Assignment 2 Coercion, factor, accessing data

Due date: see syllabus

Purpose:
In this assignment, you will have the opportunity to practice R commands and functions related to coercion. You will create factors for data frames. You will also practice different ways to access data.

Tasks: Write an R script that performs the following operations in the order listed.
At the beginning of each task, write a comment marking the task number.
Name the file as: lab2-<your last name>.R

1. Create a vector with 10 numeric values using the colon operator. Coerce the numeric data to double precision. Print the output and check data type both before and after the coercion. (1 point)
2. Create a vector with 100 numeric values starting from 10, with each value equal to the previous value +8. Print output. (1 point)
3. Create a vector with at least 50 data elements repeating 6 different words of your choice. Print output. (1 point)
4. Create a matrix with 5 rows and 4 columns. Coerce the matrix to data frame. Print the output and check data type both before and after the coercion. (2 points)
5. Create a data frame named 'studentTable' with 5 columns and at least 10 rows. Each column should contain appropriate data type that fits the column name. (3 points)
    a. The first column is called 'student ID'.
    b. The second column is 'firstName'.
    c. The third column is 'lastName'.
    d. The fourth column is a factor variable called 'major'. It should contain 3 different values corresponding to: 'CS', 'IS', 'IT' (labels).
    e. The fifth column is 'GPA'.
    f. Print the data frame.
6. Export the 'studentTable' data frame your created in task 5 to a txt file titled "student table.txt". Import "student table.txt" to a data frame called 'readTXT' using the R built-in function. (1 point)
7. Export the 'studentTable' data frame your created in task 5 to a csv file titled "student table.csv". Import "student tabel.csv" to a data frame called 'readCSV' using the R built-in function. (1 point)

Submission:
Submit the R script file to Blackboard via the Lab2 submission link