

Software Testing and Quality Assurance, final exam, group J

Before anything else, read carefully:

- Rename the root folder of the project in format index_name_lastname
 - Rename the project in the same way
 - By doing so, you are signing your work, and any projects submitted without a signature will not be considered for grading
 - This is an elimination task and if not completed the result will automatically be 0
 - The same rule applies for projects that don't have the "Turn in" button clicked in the Assignments section
 - This the way you submit work and until that button is pressed your work cannot be seen in the system
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1. Method chocolateType of the ChocolateFactory class returns the type of chocolate based on the temperature that is cooked at. At least 100 degrees is needed to cook white chocolate while everything hotter than 110 and colder than 125 degrees will result in milk chocolate. The dark chocolate is cooked at 125 degrees or higher. Use the blackbox techniques (equivalence classes, boundary values) to detect bugs, if any.
 2. The same class has an additional method chocolatePrice. The method returns the price of the chocolate based on its type, packaging, and extra ingredients. For milk chocolate the price is 150, and if it has hazelnuts, it should be 200. The price of dark chocolate is 300. Lux packaging increases the price by 50%. For the following method perform these tests:
 - a. Cover all statements (100% statement coverage)
 - b. Cover all decisions (100% decision coverage)
 - c. Cover all paths (100% path coverage)
 - d. Clearly mark in the JUnit code which tests cover which items, by using comments and test names.
 3. CFG (control flow graph) which for the previous task should be sent together with the assignment.
 4. The Song class represents a song that can be played in a MusicPlayer. The methods that need to be tested are the playSong and nextSong methods which have void return types. The MusicPlayer is not implemented. Hint - use JMock or Mockito.
 5. Parametrized test - Class Laundromat has one method, startWashing, which can accept any amount of coins. Based on the inserted coins the washing process will take longer. Create parametrized test for this method.

6. Create TestSuite, and configure it to run all test classes created in previous steps. Laundromat test should be ran first.