Data Science with R

Assignment # 1

1. Loop Task

Write an R script using a for loop that prints the square of each number from 1 to 10.

2. Switch Task

Create an R program that performs one of the following operations (add, subtract, multiply, divide) on two numbers using a switch statement. Let the operation be stored in a variable.

3. dplyr Task Using Built-in Dataset (iris)

Using the built-in iris dataset, perform the following using the dplyr package:

- Filter rows where Sepal.Length is greater than 5.
- Create a new column named Petal.Area as the product of Petal.Length and Petal.Width.
- Group the data by Species.
- Summarize the data to get:
  - Average Sepal Length
  - Maximum Petal Area
  - Count of records per species
- Arrange the result in descending order of average Sepal Length.