Department of Information Systems and Technologies

CTIS 365: Applied Data Analysis

SPRING 2025-2026

Lab Guide #1

OBJECTIVES: Vectors, Matrices, Data Frames and Package Installation
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1. Open R-Stduio

2. Open New File (RScript)

3. Code the following steps:

- Write "This is my first R script" as a comment
- Assign x = 34 and y = 16
- Calculate z that is equal to sum of x and y.
- Calculate w that is equal to mean (average) of x and y.
- Display the results of operations

4.

a. Find how many students pass from the course.

- midterm.txt and final.txt have grades of the students.
- To pass from the course students should collect at least 40 point.
- Grade of a students is sum of 40% of midterm and 60% of Final.

Output:

21 student passed the course

b. Print the passing grades

Output:

53.4 79.6 52.0 91.4 89.8 73.2 83.6 58.0 60.2 82.8 70.6 71.0 73.6 81.4 57.6 87.4 75.0 66.2 98.8 54.0 77.6

5. By using the midterm and final grades files in the above (4.) question, create a matrix and add the passing grade of the students as a new column to the matrix.

Output:

```
     midterm final grade
[1,]      57    51  53.4
[2,]      76    82  79.6
[3,]      46    56  52.0
[4,]      86    95  91.4
[5,]      41    31  35.0
[6,]      91    89  89.8
```