Assignment 1

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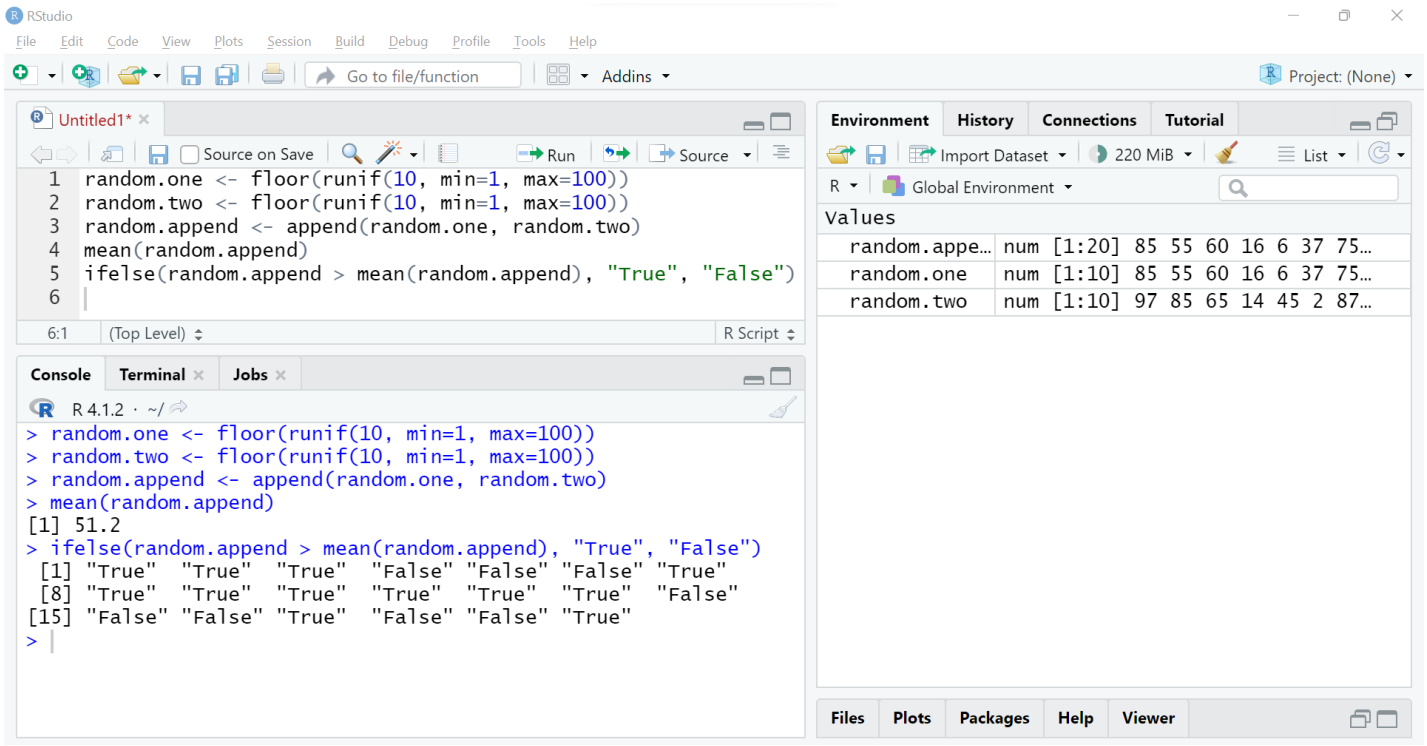
Part 1

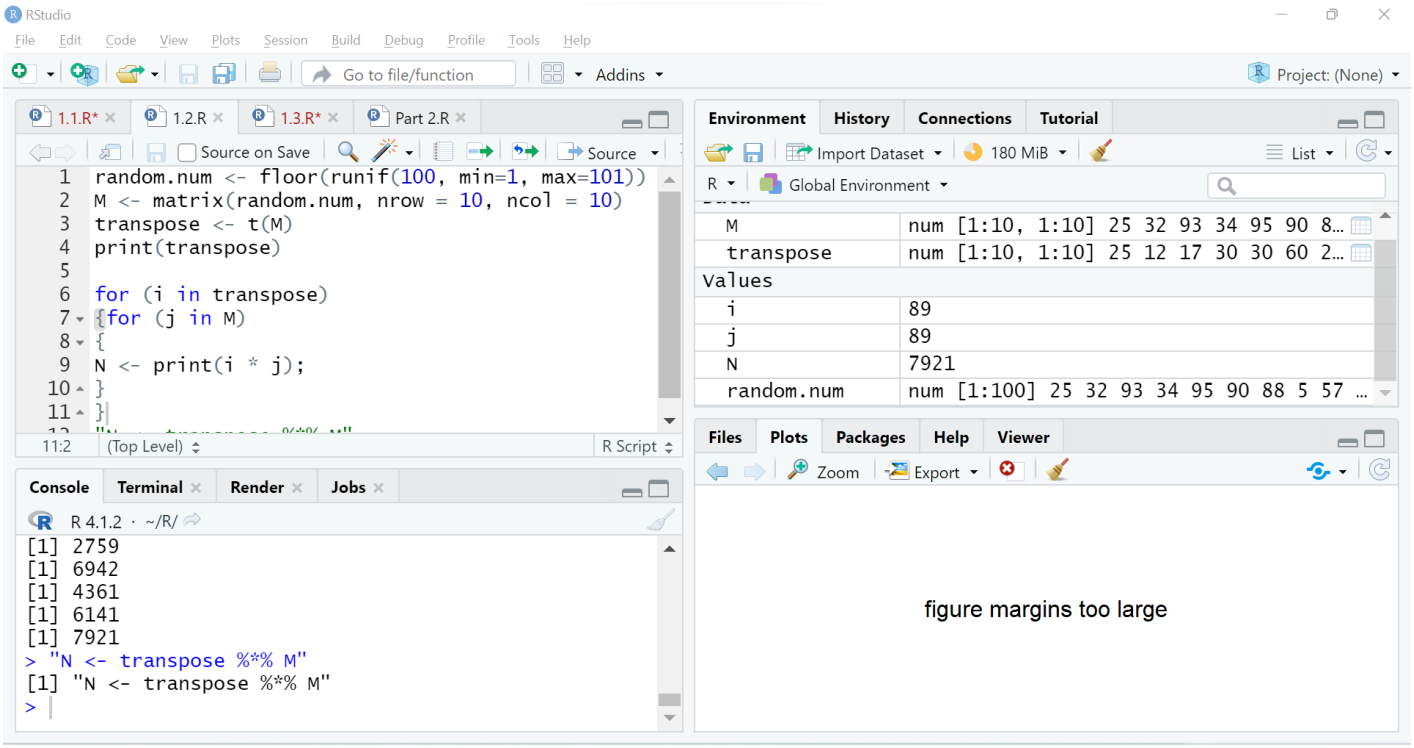
1.1

```
random.one <- floor(runif(10, min=1, max=100))
random.two <- floor(runif(10, min=1, max=100))
random.append <- append(random.one, random.two)
mean(random.append)
ifelse(random.append > mean(random.append), "True", "False")
```



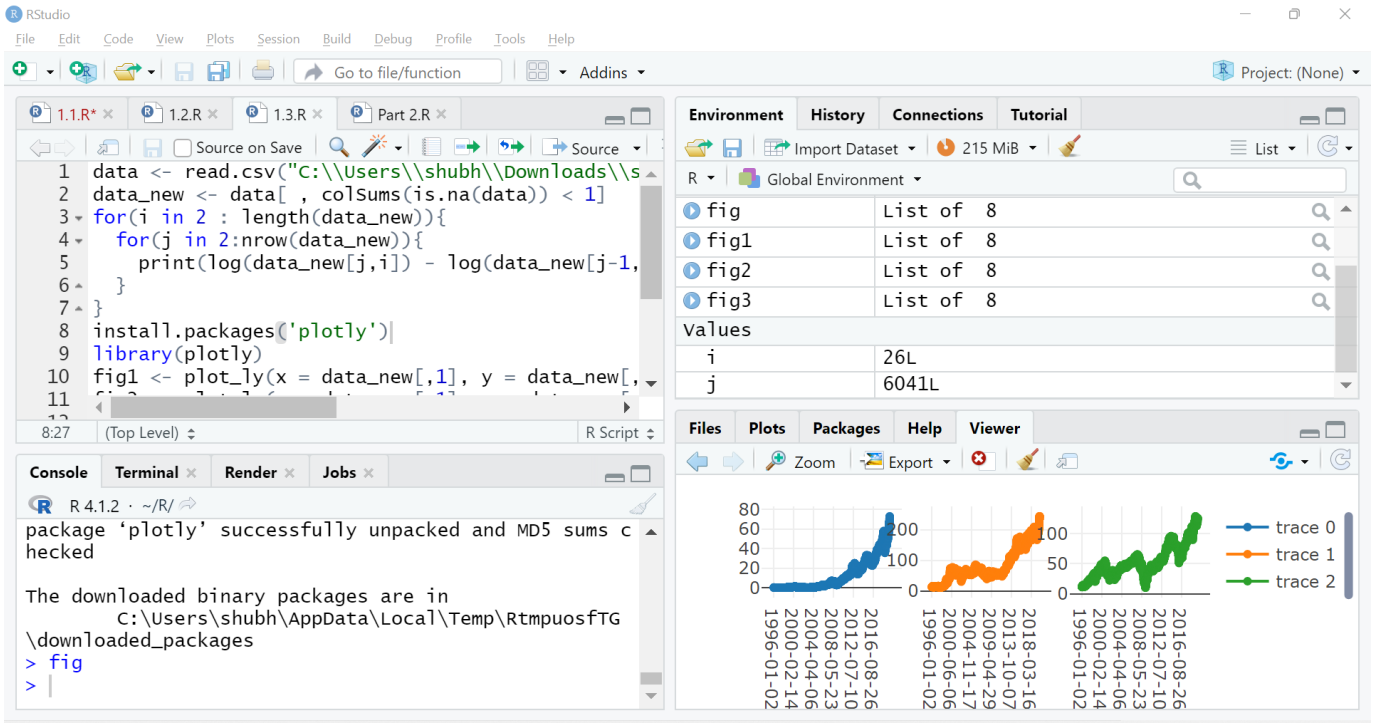
1.2

```
random.num <- floor(runif(100, min=1, max=101))
M <- matrix(random.num, nrow = 10, ncol = 10)
transpose <- t(M)
print(transpose)
for (i in transpose)
{for (j in M)
{
N <- print(i * j);
}
}
"N <- transpose %*% M"
```



1.3

```
data <- read.csv("C:\\Users\\shubh\\Downloads\\stock_data.csv")
data_new <- data[ , colSums(is.na(data)) < 1]
for(i in 2 : length(data_new)){
  for(j in 2:nrow(data_new)){
    print(log(data_new[j,i]) - log(data_new[j-1,i]))
  }
}
install.packages('plotly')
library(plotly)
fig1 <- plot_ly(x = data_new[,1], y = data_new[,2], text = 'AAPL',type =
'scatter', mode = 'lines+markers')
fig2 <- plot_ly(x = data_new[,1], y = data_new[,3], type = 'scatter', mode =
'lines+markers')
fig3 <- plot_ly(x = data_new[,1], y = data_new[,4], type = 'scatter', mode =
'lines+markers')
fig <- fig %>% add_trace(y = ~Tree2, name = 'Tree 2')
fig <- fig %>% add_trace(y = ~Tree3, name = 'Tree 3')
fig <- subplot(fig1,fig2,fig3)%>%
  layout(title=list(text=c("AAPL","AMGN","AXP")))
fig
```



```
Part 2

install.packages('quantmod')
library(quantmod)

Dailystockprice <- get(getSymbols("AMZN", from = "2020-01-01", to =
"2020-09-01"))
write.csv(Dailystockprice,"Amazonprice" )

amazon<-diff(log(AMZN$AMZN.Adjusted))
head(amazon)
mean_amazon <- mean(amazon, na.rm= TRUE)
sd_amazon <- sd(amazon, na.rm = TRUE)
median_amazon <- median(amazon, na.rm = TRUE)
table(amazon >= 0.01 & amazon <= 0.015)
hist(amazon,breaks=50)
```