DAT 230: Data Visualization

Case Study 2: Story Storytelling with Basic Visualization

Exercise 1: R Crash Course (50 Points)

Name:_____ **Date:** _____
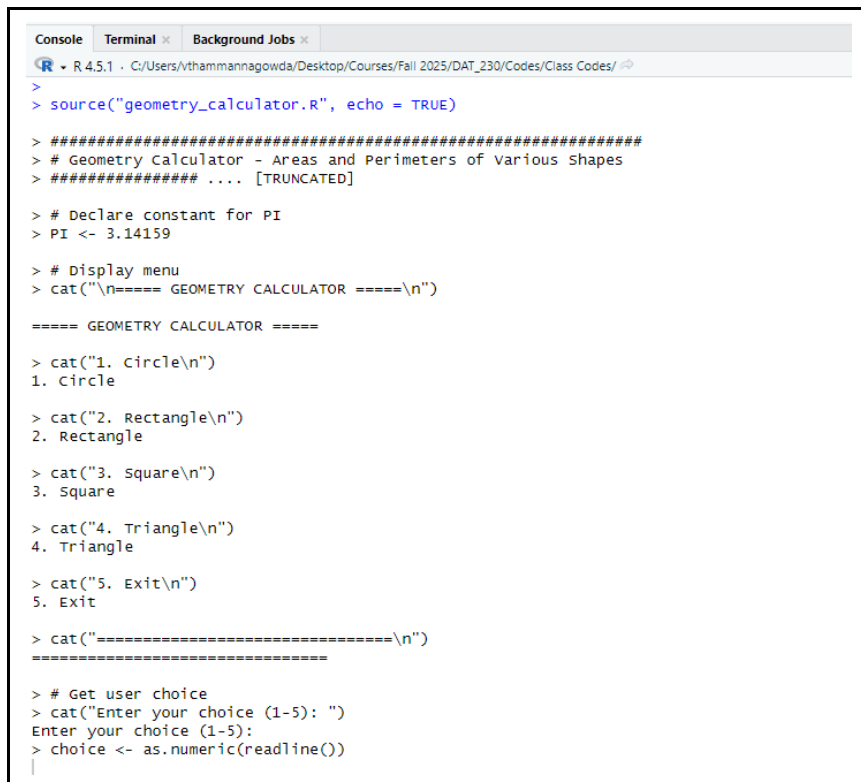
Instructions:

In this exercise, you will open the starter code **geometry_galculator.R** on R Studio and follow the steps below to build a robust system. The starter code runs only once. Use the knowledge and code snippets from the class demo to run the system efficiently. **Set the working directory.**

STEP 1: (10 Points)

a. Create a new file, **exercise1_test.R**, in the same folder that contains the file **geometry_calculator.R**.
b. **Run the following code:**

```
source("geometry_calculator.R", echo = TRUE)
```

c. You will see

d. Enter **5** as user input and record the output below

Output:

e. Run the code again and enter **1** as user input. Now, this triggers a prompt to enter radius of the circle, enter 22.2 as the radius and record the output

Output:

STEP 2: **(10 Points)**

a. Lets put the code in repeat mode and allow the user to decide when to stop.
b. Use the knowledge and code snippets from the class demo to run the system efficiently.
c. Record the output for 3 unique inputs:

Output:

STEP 3: **(10 Points)**

a. Use any LLM to get the formula to find the area and perimeter of the following geometric shapes: Rectangle, Square, and Triangle.

Shape	Area	Perimeter
Rectangle		
Square		
Triangle		

STEP 4: (20 Points)

a. Use the formula from STEP 3 to complete the starter code.

Geometry Calculator Test Record

Circle

Test #	Radius	Area	Circumference
1	12.45		
2			
3			

Rectangle

Test #	Width	Length	Area	Perimeter
1	23	7.5		
2				
3				

Square

Test #	Side	Area	Perimeter
1	5.67		
2			
3			

Triangle

Test #	Base	Height	Side 1	Side 2	Side 3	Area	Perimeter
1							
2							
3							

Additional Comments: