

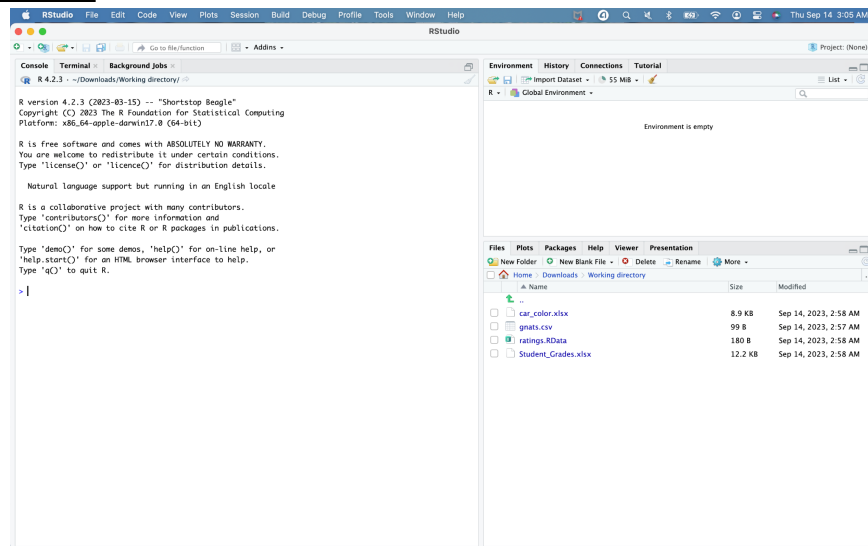
Inputting and Editing DATA (MOL2)

1. Choosing a Default Working Directory:

- Download all the files for this Assignment into a folder on your computer you will create. Give it a name and choose this folder as your Default Working Directory. Putting all the files you will use in R into one folder will make it easy to save and find your data files.
- Once you have created/chosen a file, then go into R Studio and choose it as your Default Working Directory as seen in the PowerPoint (or any method that you may have already learned – there are several ways to create a Default Working Directory in R Studio).

- Open R Studio, and in the lower right pane, select Files and take a screen shot of the directory you have chosen. Copy and paste this screen shot here (1 pt):

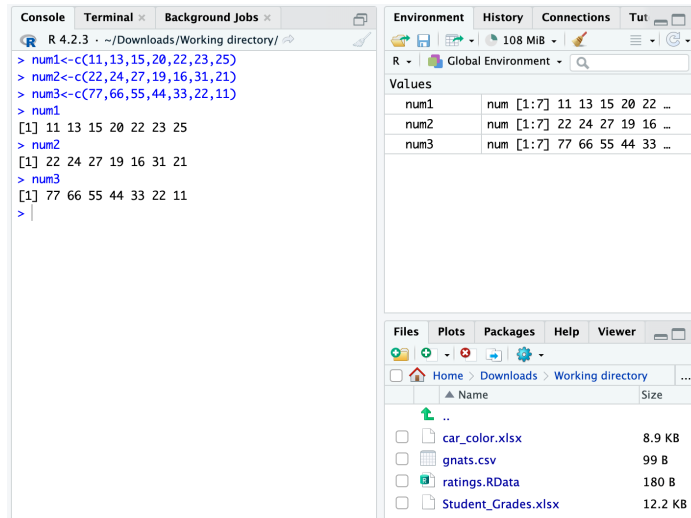
Results:



2. Input the following DATA as a vector:

- Name the following DATA num1 and input as a vector in R Studio:
(11,13,15,20,22,23,25)
- Name the following DATA num2 and input as a vector in R Studio:
(22,24,27,19,16,31,21)
- Name the following DATA num3 and input as a vector in R Studio:
(77,66,55,44,33,22,11)
- View all three DATA sets.
- Copy and paste your commands and results in R Studio Console here (2pt):

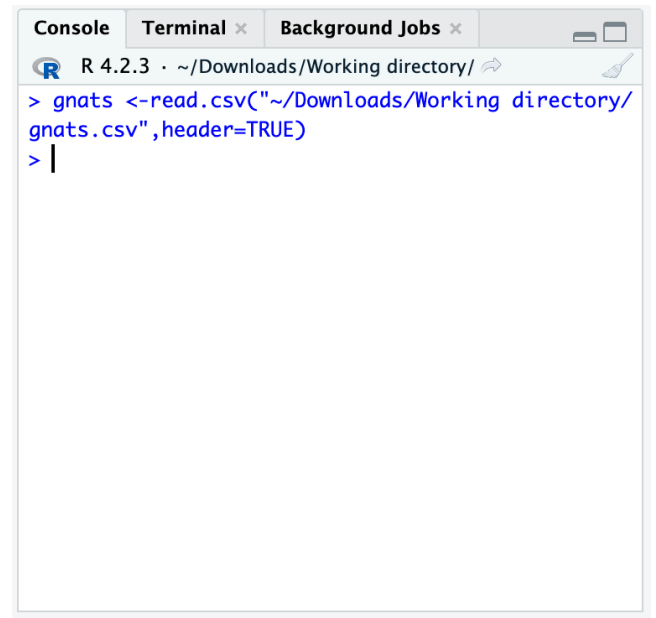
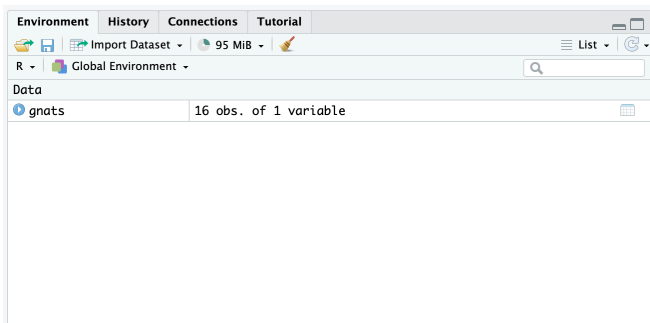
Results:



3. Input the following CSV file into R that has the variable name in first row (heading): gnats.csv

Take a screen shot of the Global Environment and console in R (1 pt):

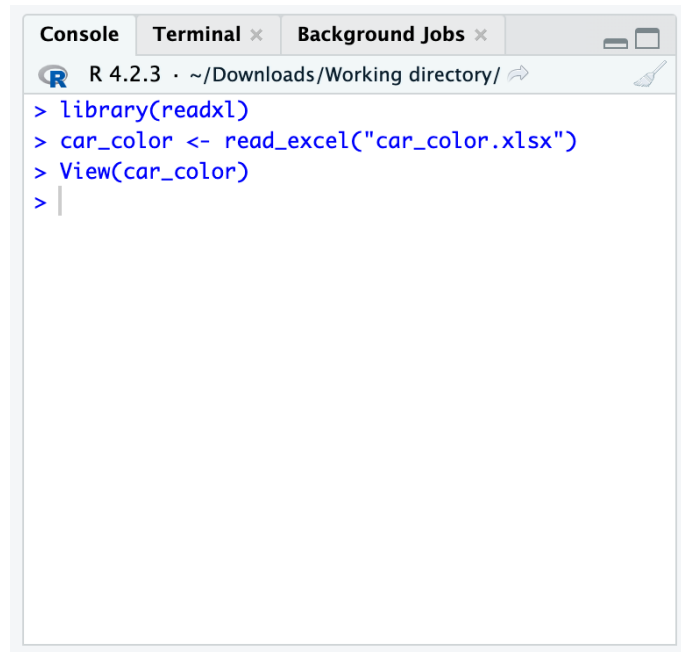
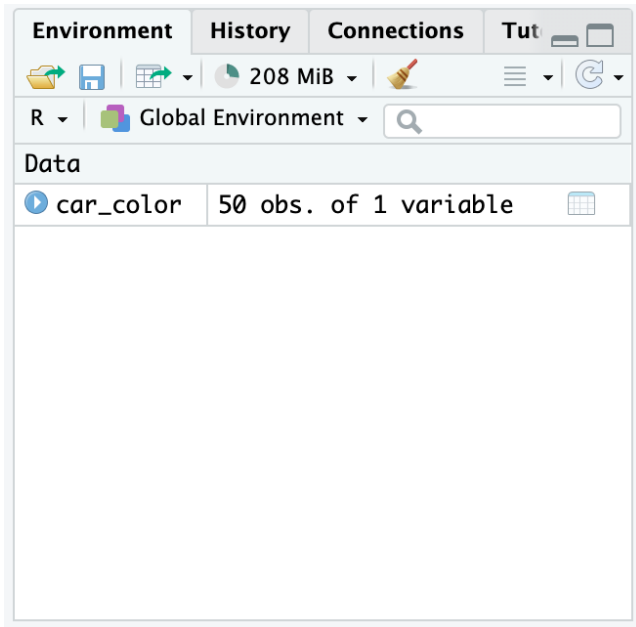
Results:



