DSC640_ASmbaraju_wk3_4_Charts

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import libraries

```
library(ggplot2)
library(reshape2)
library("dplyr")
```

```
##
## Attaching package: 'dplyr'
```

```
## The following objects are masked from 'package:stats':
##
##     filter, lag
```

```
## The following objects are masked from 'package:base':
##
##     intersect, setdiff, setequal, union
```

```
library(numbers)
```

```
## Warning: package 'numbers' was built under R version 4.0.5
```

```
library("treemap")
```

```
## Warning: package 'treemap' was built under R version 4.0.5
```

loading expenditure file

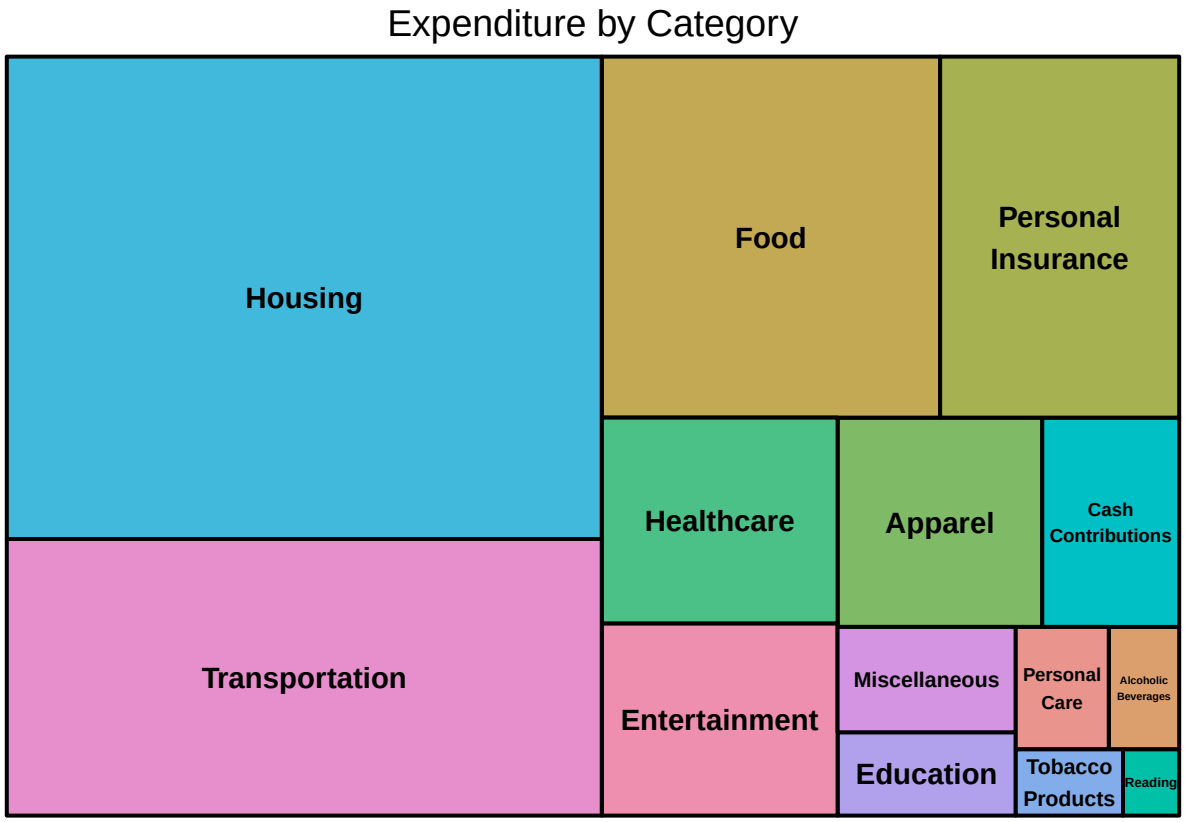
```
expenditures <- read.table(file = "C:/BU/DSC640/ex2-2/expenditures.txt", header = TRUE, sep = '\t', dec

head(expenditures)
```

```
##   year            category expenditure sex
## 1 2008                Food        6443   1
## 2 2008 Alcoholic Beverages         444   1
## 3 2008             Housing       17109   1
## 4 2008             Apparel        1801   1
## 5 2008      Transportation        8604   1
## 6 2008          Healthcare        2976   1
```

Tree maps

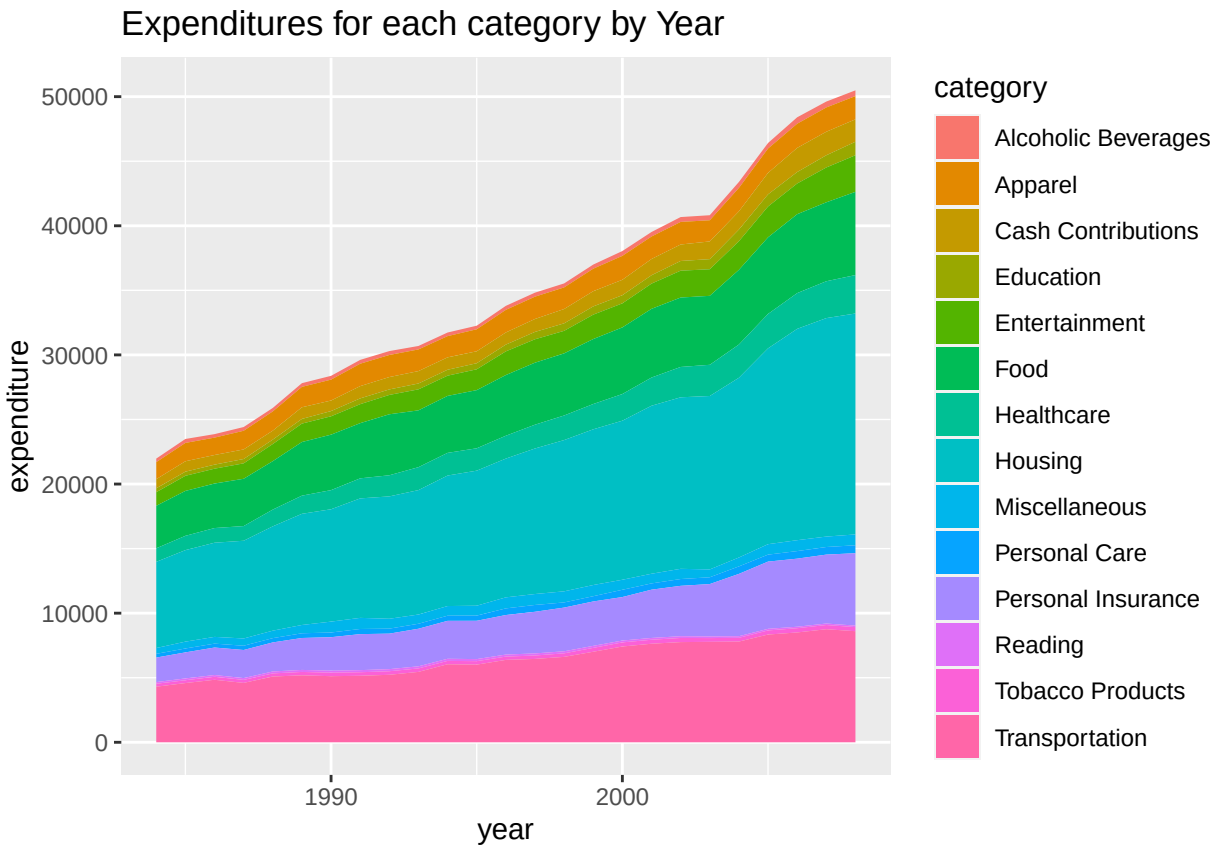
```
treemap::treemap(expenditures,index = c('category'),
                 vSize = 'expenditure',
```

```
                title = 'Expenditure by Category')
```



Stacked Area Chart

```
# Stacked area charts
Stack_Area_Plt <- ggplot(expenditures, aes(x=year, y=expenditure, fill=category)) +
  geom_area() +
  ggtitle('Expenditures for each category by Year')
Stack_Area_Plt
```



