Lab 5

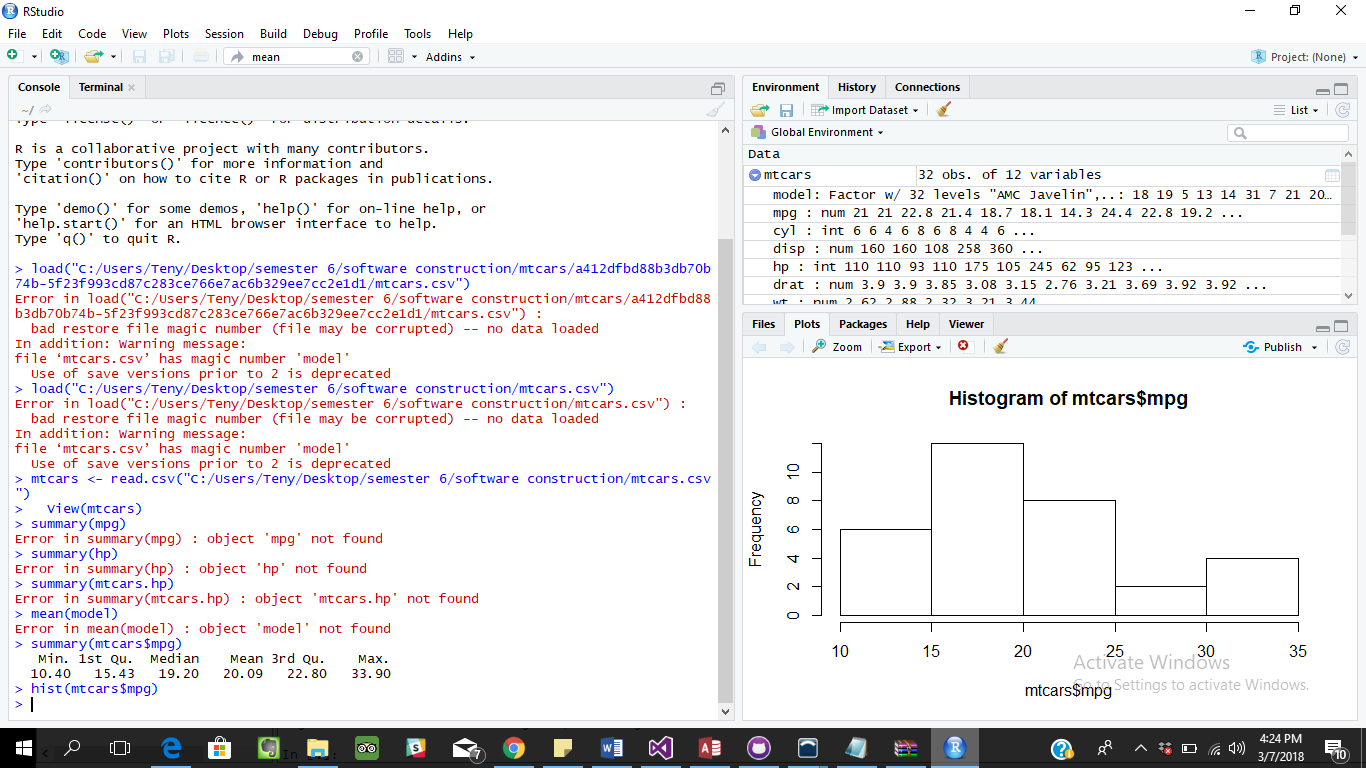
TAYYEBA MUHAMMAD KHAN

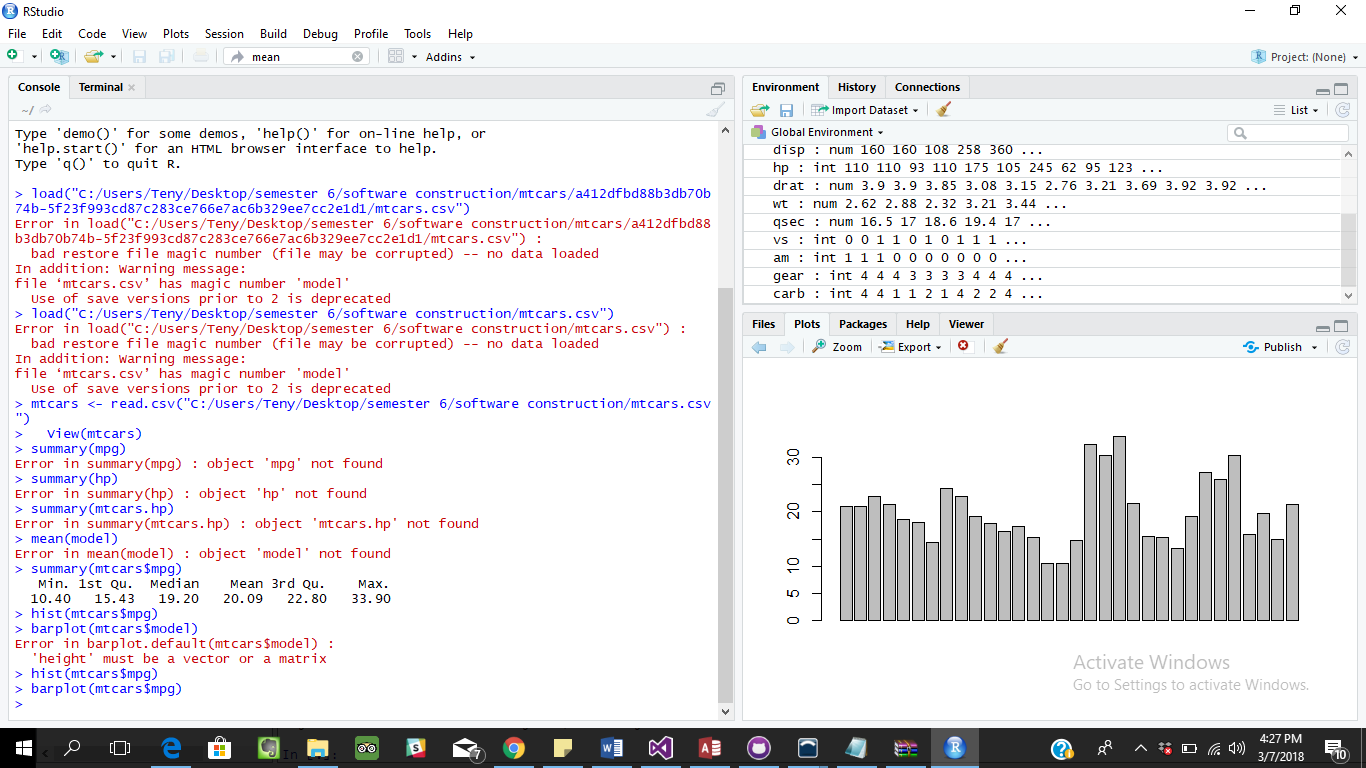
