Problem Set 3: Python

Your Name

Date

Introduction

Try to solve each problem using day three's material and some minimal Googling.

Do this problem set in a `.py` script. Use comments to indicate which question you're on.

This problem set should only take one hour.

Problem 1: Basic Operations

Create two numeric variables with any values and perform basic arithmetic operations (addition, subtraction, multiplication, division) on them. Assign the result of a division to a new variable and print it.

Problem 2: Working with Vectors

Create a numeric vector with at least 5 elements. Compute the sum and mean of the vector. You will need to import the `numpy` package (or something similar) to compute the mean.

Use a logical comparison (true/false) within a for-loop to print if an element of the vector is greater than the mean. You may need to use the `print()` command.

Problem 3: Loop and Function

Write a function that takes a numeric input and returns the square of the number.

Use a for loop to apply this function to each element of a numeric vector that you create.

Store the results in a new vector that you first initialize by running `newVec = [999, 999, 999, 999, 999]`. Print the new vector using the `print()` command.

Problem 4: Conditional Logic

Use a for loop and an if statment to replace values of the following vector with `999` if they are even.

`vec = [ 1,2,3,4,5]`

Problem 5: Reflect

Write a brief reflection (1-3 sentences) on what you found challenging and what you learned from this problem set.