2. Import the dataset into R

TAA petition Dataset obtained from the below website [https://www.dol.gov/agencies/eta/tradeact/data/petitions-determinations##]

```
library(readxl)
Petition <- read_excel('C:/Users/rotim/Documents/R/PetitionData_Revised.xlsx')
```

3. Print out descriptive statistics for a selection of quantitative and categorical variables. Descriptive statistics of quantitative variables Inv.Days & Est.Workers.Obj

```
summary(Petition$Inv.Days)
```

```
##    Min. 1st Qu.  Median    Mean 3rd Qu.    Max.    NA's
##   36.00   44.00   55.50  126.75   58.25 1041.00       2
```

```
summary(Petition$Est.Workers.Obj)
```

```
##    Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0.00   86.75  199.50  363.50  255.25 2900.00
```

Descriptive statistics of categorical variables State & City

```
summary(Petition$State)
```

```
##    Length     Class      Mode
##        18 character character
```

```
table(Petition$State)
```

```
##
## AR IL KY MA ME MO NH NY PA TN UT WV
##  1  1  1  3  2  1  1  1  2  3  1  1
```

```
prop.table(table(Petition$State))
```

```
##
##         AR         IL         KY         MA         ME         MO         NH
## 0.05555556 0.05555556 0.05555556 0.16666667 0.11111111 0.05555556 0.05555556
##         NY         PA         TN         UT         WV
## 0.05555556 0.11111111 0.16666667 0.05555556 0.05555556
```

```
summary(Petition$City)
```

```
##    Length     Class      Mode
##        18 character character
```

```
table(Petition$City)
```

```
##
##        BINGHAM        EVERETT     GREENVILLE JEFFERSON CITY       LAWRENCE
##              1              1              1              2              1
##         LISBON     LOUISVILLE           LYNN        MILFORD    MOUNTAINTOP
##              1              1              1              1              1
##        NEWPORT        PALMYRA    PARKERSBURG   PHILADELPHIA          SALEM
##              1              1              1              1              1
##          UTICA       WINTHROP
##              1              1
```

```
prop.table(table(Petition$City))
```

```
##
##        BINGHAM        EVERETT     GREENVILLE JEFFERSON CITY       LAWRENCE
##     0.05555556     0.05555556     0.05555556     0.11111111     0.05555556
##         LISBON     LOUISVILLE           LYNN        MILFORD    MOUNTAINTOP
##     0.05555556     0.05555556     0.05555556     0.05555556     0.05555556
##        NEWPORT        PALMYRA    PARKERSBURG   PHILADELPHIA          SALEM
##     0.05555556     0.05555556     0.05555556     0.05555556     0.05555556
##          UTICA       WINTHROP
##     0.05555556     0.05555556
```

4. Transform at least one variable. It doesn't matter what the transformation is. Transformation of variable SIC to integer and Zip to character

```
 Petition <- read_excel('C:/Users/rotim/Documents/R/PetitionData_Revised.xlsx')
Transform_SIC <- as.integer(Petition$SIC)
Transform_SIC
```

```
##  [1] 2241 1021 2295 2435 3914 3144 3674 3662 3651 3651 3131 3144 3622 3144 3144
## [16] 3357 3144 3144
```

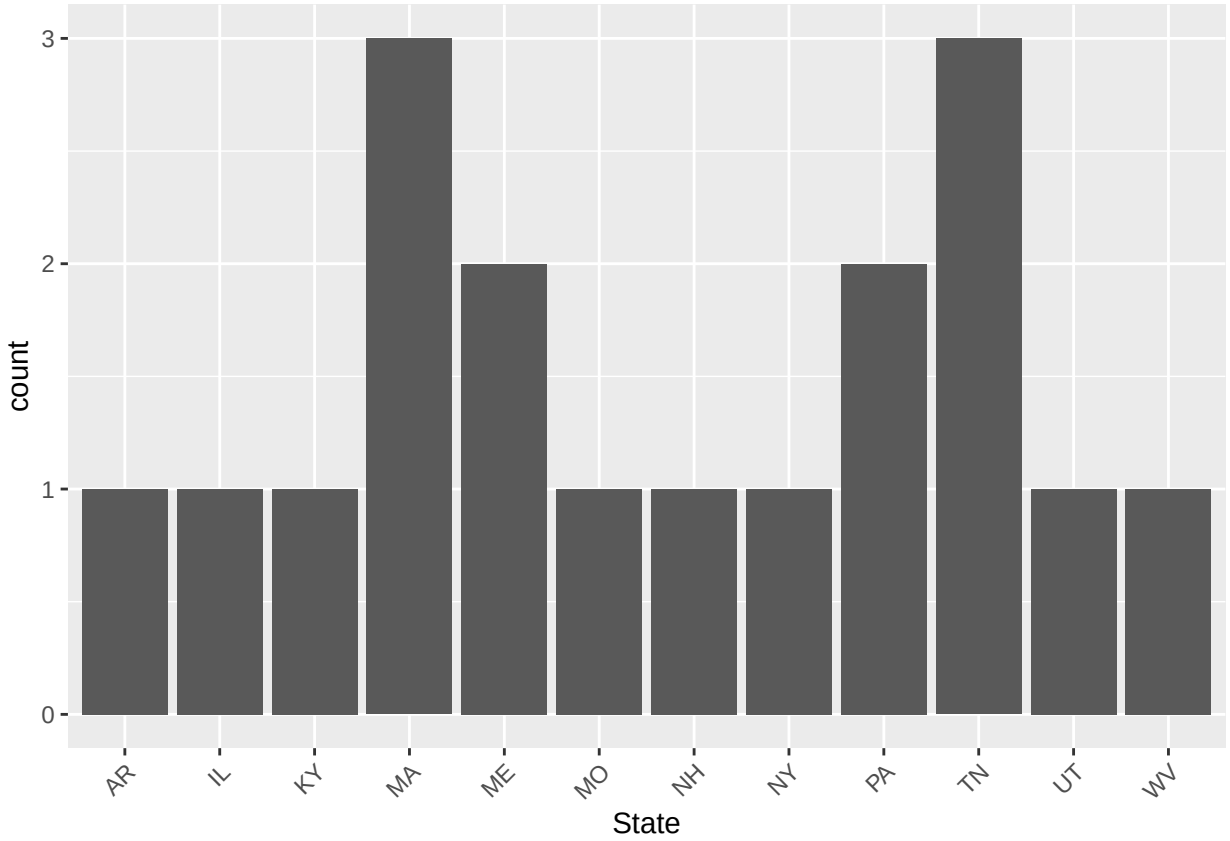
```
Transform_Zip <- as.character(Petition$Zip)
Transform_Zip
```

```
##  [1] "19103" "84707" "04364" "04920" "13503" "03585" "18707" "37760" "37760"
## [10] "37743" "01843" "72112" "19105" "02149" "01903" "40225" "62881" "63104"
```

5. Plot at least one quantitative variable, and one scatterplot

Bar graph of the State variable

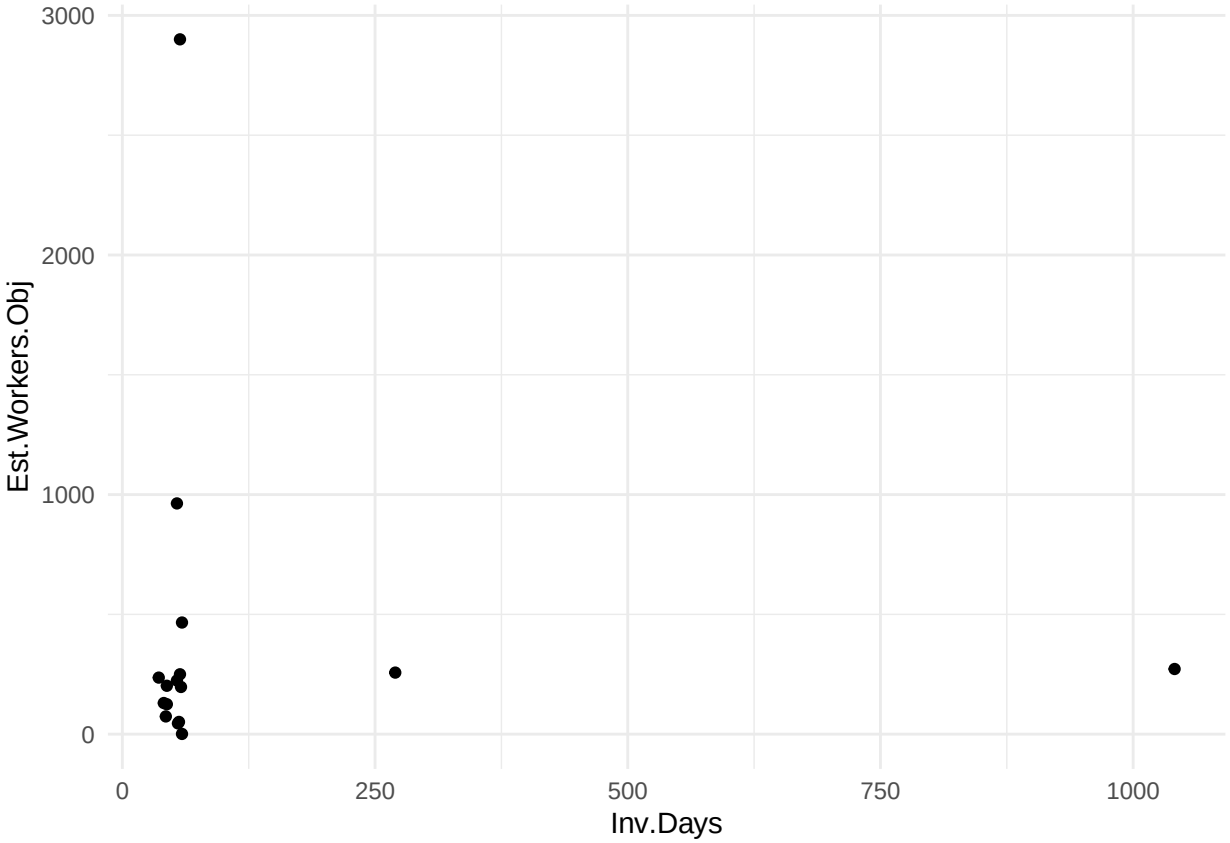
```
library("ggplot2")
ggplot(Petition, aes(x= State))+
  geom_bar() +
  theme(axis.text.x = element_text(angle = 45, hjust = 1))
```



Scatter plot of the Inv.Days and Est.Workers.Obj variables

```
library("ggplot2")
ggplot(Petition, aes(x= Inv.Days, y=Est.Workers.Obj ))+
  geom_point() +
  theme_minimal()
```

```
## Warning: Removed 2 rows containing missing values (‘geom_point()‘).
```


3000
2000
1000
0
Est.Workers.Obj
0
250
500
750
1000
Inv.Days