Class Exercise 13 Oct 2019

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Import all the data sets given into a list

```
myFiles<- list.files(path="Streets_of_London", pattern="*.csv", full.names=TRUE)
myFiles
```

```
## [1] "Streets_of_London/2019-01-city-of-london-street.csv"
## [2] "Streets_of_London/2019-02-city-of-london-street.csv"
## [3] "Streets_of_London/2019-03-city-of-london-street.csv"
## [4] "Streets_of_London/2019-04-city-of-london-street.csv"
## [5] "Streets_of_London/2019-05-city-of-london-street.csv"
## [6] "Streets_of_London/2019-06-city-of-london-street.csv"
## [7] "Streets_of_London/2019-07-city-of-london-street.csv"
## [8] "Streets_of_London/2019-08-city-of-london-street.csv"
```

Use the function lapply (list apply) to apply the read.csv function to the imported files

```
csvData <- lapply(myFiles, read.csv)
#csvData
```

Bind the data into a single csv file

```
luckdata<- do.call("rbind", csvData)
#luckdata
crimes <- 6323
```

Parse data into data frame

```
luckdata2<- data.frame(luckdata)
#luckdata2
```

Question 1.

```
## P(A)=r/n
## Probability of crime happening in Aldgate

nearAldgate<-luckdata2[luckdata2$Location=="On or near Aldgate",]
#nearAldgate

probnearAldgate <- 73/crimes
probnearAldgate
```
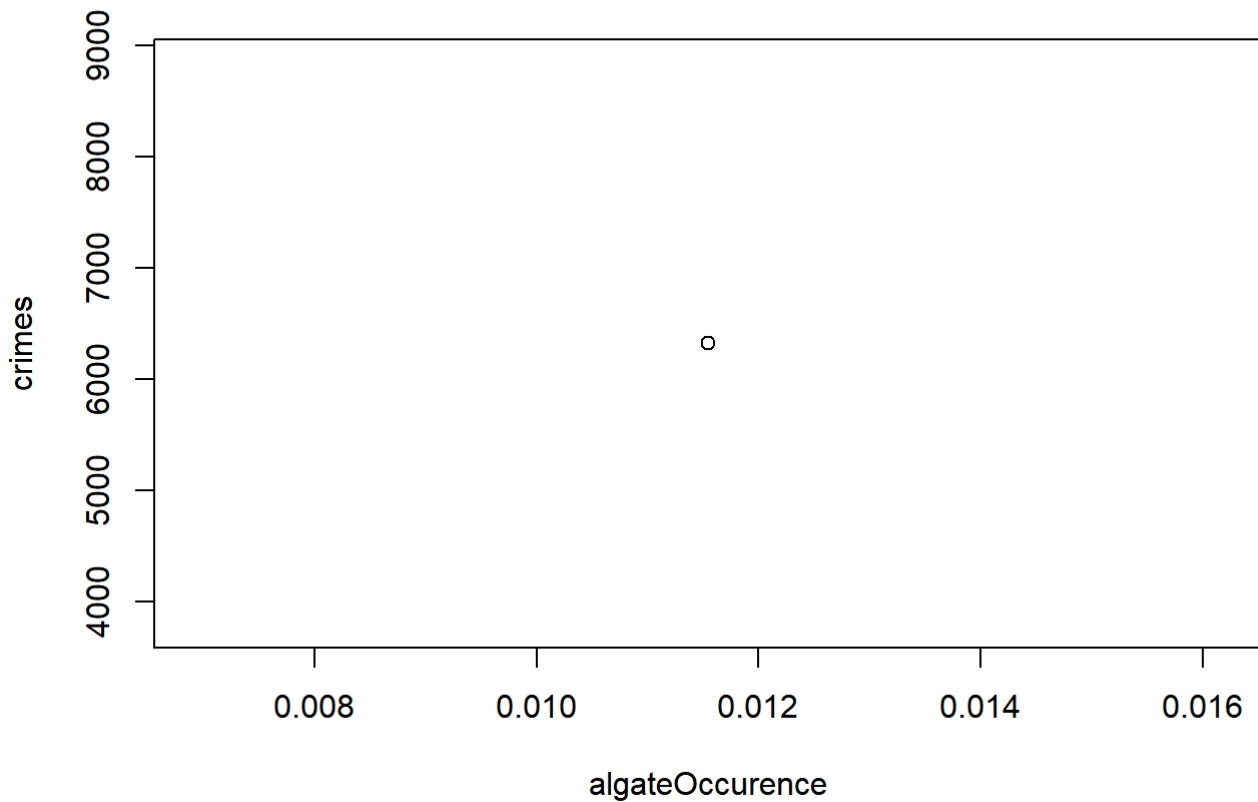
```
## [1] 0.01154515
```

```
algateOccurence= probnearAldgate

## plot showing crimes against Aldgate

plot(algateOccurence,crimes)

# On_or_near_Aldgate 95% confidence interval in R outcome

library(Rmisc)
```

```
## Loading required package: lattice
```

```
## Loading required package: plyr
```



```
rowslenght<- nrow(nearAldgate)
rowslenght
```

```
## [1] 73
```

```
CI(1:rowslenght, ci=0.95)
```

```
##     upper     mean    lower
## 41.95032 37.00000 32.04968
```