132412

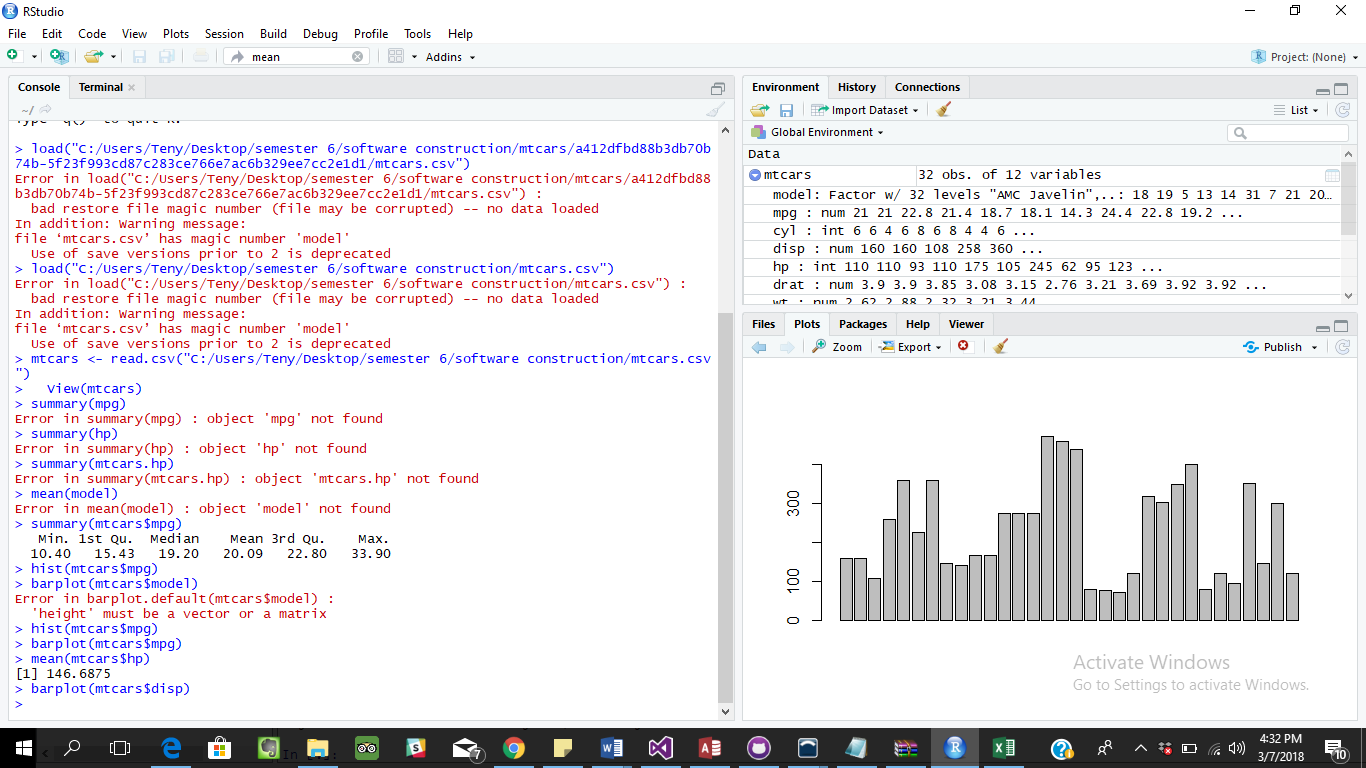
Link to github

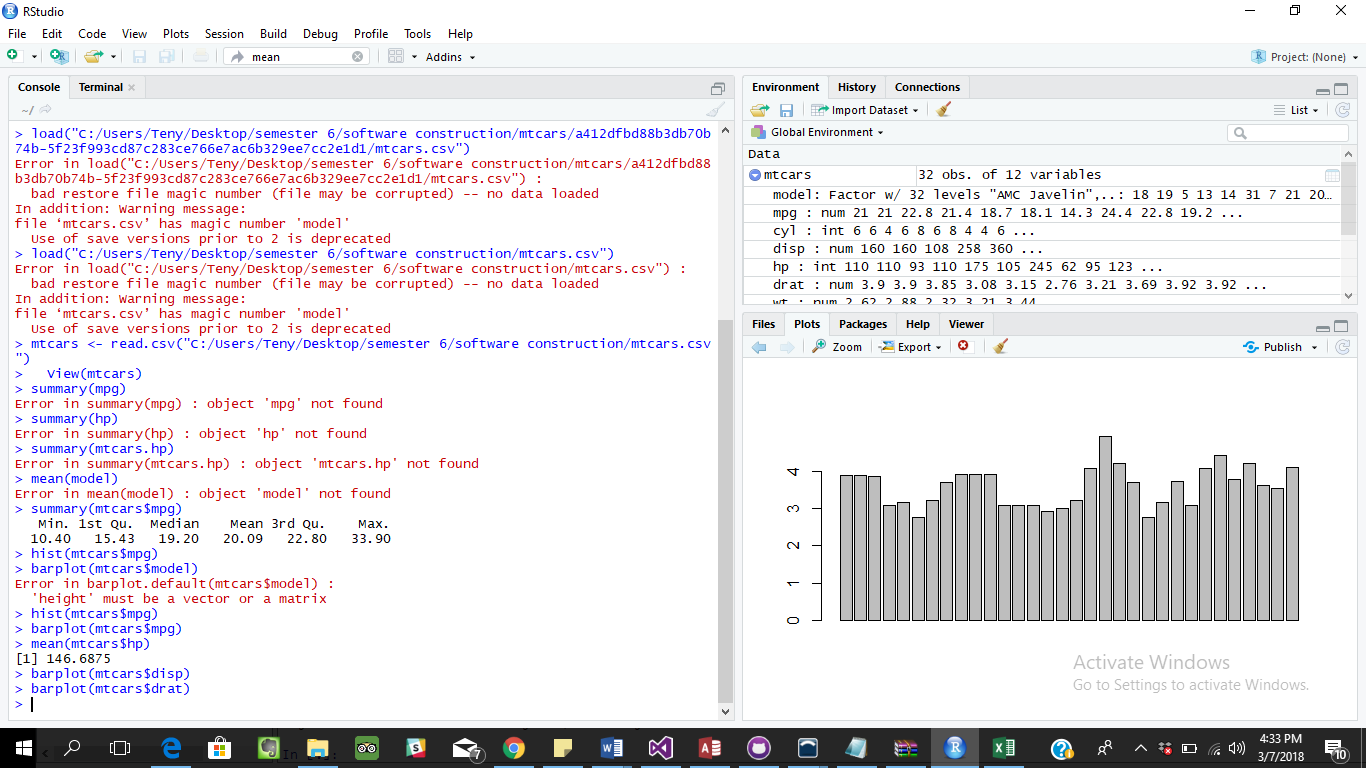
