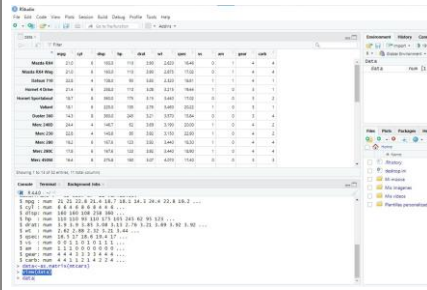
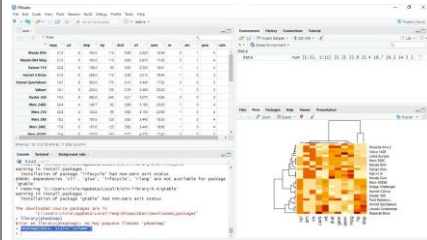
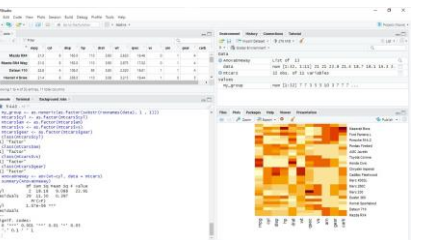




UNIVERSIDAD AUTÓNOMA DEL ESTADO DE MÉXICO
FACULTAD DE CIENCIAS.
LICENCIATURA EN BIOTECNOLOGÍA
BIOINFORMÁTICA AVANZADA



TAREA MTCARS
LÓPEZ CRUZ NANCY

Comando	
1.- OPEN DATA FRAME "MTCARS" >str(mtcars) >data<-as.matrix(mtcars) >View(data)	
2. HACER HEATMAP >heatmap(data, scale="column") >heatmap(data, Colv = NA, Rowv = NA, scale="column")	
3.CORRELACIONES ANOVA #Convierta una columna numérica o de caracteres en una variable de factor, usando as.factor()# > my_group <- as.numeric(as.factor(substr(rownames(data), 1, 1))) > mtcars\$cyl <- as.factor(mtcars\$cyl) > mtcars\$am <- as.factor(mtcars\$am) > mtcars\$vs <- as.factor(mtcars\$vs) > mtcars\$gear <- as.factor(mtcars\$gear) > class(mtcars\$cyl) [1] "factor"	

```

class(mtcars$am)
[1] "factor"
> class(mtcars$vs)
[1] "factor"
> class(mtcars$gear)
[1] "factor"
> AnovaOneWay <- aov(wt~cyl, data = mtcars)
> summary(AnovaOneWay)
          Df Sum Sq Mean Sq F value
cyl        2  18.18   9.088  22.91
Residuals 29  11.50   0.397
          Pr(>F)
cyl    1.07e-06 ***
Residuals
---
Signif. codes:
  0 '***' 0.001 '**' 0.01 '*' 0.05
  '.' 0.1 ' ' 1

```

#El valor p de la prueba es 1,22e-07, que es menor que el nivel de significancia $\alpha = 0,05$. Podemos RECHAZAR la hipótesis nula y concluir que el peso medio de los automóviles para diferentes cilindros (cilindros = 4,6,8) es significativamente diferente.#

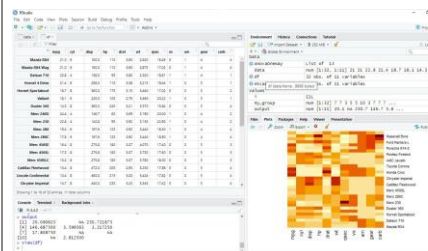
4. LOOPS PARA SACAR PROMEDIO

```

<-mtcars
> df

> View(df)
> output<-vector("double",ncol(df))
> for(i in seq_along(df)){output[[i]] <-
mean(df[[i]])}Avisos:
1: In mean.default(df[[i]]) :
  argument is not numeric or logical: returning NA
2: In mean.default(df[[i]]) :
  argument is not numeric or logical: returning NA
3: In mean.default(df[[i]]) :
  argument is not numeric or logical: returning NA
4: In mean.default(df[[i]]) :
  argument is not numeric or logical: returning NA
> output
[1] 20.090625    NA 230.721875
[4] 146.687500  3.596563  3.217250
[7] 17.848750    NA     NA
[10] NA 2.812500

```



RESULTADOS