Area Chart

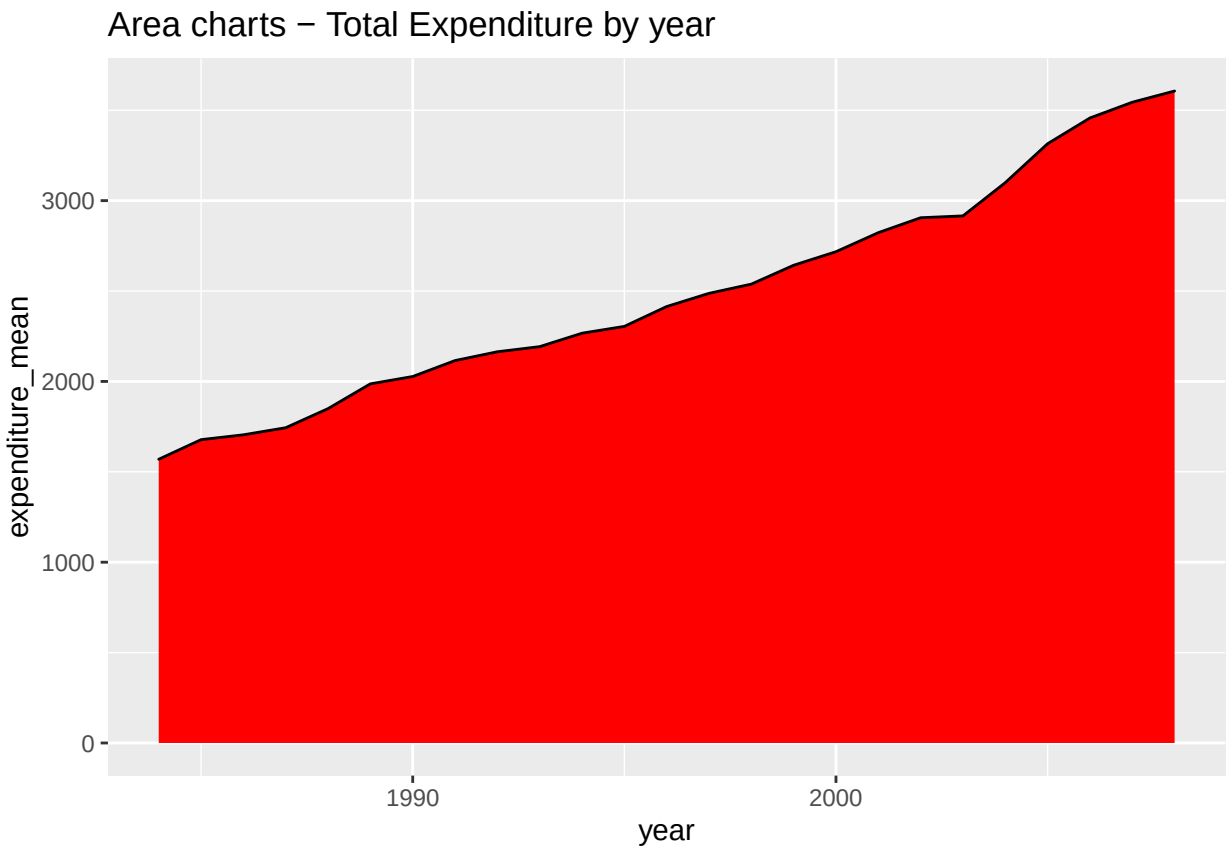
```
library(plyr)
```

```
## ------------------------------------------------------------------------------
## You have loaded plyr after dplyr - this is likely to cause problems.
## If you need functions from both plyr and dplyr, please load plyr first, then dplyr:
## library(plyr); library(dplyr)
## ------------------------------------------------------------------------------
##
## Attaching package: 'plyr'
## The following objects are masked from 'package:dplyr':
##
##     arrange, count, desc, failwith, id, mutate, rename, summarise,
##     summarize
```

```
mean_value <- ddply(expenditures, "year", summarise, expenditure_mean=mean(expenditure))
head(mean_value)
```