https://github.com/tayyeba-khan/lab5

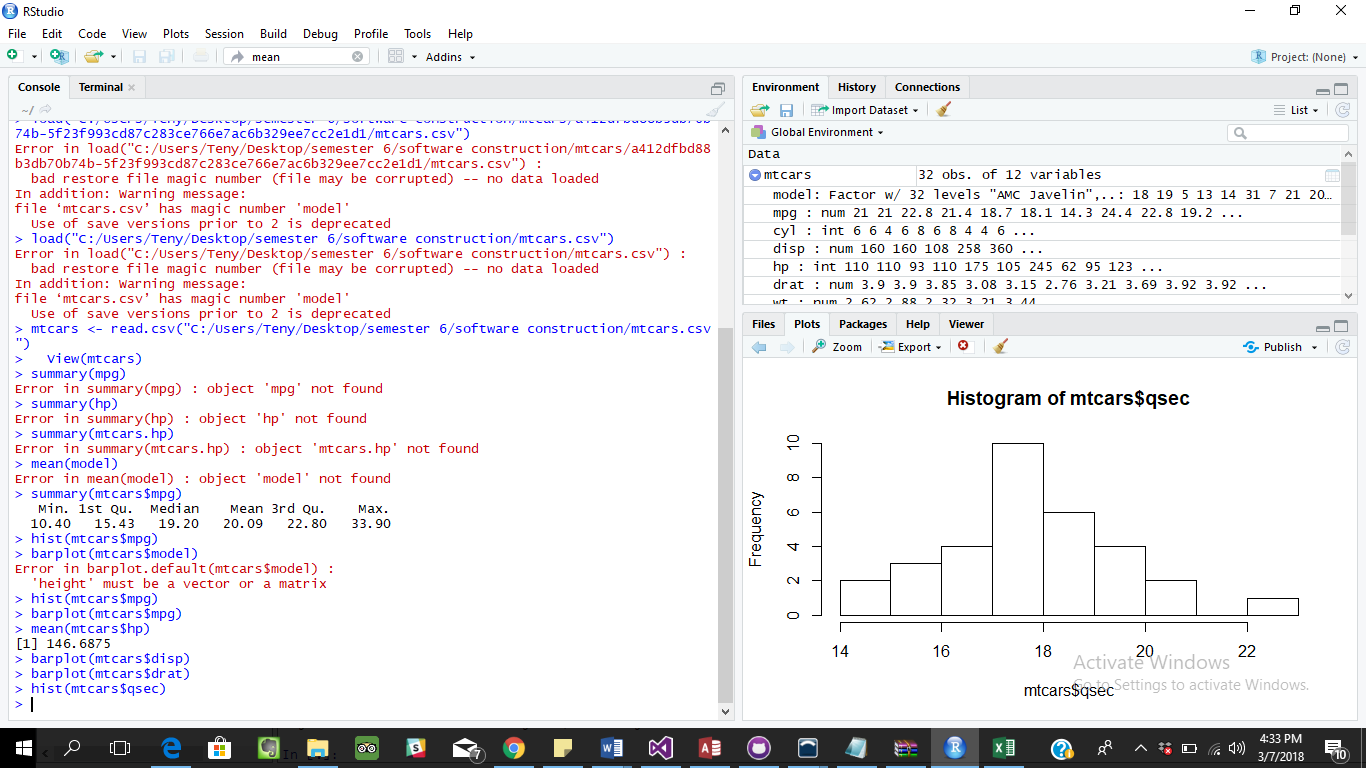
TASK4:

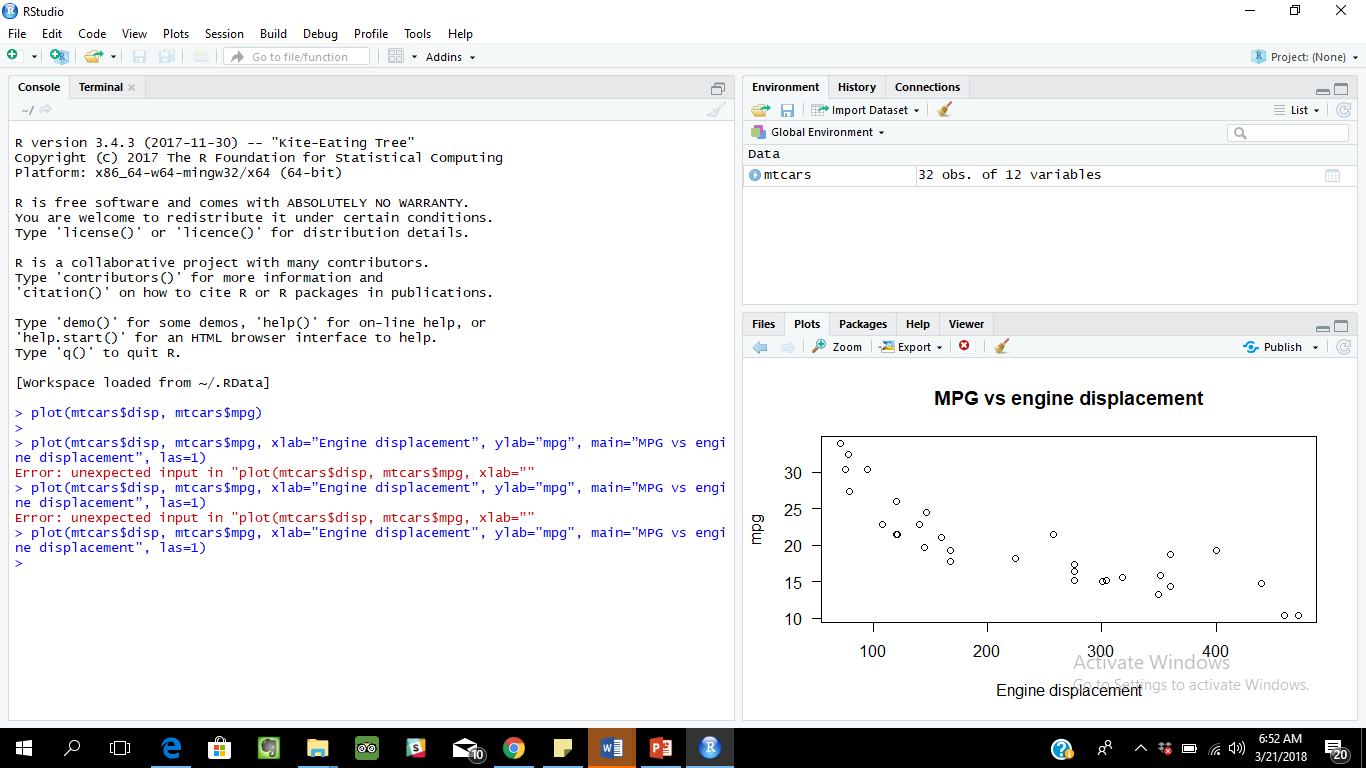


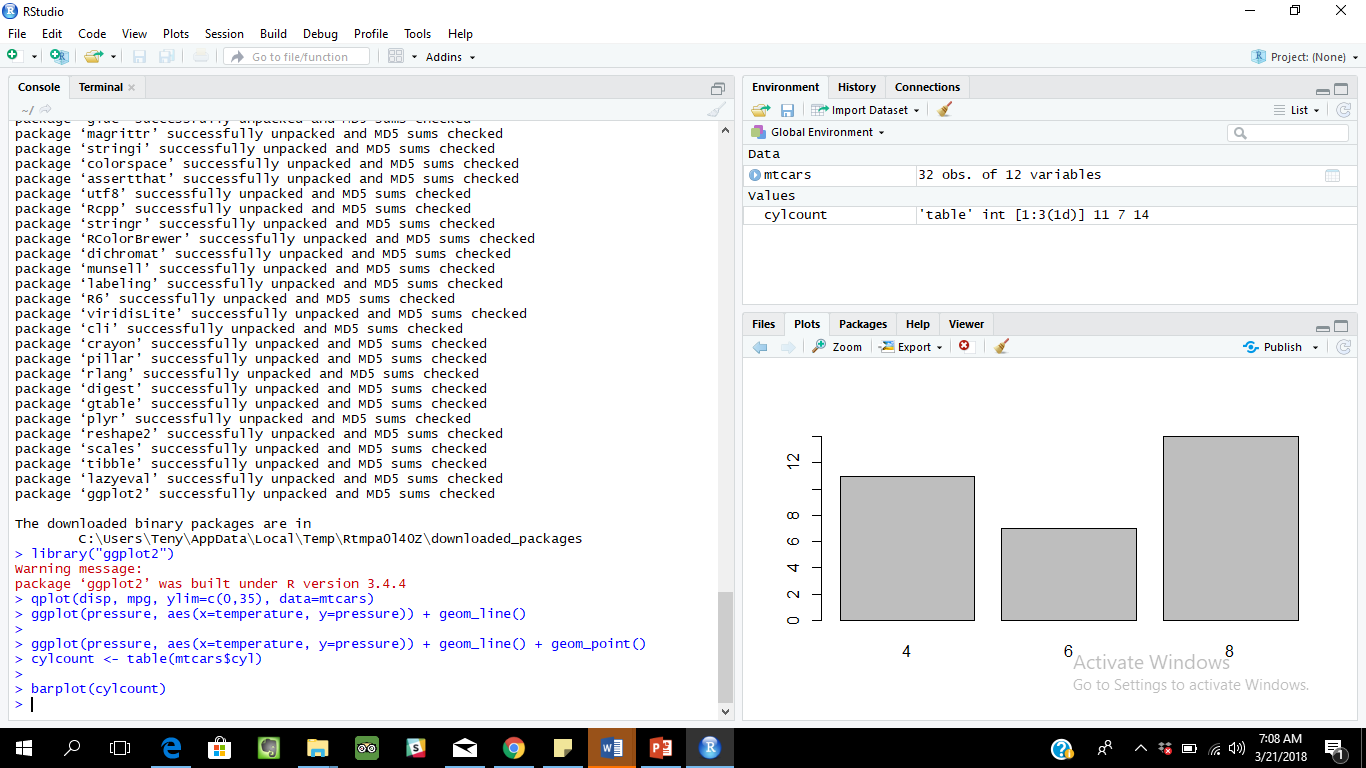








