	Bansilal Ramnath Agarwal Charitable Trust's Vishwakarma Institute of Information Technology **Department of Artificial Intelligence and Data Science**

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Class: SY	Division: B	Roll No: 272028
Semester: IV	Academic Year: 2022-2023	
Subject Name & Code: ES22201AD: Probability and Statistics		
Title of Assignment: Perform mean, mode, median for the given dataset		
Date of Performance: 03-04-2023	Date of Submission: 10-04-2023	

ASSIGNMENT NO. 5

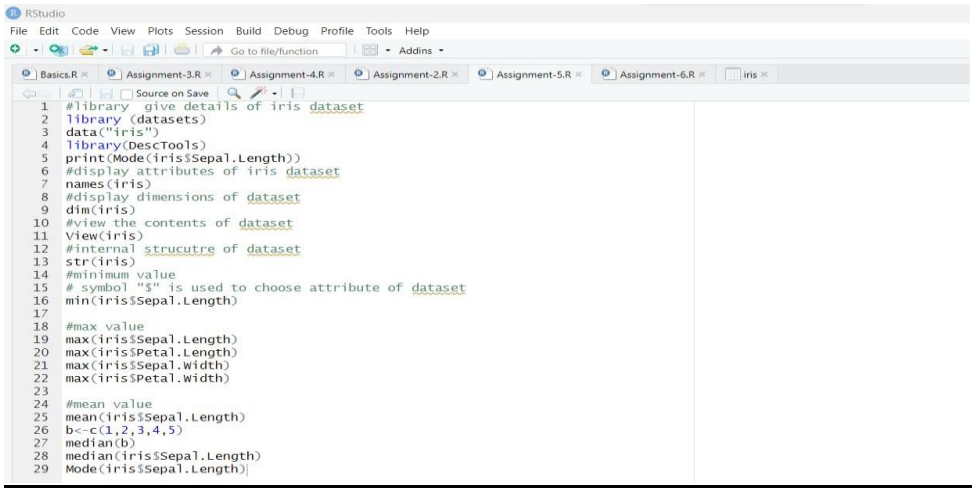
Background information:

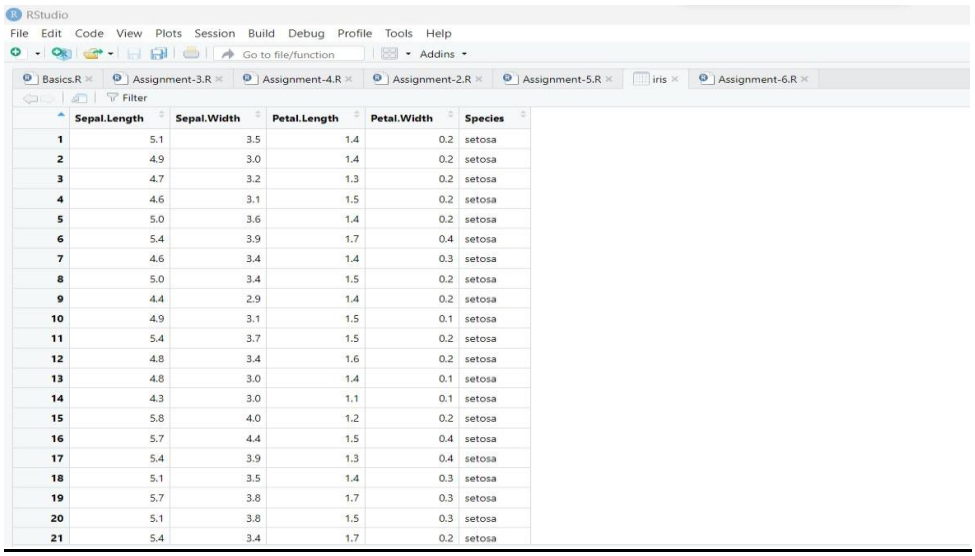
1. Calculate the mean: To calculate the mean, simply add up all the numbers in the dataset and divide by the total number of values. In R, you can use the mean () function to do this.

2. Calculate the mode: To calculate the mode, you need to find the value that occurs most frequently in the dataset. In R, you can use the Mode () function from the DescTools package to find the mode.