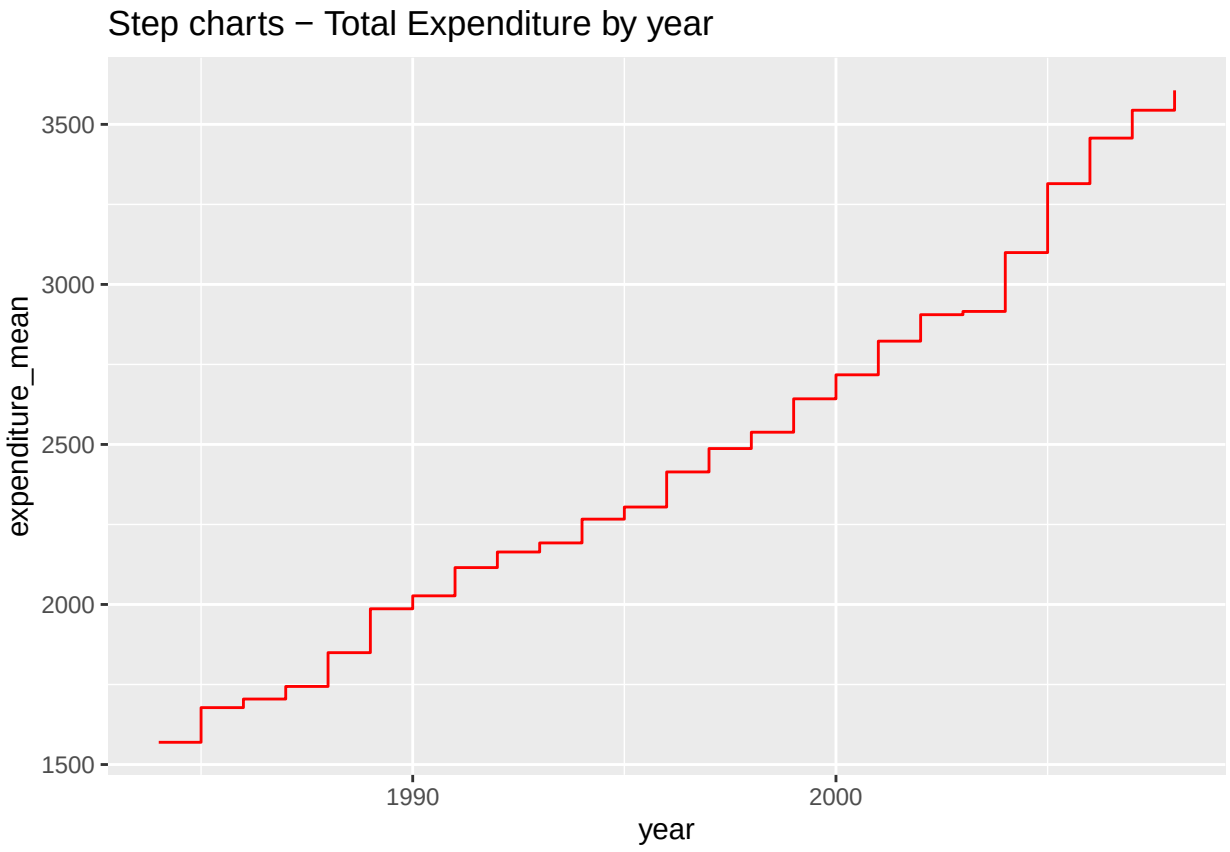
```
##   year expenditure_mean
## 1 1984         1569.429
## 2 1985         1677.786
## 3 1986         1704.643
## 4 1987         1743.929
## 5 1988         1849.500
## 6 1989         1986.500
```

```
Area_Plt <-ggplot(mean_value, aes(x=year, y=expenditure_mean)) +
  geom_area(fill = "red",color="black") +
  ggtitle('Area charts - Total Expenditure by year')
Area_Plt
```