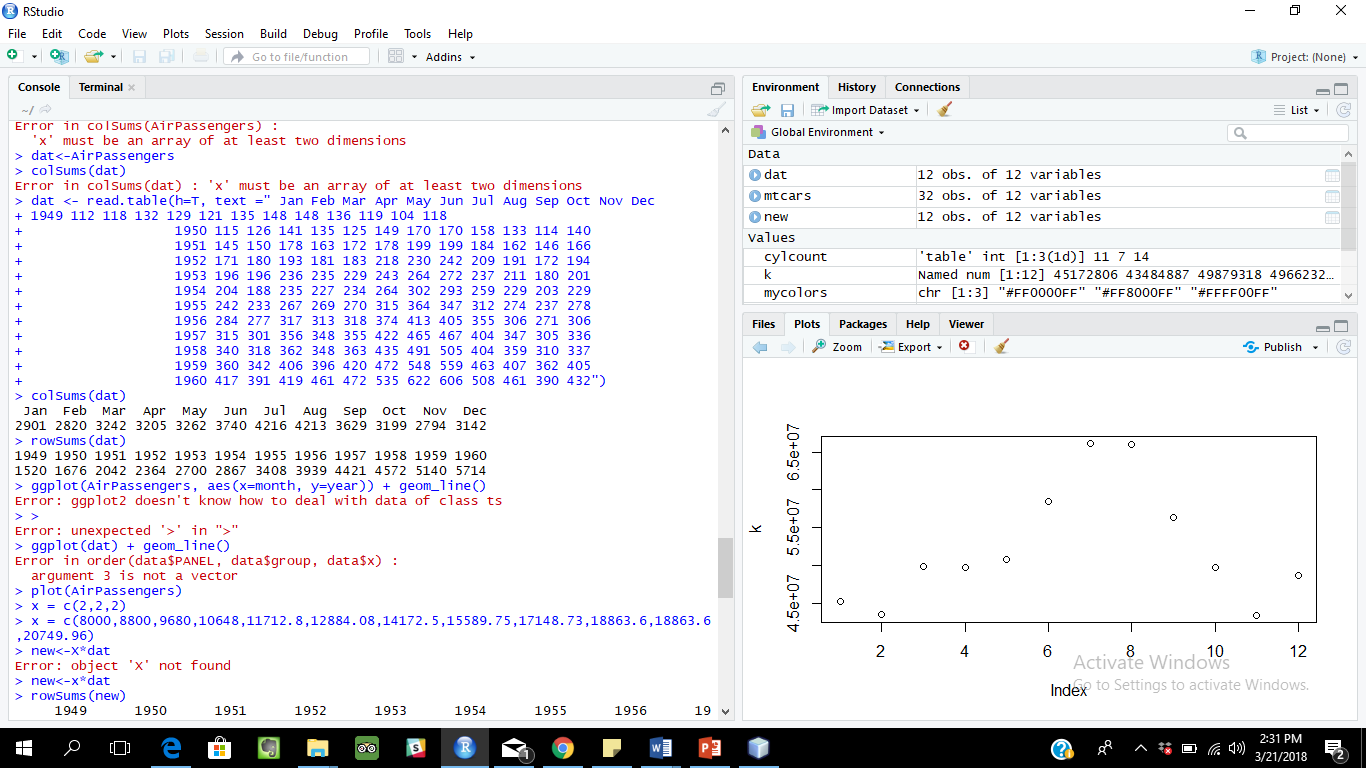




TASK 6:

A

|  |
| --- |
| dat <- read.table(h=T, text =" Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  + 1949 112 118 132 129 121 135 148 148 136 119 104 118  + 1950 115 126 141 135 125 149 170 170 158 133 114 140  + 1951 145 150 178 163 172 178 199 199 184 162 146 166  + 1952 171 180 193 181 183 218 230 242 209 191 172 194  + 1953 196 196 236 235 229 243 264 272 237 211 180 201  + 1954 204 188 235 227 234 264 302 293 259 229 203 229  + 1955 242 233 267 269 270 315 364 347 312 274 237 278  + 1956 284 277 317 313 318 374 413 405 355 306 271 306  + 1957 315 301 356 348 355 422 465 467 404 347 305 336  + 1958 340 318 362 348 363 435 491 505 404 359 310 337  + 1959 360 342 406 396 420 472 548 559 463 407 362 405  + 1960 417 391 419 461 472 535 622 606 508 461 390 432")  > colSums(dat)  Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  2901 2820 3242 3205 3262 3740 4216 4213 3629 3199 2794 3142 |
|  |
| |  | | --- | |  | |

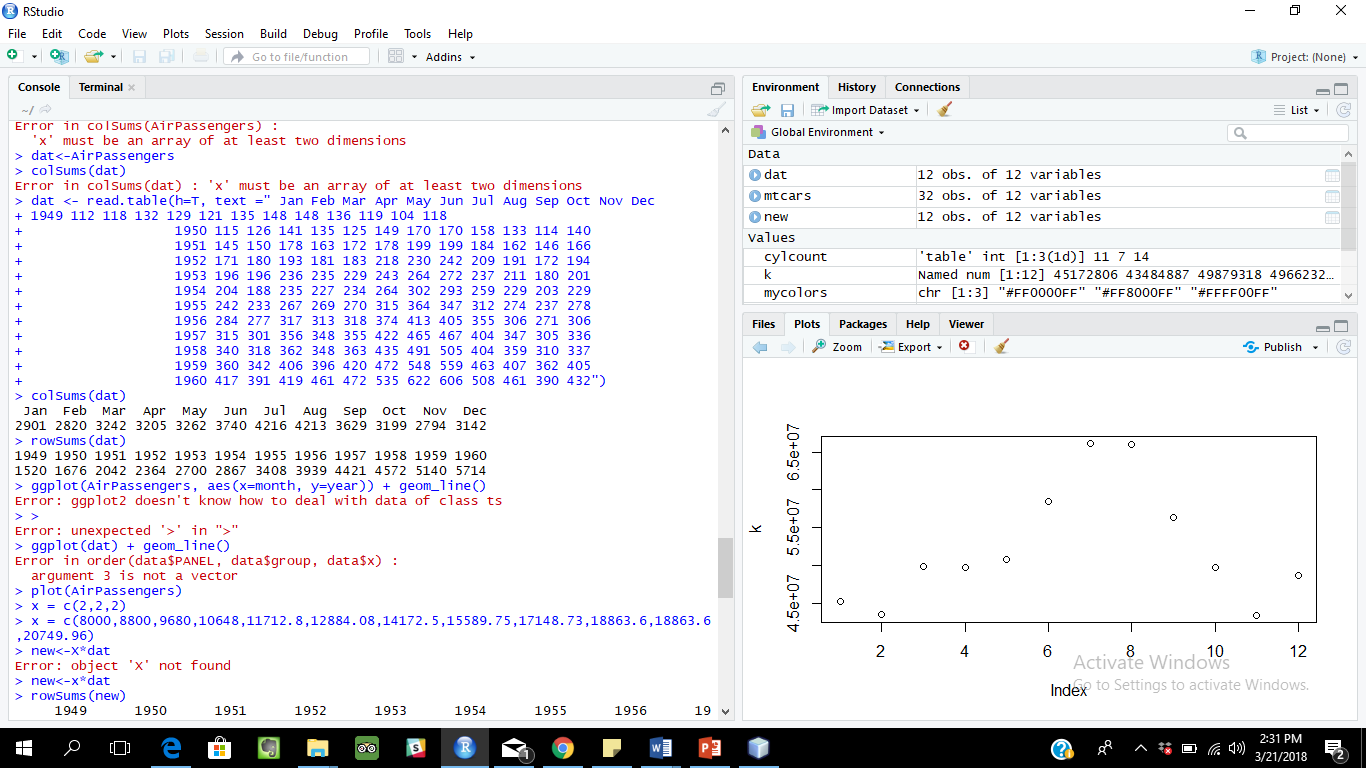


So the most profitable month in 12 year’s data is july

b)

