ Alternative.conversion.factor                : chr  NA NA NA NA ...
##  $ PPP.survey.year                              : int  NA NA NA NA NA NA NA NA NA NA ...
##  $ Balance.of.Payments.Manual.in.use            : chr  NA NA NA NA ...
##  $ External.debt.Reporting.status               : chr  NA NA NA NA ...
##  $ System.of.trade                              : chr  NA NA NA NA ...
##  $ Government.Accounting.concept                : chr  NA NA NA NA ...
##  $ IMF.data.dissemination.standard              : chr  NA NA NA NA ...
##  $ Source.of.most.recent.Income.and.expenditure.data: chr  NA NA NA NA ...
##  $ Vital.registration.complete                  : chr  NA NA NA NA ...
##  $ Latest.agricultural.census                   : chr  NA NA NA NA ...
##  $ Latest.industrial.data                       : int  NA NA NA NA NA NA NA NA NA NA ...
##  $ Latest.trade.data                            : int  NA NA NA NA NA NA NA NA NA NA ...
##  $ Latest.water.withdrawal.data                 : int  NA NA NA NA NA NA NA NA NA NA ...
##  $ X2.alpha.code                                : chr  NA NA NA NA ...
##  $ WB.2.code                                    : chr  NA NA NA NA ...
##  $ Table.Name                                   : chr  NA NA NA NA ...
##  $ Short.Name                                   : chr  NA NA NA NA ...
```

```r
str(merged)
```

```
## 'data.frame':    224 obs. of  40 variables:
##  $ CountryCode                 : chr  "ABW" "ADO" "AFG" "AGO" ...
##  $ Long.Name                   : chr  "Aruba" "Principality of Andorra" "Islami
##  $ Income.Group                : chr  "High income: nonOECD" "High income: nonOE
##  $ Region                      : chr  "Latin America & Caribbean" "Europe & Cent
##  $ Lending.category            : chr  "" "" "IDA" "IDA" ...
##  $ Other.groups                : chr  "" "" "HIPC" "" ...
##  $ Currency.Unit               : chr  "Aruban florin" "Euro" "Afghan afghani" "A
##  $ Latest.population.census    : chr  "2000" "Register based" "1979" "1970" ...
##  $ Latest.household.survey     : chr  "" "" "MICS, 2003" "MICS, 2001, MIS, 2006,
##  $ Special.Notes               : chr  "" "" "Fiscal year end: March 20; reportin
##  $ National.accounts.base.year : chr  "1995" "" "2002/2003" "1997" ...
```

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## $ National.accounts.reference.year                 : int  NA NA NA NA 1996 NA NA 1996 NA NA ...
## $ System.of.National.Accounts                       : int  NA NA NA NA 1993 NA 1993 1993 NA NA ...
## $ SNA.price.valuation                               : chr  "" "" "VAB" "VAP" ...
## $ Alternative.conversion.factor                     : chr  "" "" "" "1991-96" ...
## $ PPP.survey.year                                   : int  NA NA NA 2005 2005 NA 2005 2005 NA NA ...
## $ Balance.of.Payments.Manual.in.use                 : chr  "" "" "" "BPM5" ...
## $ External.debt.Reporting.status                    : chr  "" "" "Actual" "Actual" ...
## $ System.of.trade                                   : chr  "Special" "General" "General" "Special" .
## $ Government.Accounting.concept                     : chr  "" "" "Consolidated" "" ...
## $ IMF.data.dissemination.standard                   : chr  "" "" "GDDS" "GDDS" ...
## $ Source.of.most.recent.Income.and.expenditure.data: chr  "" "" "" "IHS, 2000" ...
## $ Vital.registration.complete                       : chr  "" "Yes" "" "" ...
## $ Latest.agricultural.census                        : chr  "" "" "" "1964-65" ...
## $ Latest.industrial.data                            : int  NA NA NA NA 2005 NA 2001 NA NA NA ...
## $ Latest.trade.data                                 : int  2008 2006 2008 1991 2008 2008 2008 2008 N
## $ Latest.water.withdrawal.data                      : int  NA NA 2000 2000 2000 2005 2000 2000 NA 19
## $ X2.alpha.code                                     : chr  "AW" "AD" "AF" "AO" ...
## $ WB.2.code                                         : chr  "AW" "AD" "AF" "AO" ...
## $ Table.Name                                        : chr  "Aruba" "Andorra" "Afghanistan" "Angola"
## $ Short.Name                                        : chr  "Aruba" "Andorra" "Afghanistan" "Angola"
## $ Gross.domestic.product.2012                       : chr  "161" "" "105" "60" ...
## $ X.1                                               : logi  NA NA NA NA NA NA ...
## $ X.2                                               : chr  "Aruba" "Andorra" "Afghanistan" "Angola"
## $ X.3                                               : chr  " 2,584 " ".." " 20,497 " " 114,147 " ...
## $ X.4                                               : chr  "" "" "" "" ...
## $ X.5                                               : logi  NA NA NA NA NA NA ...
## $ X.6                                               : logi  NA NA NA NA NA NA ...
## $ X.7                                               : logi  NA NA NA NA NA NA ...
## $ X.8                                               : logi  NA NA NA NA NA NA ...
```