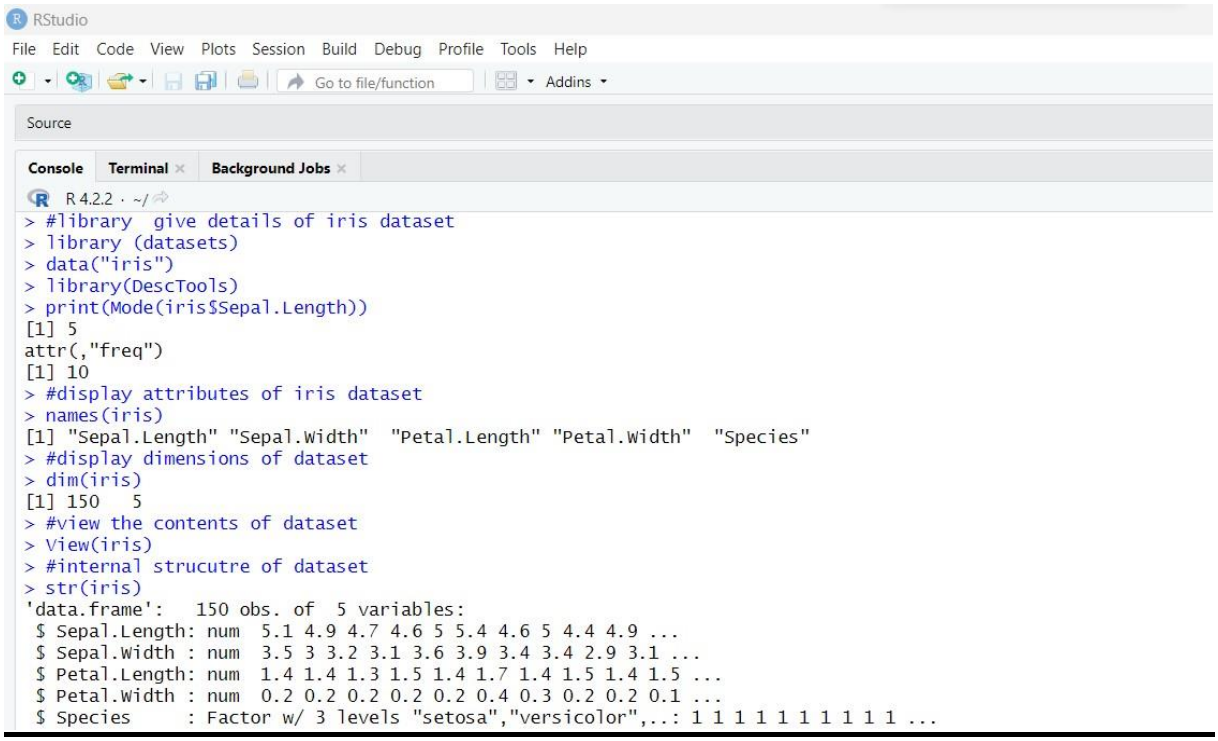
3. Calculate the median: To calculate the median, you need to find the middle value in the dataset when it is ordered from smallest to largest. In R, you can use the median () function to do this.

Program and Output:





	Sepal.Length	Sepal.Width	Petal.Length	Petal.Width	Species
1	5.1	3.5	1.4	0.2	setosa
2	4.9	3.0	1.4	0.2	setosa
3	4.7	3.2	1.3	0.2	setosa
4	4.6	3.1	1.5	0.2	setosa
5	5.0	3.6	1.4	0.2	setosa
6	5.4	3.9	1.7	0.4	setosa
7	4.6	3.4	1.4	0.3	setosa
8	5.0	3.4	1.5	0.2	setosa
9	4.4	2.9	1.4	0.2	setosa
10	4.9	3.1	1.5	0.1	setosa
11	5.4	3.7	1.5	0.2	setosa
12	4.8	3.4	1.6	0.2	setosa
13	4.8	3.0	1.4	0.1	setosa
14	4.3	3.0	1.1	0.1	setosa
15	5.8	4.0	1.2	0.2	setosa
16	5.7	4.4	1.5	0.4	setosa
17	5.4	3.9	1.3	0.4	setosa
18	5.1	3.5	1.4	0.3	setosa
19	5.7	3.8	1.7	0.3	setosa
20	5.1	3.8	1.5	0.3	setosa
21	5.4	3.4	1.7	0.2	setosa




```
> #minimum value
> # symbol "$" is used to choose attribute of dataset
> min(iris$Sepal.Length)
[1] 4.3
> #max value
> max(iris$Sepal.Length)
[1] 7.9
> max(iris$Petal.Length)
[1] 6.9
> max(iris$Sepal.Width)
[1] 4.4
> max(iris$Petal.Width)
[1] 2.5
> #mean value
> mean(iris$Sepal.Length)
[1] 5.843333
> b<-c(1,2,3,4,5)
> median(b)
[1] 3
> median(iris$Sepal.Length)
[1] 5.8
```

Conclusion: Thus, we have executed an R script to demonstrate the mean, mode, and median operations on a dataset processed using various pre-processing functions.