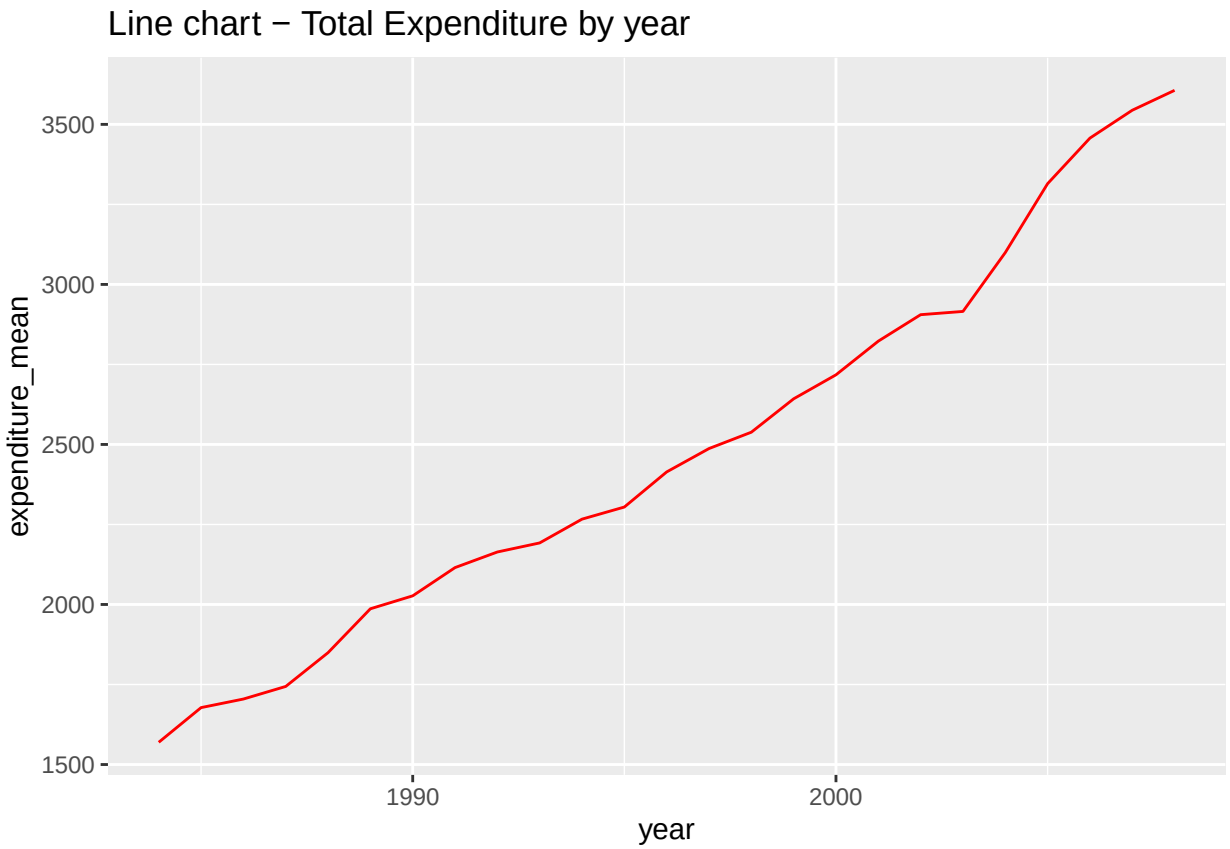
step chart

```
Step_Plt <-ggplot(mean_value, aes(x=year, y=expenditure_mean)) +
  geom_step(color="Red") +
  ggtitle('Step charts - Total Expenditure by year')
Step_Plt
```



Line Chart

```
line_Plt <-ggplot(mean_value, aes(x=year, y=expenditure_mean)) +
  geom_line(color="Red") +
  ggtitle('Line chart - Total Expenditure by year')
line_Plt
```


Line chart − Total Expenditure by year
expenditure_mean
3500
3000
2500
2000
1500
1990
2000
year