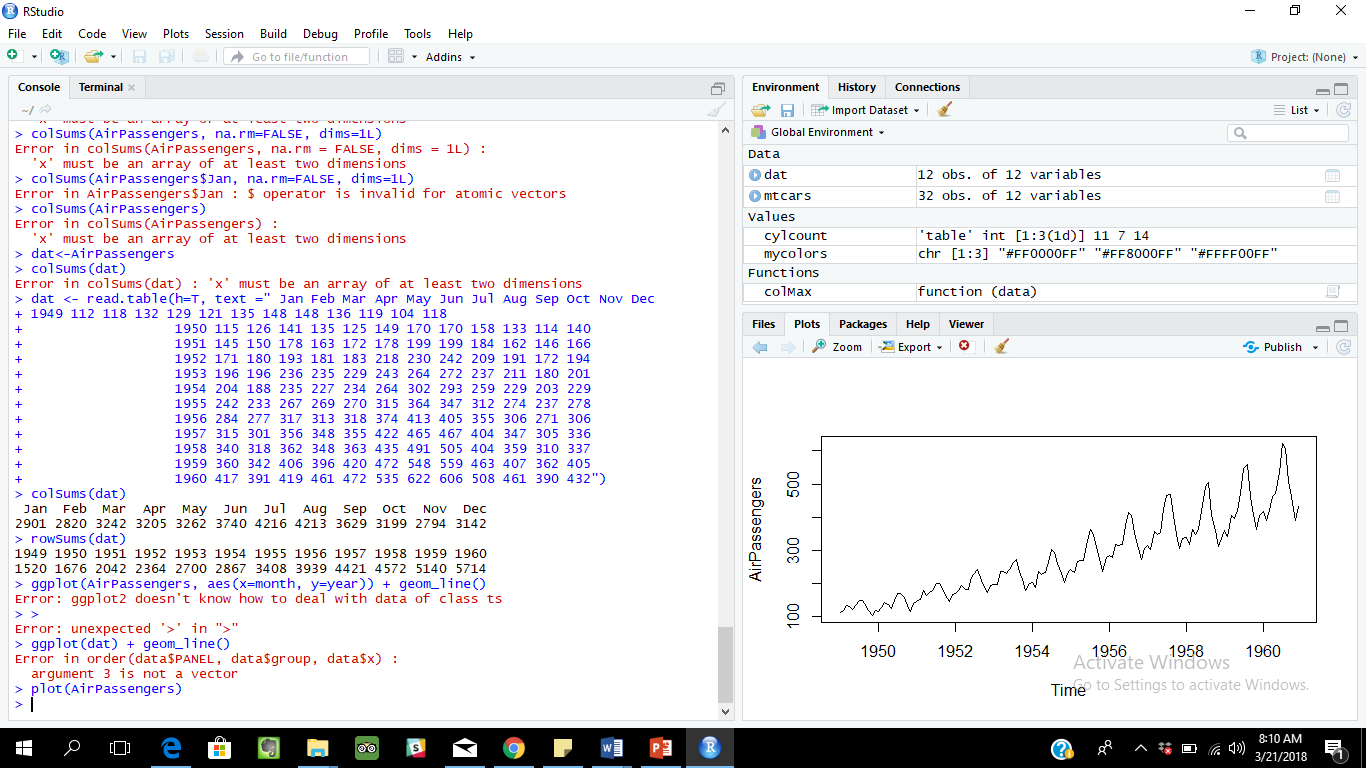
|  |
| --- |
| rowSums(dat)  1949 1950 1951 1952 1953 1954 1955 1956 1957 1958 1959 1960  1520 1676 2042 2364 2700 2867 3408 3939 4421 4572 5140 5714 |
|  |
| |  | | --- | | > | |

So the most profitable year in 12 years is 1960



c)

plot(Airpassengers)



7.

plot(AirPassengers)

> x = c(8000,8800,9680,10648,11712.8,12884.08,14172.5,15589.75,17148.73,18863.6,18863.6,20749.96)

> new<-X\*dat

a)

colSums(new)

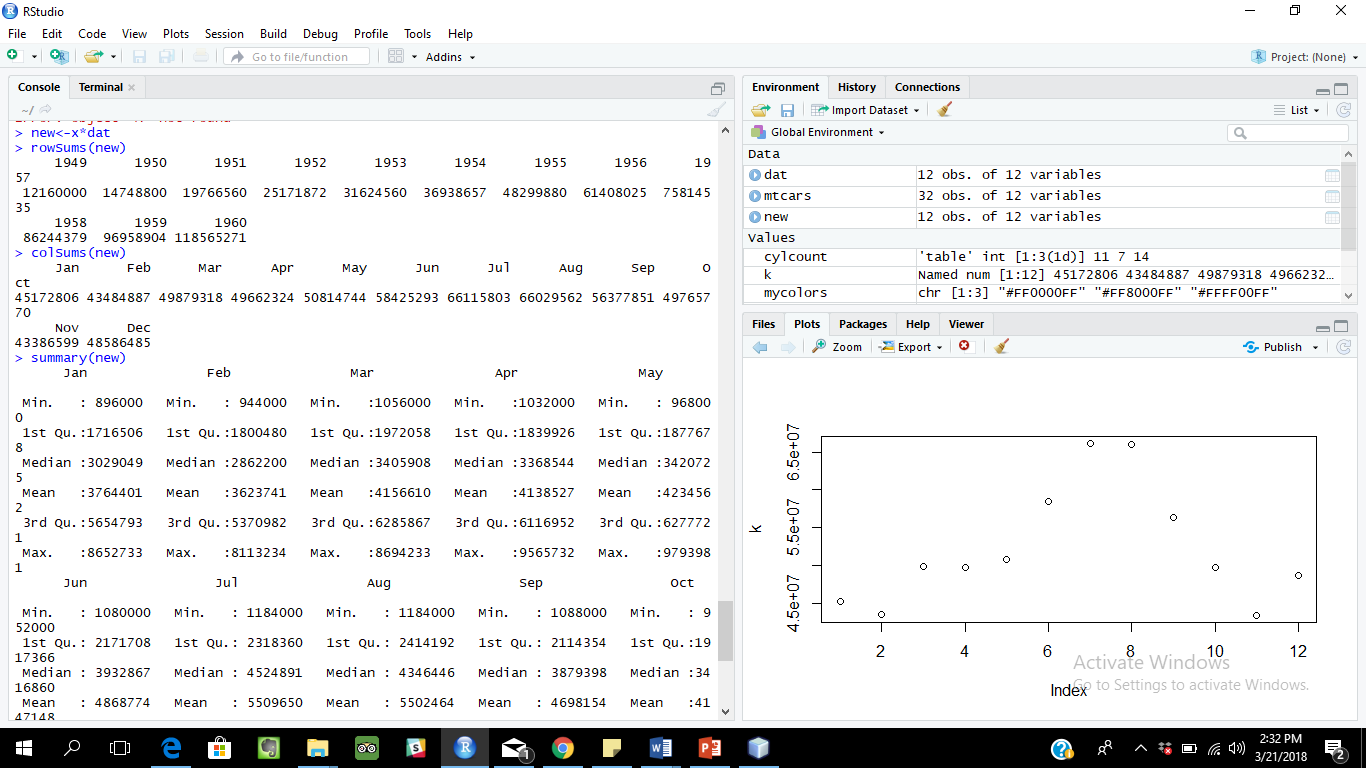
Jan Feb Mar Apr May Jun Jul Aug Sep Oct

45172806 43484887 49879318 49662324 50814744 58425293 66115803 66029562 56377851 49765770

Nov Dec

43386599 48586485

Highest revenue was earned in july that was 66115803



b)

> rowSums(new)

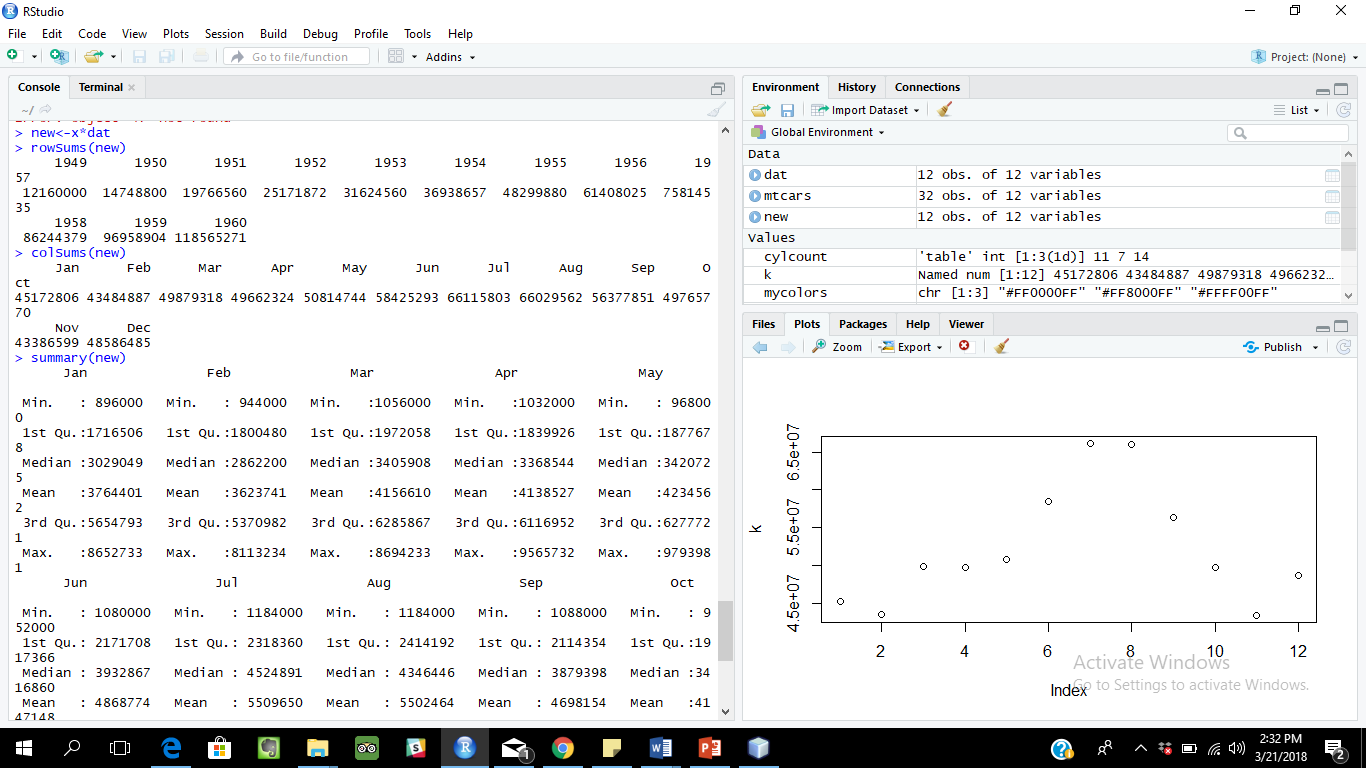
1949 1950 1951 1952 1953 1954 1955 1956 1957

12160000 14748800 19766560 25171872 31624560 36938657 48299880 61408025 75814535

1958 1959 1960

86244379 96958904 118565271

So they earned the highest revenue in 1960 that is 118565271



c)

|  |
| --- |
| > k<-colSums(new)  > sum(k)  [1] 627701445  > sum(rowSums(new))  [1] 627701445 |
|  |
| |  | | --- | |  | |

So the total revenue generated in this time is 627701445

8.

Yes we can identify such trends. They can be easily seen in the calculations but we can visualize them as well. in july most customers were travelled

