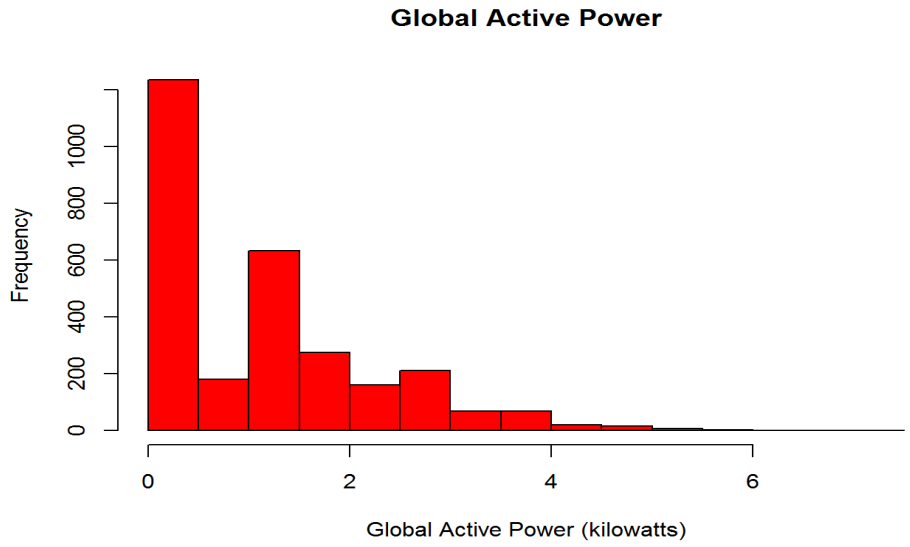
Assignment 1 Exploratory Data Analysis

The object of this assignment was to reproduce plots provided. Our overall goal here is simply to examine how household energy usage varies over a 2-day period in February, 2007. The task is to reconstruct certain given plots, all of which were constructed using the base plotting system.

Base Plotting System

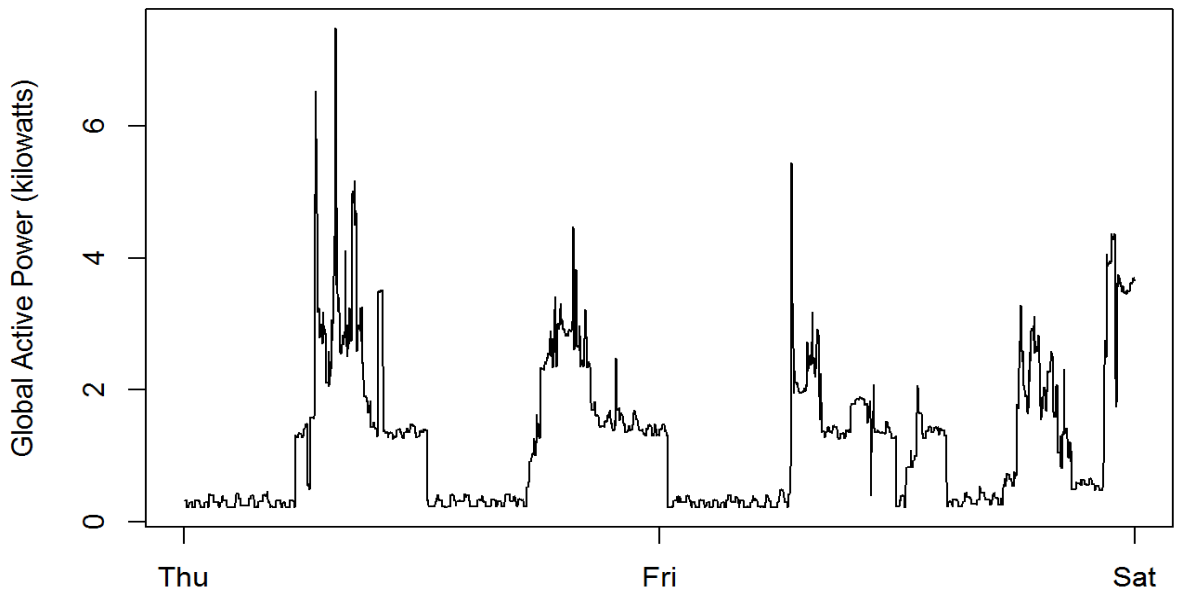
Plot 1

```
setwd("C:/Users/HusyRazool/Desktop/Data Scientist/Exploratory data analysis C
oursera")


data_full <- read.csv("household_power_consumption.txt", header=T, sep=';', n
a.strings="?",

                      nrows=2075259, check.names=F, stringsAsFactors=F, comme
nt.char="", quote='\"')

data1 <- subset(data_full, Date %in% c("1/2/2007","2/2/2007"))

data1$Date <- as.Date(data1$Date, format="%d/%m/%Y")

hist(data1$Global_active_power, main="Global Active Power",

     xlab="Global Active Power (kilowatts)", ylab="Frequency", col="Red")
```



