Assignment-1

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## Part-1 - pollutantmean Function

print(R.version.string)

## [1] "R version 3.6.1 (2019-07-05)"

source("pollutantmean.R")  
pollutantmean("specdata", "sulfate", 1:10)

## [1] 4.064128

pollutantmean("specdata", "nitrate", 70:72)

## [1] 1.706047

pollutantmean("specdata", "nitrate", 23)

## [1] 1.280833

## Part-2 - complete Function

source("complete.R")  
complete("specdata", 1)

## id nobs  
## 1 1 117

complete("specdata", c(2, 4, 8, 10, 12))

## id nobs  
## 1 2 1041  
## 2 4 474  
## 3 8 192  
## 4 10 148  
## 5 12 96

complete("specdata", 30:25)

## id nobs  
## 1 30 932  
## 2 29 711  
## 3 28 475  
## 4 27 338  
## 5 26 586  
## 6 25 463

complete("specdata", 3)

## id nobs  
## 1 3 243

## Part-3 - Correlation function

print(R.version.string)

## [1] "R version 3.6.1 (2019-07-05)"

source("corr.R")  
source("complete.R")  
cr <- corr("specdata", 150)  
head(cr)

## [1] -0.01895754 -0.14051254 -0.04389737 -0.06815956 -0.12350667 -0.07588814

summary(cr)

## Min. 1st Qu. Median Mean 3rd Qu. Max.   
## -0.21057 -0.04999 0.09463 0.12525 0.26844 0.76313

cr <- corr("specdata", 400)  
head(cr)

## [1] -0.01895754 -0.04389737 -0.06815956 -0.07588814 0.76312884 -0.15782860

summary(cr)

## Min. 1st Qu. Median Mean 3rd Qu. Max.   
## -0.17623 -0.03109 0.10021 0.13969 0.26849 0.76313

cr <- corr("specdata", 5000)  
summary(cr)

## Min. 1st Qu. Median Mean 3rd Qu. Max.   
##

length(cr)

## [1] 0

cr <- corr("specdata")  
summary(cr)

## Min. 1st Qu. Median Mean 3rd Qu. Max.   
## -1.00000 -0.05282 0.10718 0.13684 0.27831 1.00000

length(cr)

## [1] 323