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Module Four Assignment

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Welcome everyone to Module Four of CS-320 Software Test Automation and QA,

In the last module, you developed the first milestone for the mobile application. In Module Four, you will continue to expand on these concepts by developing the task object and task service. This week's deliverable will continue to reinforce the Module Three concepts of writing code and unit tests to verify and validate the given requirements.

This week you will be developing a task service. This is a common approach to building complex systems to handle user requests. You will learn how to construct a service per the given requirements and provide tests that verify and validate those requirements. Please pay close attention to the requirements. This service will not require a database or have a user interface. Software testing is important for many reasons, such as reducing cost, eliminating defects, and minimizing customer dissatisfaction. As a professional developer, you will be expected to know how to write JUnit tests for the software artifacts that you develop. These assignments will help you build the necessary skills to make you successful in industry.

Please review the Module Four resource which is this Tutorial Using JUnit



Tutorial Using JUnit

In this tutorial, we will be developing a student object with the following requirements:

- The student object will have a name field that will be a String.
- The student object will have an address that will be a String.
- The student object will have a student ID that is a String and cannot be null, and the String shall be less than five characters.

Let's Look at the Student Class

The student class takes in three arguments in the constructor. It takes the name, the address, and the student ID. Please also note that there is a conditional check in the constructor to make sure that the student ID is not null or is no longer than five characters; otherwise, we throw an exception that the input is invalid. This check is done to ensure that the following requirement is being met: "The student object will have a student ID that is a String and cannot be null, and shall be less than five characters."

```
Student.java X
1 package main.java.model;
2
3 public class Student {
4
5     private String name;
6     private String address;
7     private String studentId;
8
9     //The requirement for student ID is that it cannot be null and it cannot be longer than 5 characters or through an exception
10    public Student(String name, String address, String studentId) {
```

For the Module Four assignment, below are typical areas that will need to be tested for the contact object and contact service:

- Task object:
 - Test creating a task object
 - Test if an error occurs if the task ID is too long
 - Test if an error occurs if the task name is too long
 - Test if an error occurs if the description is too long
- Task service:
 - Test adding a single task
 - Test adding multiple tasks
 - Test if an error occurs when adding a task with a duplicate ID
 - Test adding and getting a task back from the service
 - Test updating a task
 - Test deleting a task

Project One is due in Module Six. Review the Project One Guidelines and Rubric for more information. In the next few modules, you will continue working on the milestones that directly relate to this project. Consider previewing these

assignments, because reviewing assignments early will help you understand how the concepts in each module lead up to the larger project.

Submit the Module 4 milestone by Sunday.

Submit your Journal assignment by Sunday.

Rob