Week One - Assignment

PART 1

1. Setting up R and RStudio:

- Follow the instructions provided in the lecture notes to download and install R and RStudio.
- Create a new folder on your computer for this course (e.g., "Programming in R Course").

2. Creating a Project:

- Open RStudio and create a new project within the folder you just created.
- Organize your project files and ensure that you have separate folders for input and output files.

Note: **Make sure you install R before RStudio, as RStudio is an integrated development environment (IDE) for R.**

PART 2

Exercises

1. Generate a vector called **months** containing the names of the first three months of the year.

2. Generate two vectors with the elements "3, 7, 11, 15, 19" & "2, 4, 6, 8, 10" respectively. Calculate the element-wise product of these vectors

3. Generate two vectors representing the grade of student 1 and student 2 with the elements "85, 90, 78, 92, 88" & "76, 84, 89, 70, 93" respectively. Calculate the average grade for both students. Determine the total points earned by both students

4. Create a vector named colors with the elements "Red", "Green", and "Blue". Concatenate them to form a single string.

5. Generate two matrices: Matrix A: 2x2 matrix with elements (1, 2, 3, 4), and the other with elements (5, 6, 7, 8). Add Matrix A and Matrix B and assign to an object.

6. Using the base r "iris" dataset. Calculate the sum and mean of the sepal lengths of the setosa species.

PART 3

1. Brainstorming for Final Assignment:

- Begin thinking about potential data sources from Ghana Statistical Service and topics for the final assignment. Consider what interests you and what data might be available from GSS.
- Write down your initial ideas for discussion.

2. Group Formation Exercise:

- Form groups of 3-4 students with similar interests in data topics for the final assignment.
- Discuss and share your initial ideas for the final assignment within your group.