4. Input the following .xlsx file into R that has the variable name in first row (heading):
car_color.xlsx

Take a screen shot of the Global Environment and console in R (1 pt):

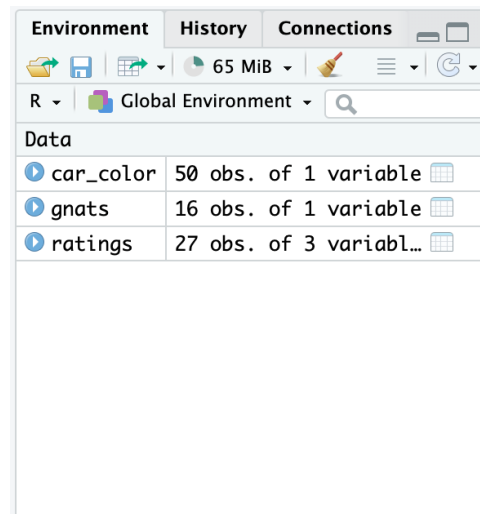
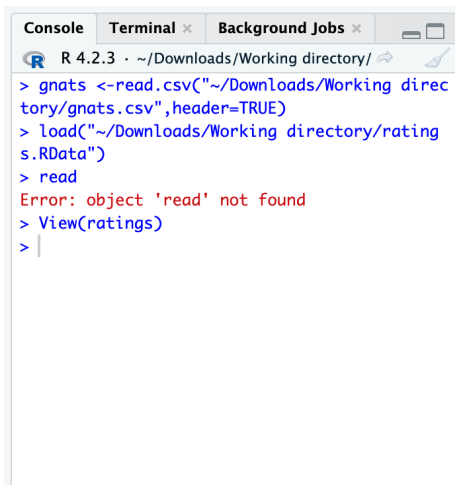
Results:



5. Input the following .Rmd file into R that has the variable name in first row (heading)) then use
View to view file: ratings.RData

Take a screen shot of the Global Environment and console in R (1 pt):

Results:



6. Simulate a sample of 100 from a Normal Distribution for the height of an oak tree with a mean of 60 feet and a standard deviation of 20.2 ft. Give the name of the column vector Height_of_Oak.

Take a screen shot of the Global Environment and console in R (1 pt):

Results:

The screenshot shows the R console with the following commands and output:

```
> Height_of_Oak<-rnorm(100,mean=60,sd=20.2)
> Height_of_Oak
 [1] 62.768963 61.073404 18.835489
 [4] 77.241069 73.271598 76.235978
 [7] 94.181343 84.379103 95.866899
[10] 49.094063 34.984033 80.586461
[13] 32.896020 25.469153 49.681340
[16] 56.153166 65.469679 88.218401
[19] 89.824216 96.854683 81.757315
[22] 34.277931 71.977932 60.000997
[25] 69.987815 60.520989 65.759059
[28] 66.650875 36.993893 30.901049
[31] 71.644399 64.344719 75.980466
[34] 86.132144 87.222220 49.977669
[37] 97.575562 74.195615 88.497864
[40] 31.439127 10.708391 95.858767
[43] 78.258593 50.457906 96.797723
[46] 55.556412 53.957658 82.889914
```

The Global Environment window shows the following data:

Data	
car_color	50 obs. of 1 variable
gnats	16 obs. of 1 variable
ratings	27 obs. of 3 variabl...

The Values window shows the following values:

Values	
Height_o...	num [1:100] 62.8 61.1 ...

7. Create a random sample of 4 without replacement from the following DATA num1 you created earlier, call the column vector, sample_of_4. Then type sample_of_4 to view the column vector

Take a screen shot of the Global Environment and console in R (1 pt):

Results:

The screenshot shows the R console with the following commands and output:

```
> #Create a random sample of 4 without replac
> #ment from the following DATA num1 you create
> #d earlier, call the column vector, sample_of
> #_4. Then type sample_of_4 to view the column
> #vector
> num1<-c(11,13,15,20,22,23,25)
> sample_of_4<-sample(num1,4,replace=FALSE)
> sample_of_4
[1] 13 11 20 22
>
```

The Global Environment window shows the following data:

Data	
car_color	50 obs. of 1 variable
gnats	16 obs. of 1 variable
ratings	27 obs. of 3 variabl...

The Values window shows the following values:

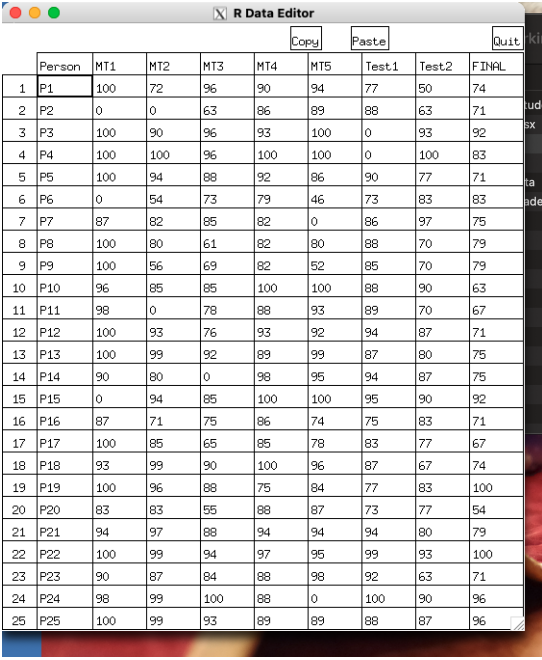
Values	
Height_o...	num [1:100] 62.8 61.1 ...
num1	num [1:7] 11 13 15 20 ...
sample_o...	num [1:4] 13 11 20 22

8. Upload the data set Student_Grades.xlsx , then edit the following data set, Student_Grades.xlsx in the following ways:

- Name the new file we shall create and get ready to edit using the edit command (new file name is (Adjusted_Student_Grades.csv)

Take a Screen shot of the edit window (0.5 pts):

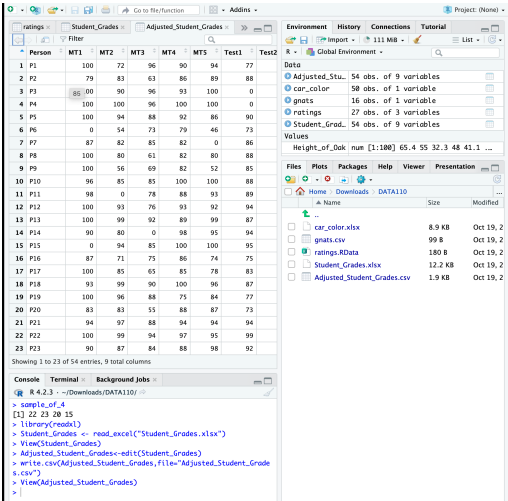
Results:



	Person	MT1	MT2	MT3	MT4	MT5	Test1	Test2	FINRL
1	P1	100	72	96	90	94	77	50	74
2	P2	0	0	63	86	89	88	63	71
3	P3	100	90	96	93	100	0	93	92
4	P4	100	100	96	100	100	0	100	83
5	P5	100	94	88	92	86	90	77	71
6	P6	0	54	73	79	46	73	83	83
7	P7	87	82	85	82	0	86	97	75
8	P8	100	80	61	82	80	88	70	79
9	P9	100	56	69	82	52	85	70	79
10	P10	96	85	85	100	100	88	90	63
11	P11	98	0	78	88	93	89	70	67
12	P12	100	93	76	93	92	94	87	71
13	P13	100	99	92	89	99	87	80	75
14	P14	90	80	0	98	95	94	87	75
15	P15	0	94	85	100	100	95	90	92
16	P16	87	71	75	86	74	75	83	71
17	P17	100	85	65	85	78	83	77	67
18	P18	93	99	90	100	96	87	67	74
19	P19	100	96	88	75	84	77	83	100
20	P20	83	83	55	88	87	73	77	54
21	P21	94	97	88	94	94	94	80	79
22	P22	100	99	94	97	95	99	93	100
23	P23	90	87	84	88	98	92	63	71
24	P24	98	99	100	88	0	100	90	96
25	P25	100	99	93	89	89	88	87	96

- For Person 2 (P2), change the 0 for MT1 to 79 and MT2 to an 83. Close the edit screen. Then View the new file, Adjusted_Student_Grade.csv using the view command. **Take a Screen shot (0.5 pts):**

