NS125 PCW Session 6

Hello world, let's explore London's crime!

Merging all packages into 1:

```
library(dplyr)

#get list of files ending in csv in directory root
dir(".", pattern='.*[.]csv', recursive = TRUE, full.names = TRUE) %>%
  # read files into data frames
  lapply(FUN = read.csv) %>%
  # bind all data frames into a single data frame
  bind_rows %>%
  # write into a single csv file
  write.csv("all.csv")
df <- read.csv("all.csv", header=TRUE)
head(df)
```

```
##   X.2                                                              Crime.ID   Month
## 1   1                                                                       2016-01
## 2   2                                                                       2016-01
## 3   3                                                                       2016-01
## 4   4                                                                       2016-01
## 5   5 06ad59a65137a97eb1e9e979f1eb96f0d70935e584b3d1ac489847c7c684e5b4 2016-01
## 6   6                                                                       2016-01
##             Reported.by          Falls.within Longitude Latitude
## 1 City of London Police City of London Police -0.112422 51.51538
## 2 City of London Police City of London Police -0.114954 51.51863
## 3 City of London Police City of London Police -0.111497 51.51823
## 4 City of London Police City of London Police -0.114954 51.51863
## 5 City of London Police City of London Police -0.113767 51.51737
## 6 City of London Police City of London Police -0.097736 51.52021
##                                  Location LSOA.code           LSOA.name
## 1                    On or near Star Yard E01000914         Camden 028B
## 2              On or near Brownlow Street E01000914         Camden 028B
## 3            On or near Pedestrian Subway E01000914         Camden 028B
## 4              On or near Brownlow Street E01000914         Camden 028B
## 5              On or near Stone Buildings E01000914         Camden 028B
## 6 On or near Conference/Exhibition Centre E01000001 City of London 001A
##              Crime.type                         Last.outcome.category Context
## 1 Anti-social behaviour                                                    NA
## 2 Anti-social behaviour                                                    NA
## 3 Anti-social behaviour                                                    NA
## 4 Anti-social behaviour                                                    NA
## 5           Other theft Investigation complete; no suspect identified      NA
## 6 Anti-social behaviour                                                    NA
##   X.1  X
## 1  NA NA
## 2  NA NA
```

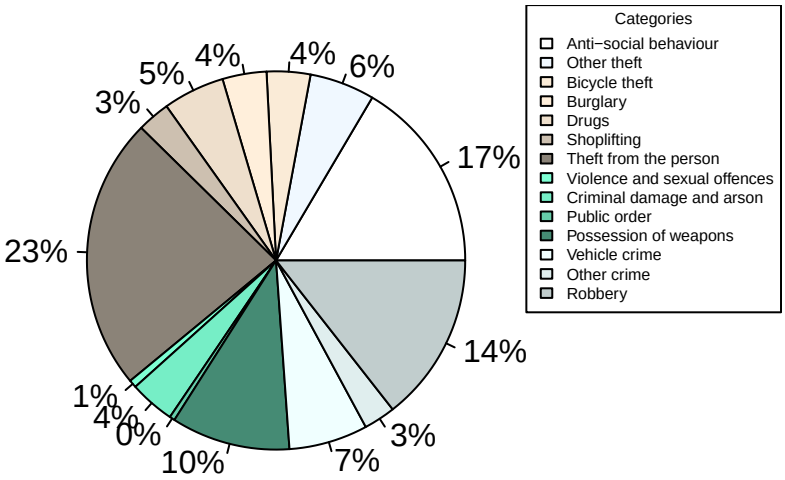
```
## 3  NA NA
## 4  NA NA
## 5  NA NA
## 6  NA NA
```

Cleaning the data

```
clean <- mutate(df,Month = as.Date(paste(Month,"-01",sep=""), format="%Y-%m-%d"))
clean$Crime.type <- as.factor(df$Crime.type)
clean$LSOA.code <- as.factor(df$LSOA.code)
clean$LSOA.name <- as.factor(df$LSOA.code)
head(clean)
```

```
##   X.2                                                          Crime.ID
## 1   1
## 2   2
## 3   3
## 4   4
## 5   5 06ad59a65137a97eb1e9e979f1eb96f0d70935e584b3d1ac489847c7c684e5b4
## 6   6
##        Month           Reported.by          Falls.within Longitude Latitude
## 1 2016-01-01 City of London Police City of London Police -0.112422 51.51538
## 2 2016-01-01 City of London Police City of London Police -0.114954 51.51863
## 3 2016-01-01 City of London Police City of London Police -0.111497 51.51823
## 4 2016-01-01 City of London Police City of London Police -0.114954 51.51863
## 5 2016-01-01 City of London Police City of London Police -0.113767 51.51737
## 6 2016-01-01 City of London Police City of London Police -0.097736 51.52021
##                                 Location LSOA.code LSOA.name
## 1                    On or near Star Yard E01000914 E01000914
## 2              On or near Brownlow Street E01000914 E01000914
## 3            On or near Pedestrian Subway E01000914 E01000914
## 4              On or near Brownlow Street E01000914 E01000914
## 5              On or near Stone Buildings E01000914 E01000914
## 6 On or near Conference/Exhibition Centre E01000001 E01000001
##              Crime.type                         Last.outcome.category Context
## 1 Anti-social behaviour                                                    NA
## 2 Anti-social behaviour                                                    NA
## 3 Anti-social behaviour                                                    NA
## 4 Anti-social behaviour                                                    NA
## 5           Other theft Investigation complete; no suspect identified      NA
## 6 Anti-social behaviour                                                    NA
##   X.1  X
## 1  NA NA
## 2  NA NA
## 3  NA NA
## 4  NA NA
## 5  NA NA
## 6  NA NA
```

```
pie(table(clean$Crime.type), labels = paste(round(prop.table(table(clean$Crime.type))*100), "%", sep =
legend("topright", legend = unique(clean$Crime.type), col = ,
fill = colors(15), title = "Categories", cex = 0.5)
```


Categories
Anti−social behaviour
Other theft
Bicycle theft
Burglary
Drugs
Shoplifting
Theft from the person
Violence and sexual offences
Criminal damage and arson
Public order
Possession of weapons
Vehicle crime
Other crime
Robbery
17%
14%
3%
7%
10%
0%
4%
1%
23%
3%
5%
4%
4%
6%