CS 3203

Assignment 4

In this assignment you will demonstrate proficiency creating unit tests for a simple method / function. To demonstrate this you will write code for a simple method / function and then create unit tests which you will execute in the programming language and tool (e.g., Integrated Development Environment, IDE) of your choice.

In a programming language of your choice (which has known unit testing capabilities or existing tools such as Java's JUnit or TestNG libraries, Python's unittest module, NodeJS's / JavaScript's Jest, etc.) create a function or method which computes the following: Given two inputs, a list / collection / array of numbers called `numbers` and a single number called `target`, return a boolean value indicating whether any two different values in the `numbers` parameter added together are equal to the `target` parameter value.

Then, thinking about the concept of *equivalence classes* of inputs and outputs for this method, define a series of 8 or more unit tests and ensure your function / method being tested passes all tests.

Your submission / solution to this assignment **must** be a PDF document which includes:

1. A copy of your function / method meeting the requirements above
2. A textual or graphical depiction of your equivalence classes for testing the function / method. Include in your description whether the equivalence classes are disjoint (no overlap) or not, and whether they cover all possible inputs / outputs for the function / method.
3. A copy of the 8 or more unit tests written as code that you created.
4. A screenshot of the successful execution of your 8+ unit tests using whatever tool (an IDE, a command-line execution) which depicts all unit tests' names and their success (i.e., that your function / method passed each test)

Constraints

- Submit your completed assignment on Canvas in the appropriate assignment (should Canvas be down or experiencing issues, e-mail your assignment to nicgrounds@ou.edu)
- Deadline is 11:59 PM on Thursday, March 9, 2023
- Be sure your name is clearly shown on the submission, as is the exercise which each answer is for
- Your submission needs to be in a PDF format
- Name your submission document(s) as yourname-assignment4.pdf where yourname is your name (first name, last name, full name, whatever).
- 5% of credit will be awarded for following these naming Constraints.