

exercise_2_code+output.R

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```
library(tidyverse)

## -- Attaching packages ----- tidyverse
1.2.1 --

## v ggplot2 3.1.0      v purrr  0.3.0
## v tibble  2.0.1      v dplyr  0.7.8
## v tidyr   0.8.2      v stringr 1.3.1
## v readr   1.3.1      v forcats 0.3.0

## -- Conflicts -----
tidyverse_conflicts() --
## x dplyr::filter() masks stats::filter()
## x dplyr::lag()    masks stats::lag()

library(tibble)
library(ggplot2)
library(dplyr)

times <- read.csv("timesData.csv")
timesdf <- data.frame(times)

names(timesdf)

## [1] "world_rank"          "university_name"
## [3] "country"             "teaching"
## [5] "international"       "research"
## [7] "citations"           "income"
## [9] "total_score"         "num_students"
## [11] "student_staff_ratio" "international_students"
## [13] "female_male_ratio"  "year"

shanghai <- read.csv("shanghaiData.csv")
shangaidf <- data.frame(shanghai)

names(shangaidf)

## [1] "world_rank"          "university_name" "national_rank"
## [4] "total_score"         "alumni"          "award"
## [7] "hici"                "ns"              "pub"
## [10] "pcp"                 "year"
```

```
cwur <- read.csv("cwurData.csv")
cwurdf <- data.frame(cwur)
```

```
names(cwurdf)
```

```
## [1] "world_rank"      "institution"      "country"
## [4] "national_rank"   "quality_of_education" "alumni_employment"
## [7] "quality_of_faculty" "publications"      "influence"
## [10] "citations"       "broad_impact"      "patents"
## [13] "score"           "year"
```

#comparing the mean of the total scores from three datasets(cwur, shangai and times)

#used to determine the world ranking of universities in the year 2014.

```
timesfilter <- timesdf %>% filter(year == "2014")
timesnumeric <- as.numeric(timesfilter$total_score)
timesomit <- na.omit(timesnumeric)
timesmean <- mean(timesomit)
timesmean
```

```
## [1] 71.3275
```

```
cwurfilter <- cwurdf %>% filter(year == "2014")
cwurnumeric <- as.numeric(cwurfilter$score)
cwuomit <- na.omit(cwurnumeric)
cwurmean <- mean(cwuomit)
cwurmean
```

```
## [1] 47.27141
```

```
shangaifilter <- shangaidf %>% filter(year == "2014")
shangainumeric <- as.numeric(shangaifilter$total_score)
shangaiomit <- na.omit(shangainumeric)
shangaimean <- mean(shangaiomit)
shangaimean
```

```
## [1] 36.172
```