Question 2.

```
## % of violence_sexualcrimes in London

vandsexoffences <- luckdata2[luckdata2$Crime.type=="Violence and sexual offences",]
#vandsexoffences

vso=833
vandsexoffencespercent <- vso/crimes*100
vandsexoffencespercent
```
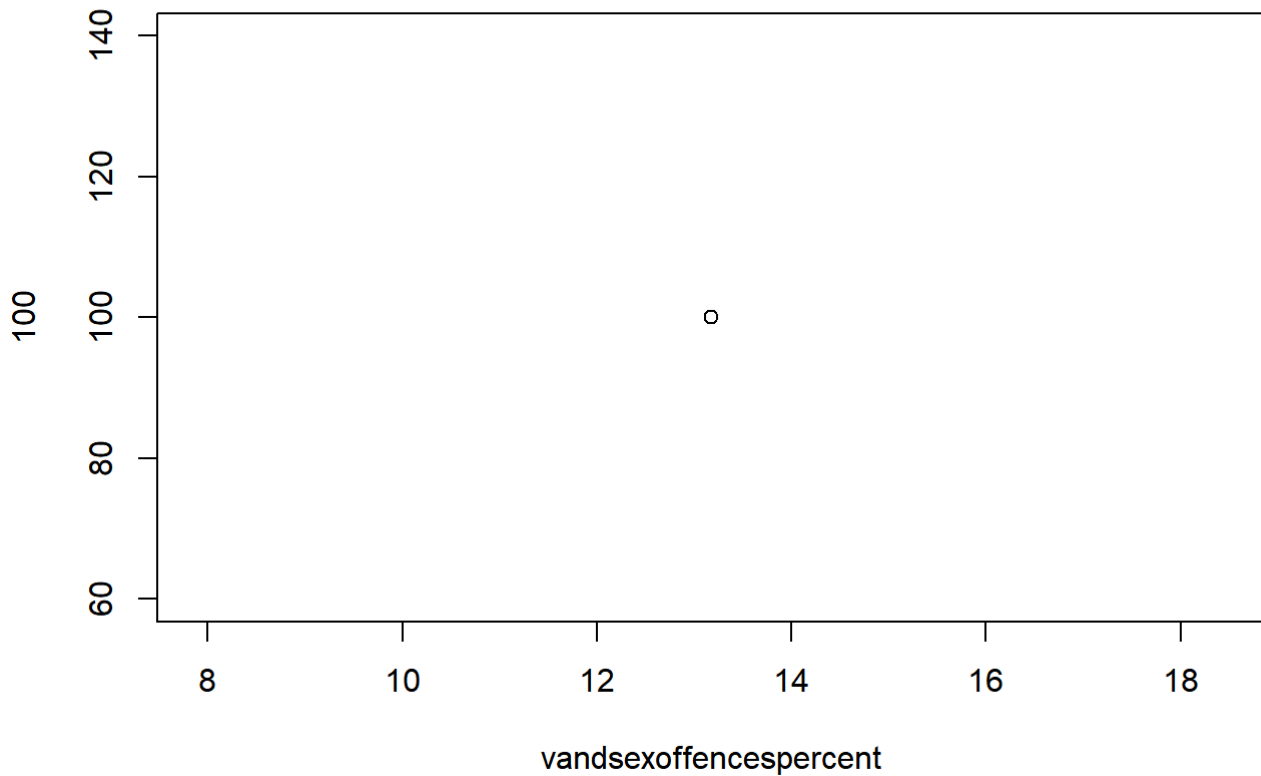
```
## [1] 13.17413
```

```
## violence_and_sexual_offences against crime plot

plot(vandsexoffencespercent,100)
```



```
# 95% confidence interval of violence_and_sexual_offences caculation

library(Rmisc)
vsorowslenght<- nrow(vandsexoffences)
vsorowslenght
```

```
## [1] 833
```
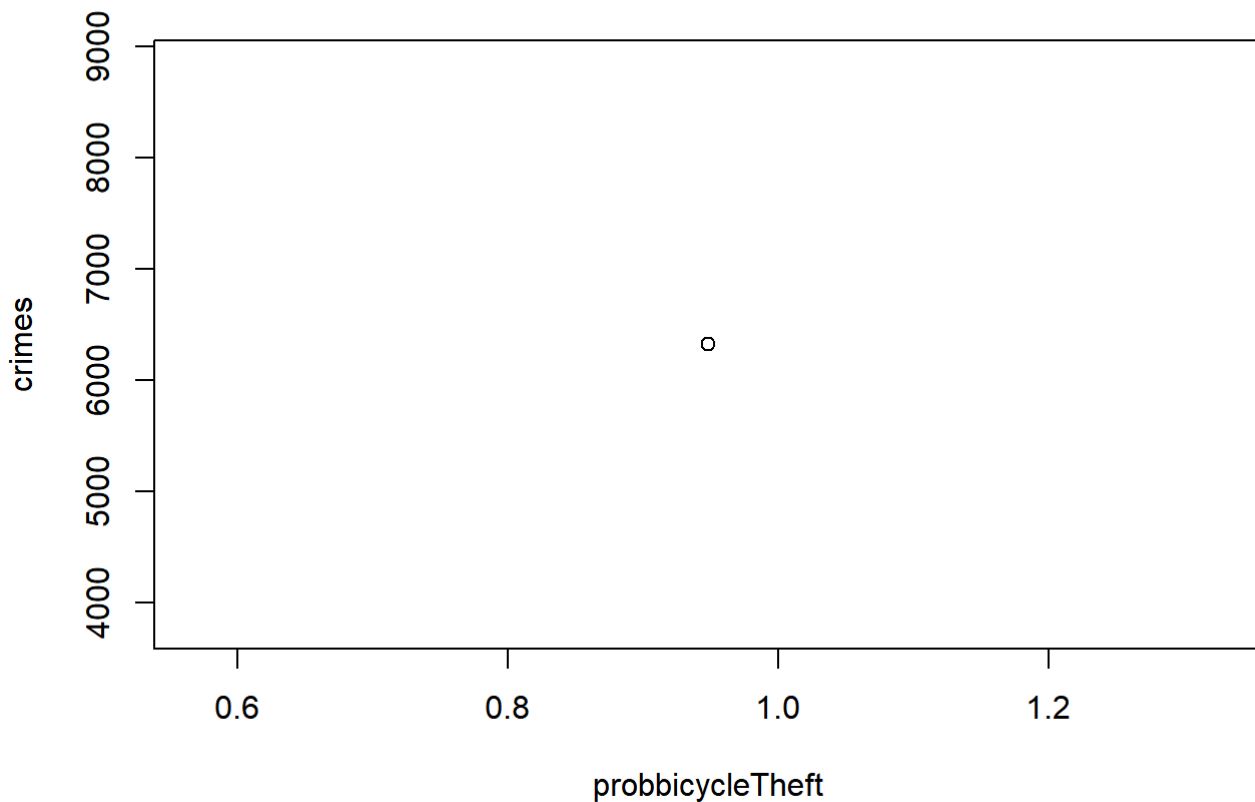
```
CI(1:vsorowslenght, ci=0.95)
```

```
##    upper    mean    lower
## 433.3634 417.0000 400.6366
```

Question 3.

```
## Prob of no suspect in bicycle_theft
bicycleTheft<- luckdata2[luckdata2$Crime.type!="Bicycle theft",]
#bicycleTheft
probbicycleTheft <- 5995/crimes
probbicycleTheft
```

```
## [1] 0.9481259
```

```
## no_bicycle_theft against crime plot
plot(probbicycleTheft,crimes)
```



```
# 95% confidence interval in R no_bicycle_theft calculation
library(Rmisc)
rowslenght3<- nrow(bicycleTheft)
CI(1:rowslenght3, ci=0.95)
```

```
##    upper    mean    lower
## 3041.82 2998.00 2954.18
```

Question 4.

```
## Robbery prob in carthusian street
carthursianrobbery <- luckdata2[(luckdata2$Crime.type=="Robbery")&(luckdata2$Location=="On or
near Carthusian Street"), ]
carthursianrobbery
```

```
##  [1] Crime.ID              Month                 Reported.by
##  [4] Falls.within          Longitude             Latitude
##  [7] Location              LSOA.code             LSOA.name
## [10] Crime.type            Last.outcome.category Context
## <0 rows> (or 0-length row.names)
```

```
## Zero occurrence of Robbery on Carthusian Street resulting in a zero probability
```