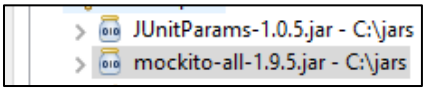
UECS2354 Software Testing
Lab Test

Duration: 2 hours **Total: 40 marks**

NOTE: ALL PCs are scheduled to shutdown at 6pm. Go to Start>Search "Task scheduler". Then look for "shutdown" task and disable it.

Setup

Create the directory **C:\jars** and copy **JUnitParams-1.0.5.jar** and **Mockito-all-1.9.5.jar** into it. Configure **Build Path** to include jars files for **C:\jars**. (2 marks)



Download the questions zip file from WBLE and open the project in Eclipse.
Fill your name in each source file.

Part 1: [20 marks]

The **`MiniGame`** class contains a method called **`getCharge()`**, which will calculate the charge based on playing duration and also promotion, if applicable.

Study the decision structure in the **`getCharge()`** method.

To do:

1. Add additional codes in the `getCharge()` method to throw ***IllegalArgumentException*** for unacceptable duration values. (5 marks)

2. Write the necessary parameterised test methods in **`TestMiniGame`** class to test the **`getCharge()`** method by using **Boundary Value Analysis** approach. (15 marks)

Part 2: Stub/Mock [18 marks]

There is method called **`initPlayer()`** in the **`Player`** class. This method will return the player's level (**`lvl`**) based on the player's username. The player's level will be used by the **`getBonus()`** method in **`MiniGame`** class to determine the bonus rate.

To do:

1. Add the appropriate constructors in **`MiniGame`** class so that mock object can be used for testing purposes. (3 marks)
2. Add additional codes in **`updateLevel()`** method to throw IllegalArgumentException when score is a negative value. (2 marks)
3. Write a parameterised test method to test the **`getBonus()`** method. (5 marks)
4. Write the necessary parameterised test methods to test the **`updateLevel()`** method in **`MiniGame`** class by using **Boundary Value Analysis** approach. The test must **verify** that the correct level (Junior/Senior/Master) is passed to the **Player's updateLevel()** method. (8 marks)

Submission:

Create a **folder and label it with your name**, copy the **Eclipse project folder** into this folder. Then zip it and submit through WBLE.