Results:



The screenshot shows the RStudio interface. The R Data Editor window is open, displaying the updated data for Person 2 (P2). The MT1 value has been changed from 0 to 79, and the MT2 value has been changed from 0 to 83. The Environment pane on the right shows the Adjusted_Student_Grades.csv file. The Console pane at the bottom shows the R code used to create the file.

```

R 4.2.3 - ~/Downloads/DATA101 /
> sample_of_4
[1] 22 23 28 15
> library(readxl)
> Student_Grades <- read_excel("Student_Grades.xlsx")
> View(Student_Grades)
> Adjusted_Student_Grades<-edit(Student_Grades)
> write.csv(Adjusted_Student_Grades, file="Adjusted_Student_Grade
+ .csv")
> View(Adjusted_Student_Grades)

```

c. Create a new file called MT_Grades.csv from the Adjusted_Student_Grade.csv file where you will select only the Person, MT1, MT2, MT3, MT4 and MT5 Grades, calling the subset file temp_MT

Save the file.

Then View the new file, MT_Grades.csv, using the view command.

Make sure you have the file tab open in the bottom right of R Studio.

Take a Screen shot (0.5 pts):

Results:

	Person	MT1	MT2	MT3	MT4	MT5
1	P1	100	72	96	90	94
2	P2	79	83	63	86	89
3	P3	100	90	96	93	100
4	P4	100	100	96	100	100
5	P5	100	94	88	92	86
6	P6	0	54	73	79	46
7	P7	87	82	85	82	0
8	P8	100	80	61	82	80
9	P9	100	56	69	82	52
10	P10	96	85	85	100	100
11	P11	98	0	78	88	93
12	P12	100	93	76	93	92
13	P13	100	99	92	89	99
14	P14	90	80	0	98	95
15	P15	0	94	85	100	100
16	P16	87	71	75	86	74
17	P17	100	85	65	85	78
18	P18	93	99	90	100	96
19	P19	100	96	88	75	84
20	P20	83	83	55	88	87
21	P21	94	97	88	94	94
22	P22	100	99	94	97	95
23	P23	90	87	84	88	98
24	P24	98	99	100	88	0
25	P25	100	99	93	89	89
26	P26	0	0	0	0	0

```

R 4.2.3 ~ ~/Downloads/DATA110/ >
> temp_MT<- subset(Adjusted_Student_Grade,select=c(Person,MT1,MT2,MT3,MT4,MT5))
> write.csv(temp_MT,file="MT_Grades.csv",row.names=FALSE)
> MT_Grades <-read.csv("MT_Grades.csv",header=TRUE)
> View(MT_Grades)

```

d. Create a new file called Exam_Grades.csv from the Adjusted_Student_Grade.csv file where you will delete MT1, MT2, MT3, MT4 and MT5 Grades, calling the subset file temp_Exam

Save the file.

Then View the new file, Exam_Grades.csv, using the view command.

Make sure you have the file tab open in the bottom right of R Studio.

Take a Screen shot (0.5 pts):

Results

	Person	Test1	Test2	FINAL
1	P1	77	50	74
2	P2	88	63	71
3	P3	0	93	92
4	P4	0	100	83
5	P5	90	77	71
6	P6	73	83	83
7	P7	86	97	75
8	P8	88	70	79
9	P9	85	70	79
10	P10	88	90	63
11	P11	89	70	67
12	P12	94	87	71
13	P13	87	80	75
14	P14	94	87	75
15	P15	95	90	92
16	P16	75	83	71
17	P17	83	77	67
18	P18	87	67	74
19	P19	77	83	100
20	P20	73	77	54
21	P21	94	80	79
22	P22	99	93	100
23	P23	92	63	71
24	P24	100	90	96
25	P25	88	87	96
26	P26	0	0	0

```

R 4.2.3 ~ ~/Downloads/DATA110/ >
> MI_Grades <-read.csv("MI_Grades.csv",header=TRUE)
> View(MI_Grades)
> temp_Exam <-subset(Adjusted_Student_Grade,select= ~(MT1,MT2,MT3,MT4,MT5))
> write.csv(temp_Exam,file="Exam_Grades.csv",row.names=FALSE)
> Exam_Grades <-read.csv("Exam_Grades.csv",header=TRUE)
> View(Exam_Grades)

```