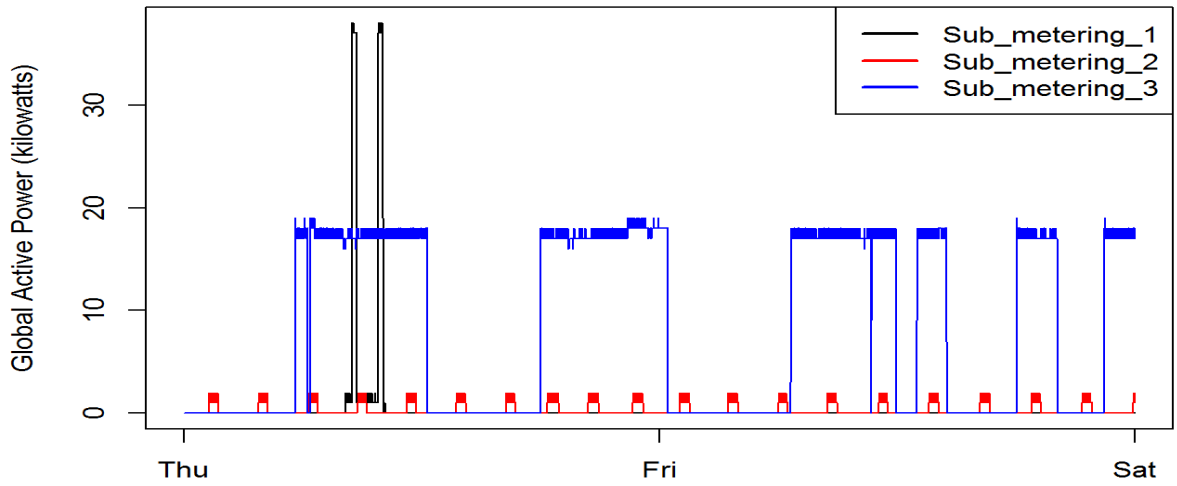
Plot 2

```
setwd("C:/Users/Husy Razool/Desktop/Data Scientist/Exploratory data analysis
Coursera")


data_full <- read.csv("household_power_consumption.txt", header=T, sep=';', n
a.strings="?", nrows=2075259, check.names=F, stringsAsFactors=F, comment.char
="", quote='\"')

data1 <- subset(data_full, Date %in% c("1/2/2007","2/2/2007"))

data1$Date <- as.Date(data1$Date, format="%d/%m/%Y")

datetime <- paste(as.Date(data1$Date), data1$Time)

data1$Datetime <- as.POSIXct(datetime)


## Plot 2

with(data1, {

  plot(Global_active_power~Datetime, type="l",

     ylab="Global Active Power (kilowatts)", xlab="")

  })
```



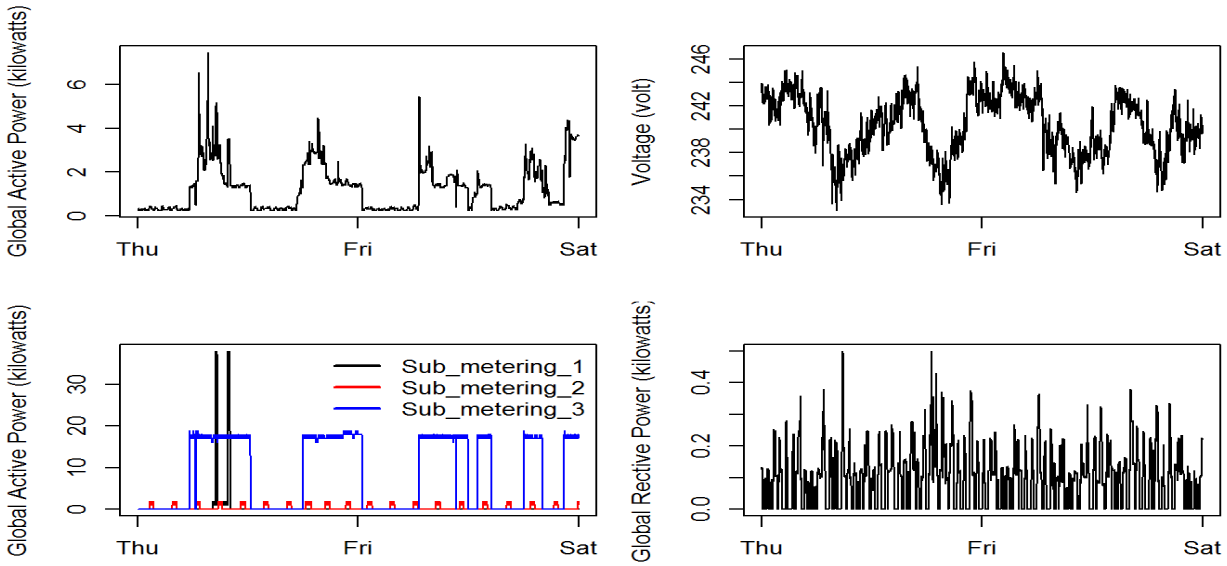
Plot 3

```
setwd("C:/Users/Husy Razool/Desktop/Data Scientist/Exploratory data analysis
Coursera")


data_full <- read.csv("household_power_consumption.txt", header=T, sep=';', n
a.strings="?",

                      nrows=2075259, check.names=F, stringsAsFactors=F, comme
nt.char="", quote='\"')

data1 <- subset(data_full, Date %in% c("1/2/2007","2/2/2007"))

data1$Date <- as.Date(data1$Date, format="%d/%m/%Y")

datetime <- paste(as.Date(data1$Date), data1$Time)

data1$Datetime <- as.POSIXct(datetime)


with(data1, {

  plot(Sub_metering_1~Datetime, type="l",

       ylab="Global Active Power (kilowatts)", xlab="")

  lines(Sub_metering_2~Datetime,col='Red')

  lines(Sub_metering_3~Datetime,col='Blue')

})

legend("topright", col=c("black", "red", "blue"), lty=1, lwd=2,

       legend=c("Sub_metering_1", "Sub_metering_2", "Sub_metering_3"))
```



Plot 4

```
setwd("C:/Users/Husy Razool/Desktop/Data Scientist/Exploratory data analysis
Coursera")


data_full <- read.csv("household_power_consumption.txt", header=T, sep=';', n
a.strings="?",

                      nrows=2075259, check.names=F, stringsAsFactors=F, comme
nt.char="", quote='\"')

data1 <- subset(data_full, Date %in% c("1/2/2007","2/2/2007"))

data1$Date <- as.Date(data1$Date, format="%d/%m/%Y")

datetime <- paste(as.Date(data1$Date), data1$Time)

data1$Datetime <- as.POSIXct(datetime)


par(mfrow=c(2,2), mar=c(4,4,2,1), oma=c(0,0,2,0))

with(data1, {

  plot(Global_active_power~Datetime, type="l",

       ylab="Global Active Power (kilowatts)", xlab="")

  plot(Voltage~Datetime, type="l",

       ylab="Voltage (volt)", xlab="")

  plot(Sub_metering_1~Datetime, type="l",

       ylab="Global Active Power (kilowatts)", xlab="")

  lines(Sub_metering_2~Datetime,col='Red')

  lines(Sub_metering_3~Datetime,col='Blue')

  legend("topright", col=c("black", "red", "blue"), lty=1, lwd=2, bty="n",

         legend=c("Sub_metering_1", "Sub_metering_2", "Sub_metering_3"))

  plot(Global_reactive_power~Datetime, type="l",

       ylab="Global Rective Power (kilowatts)",xlab="")

})
```




```
## Saving to file
dev.copy(png, file="plot4.png", height=480, width=480)
```

```
## png
##   3
```

```
dev.off()
```

```
## png
##   2
```