| Logoslogo | INSTITUTE OF TECHNOLOGY TRALEE    **Software Testing**  **Assignment 1 35%** |
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**Due Date: 1pm Friday 23rd March 2018**

**INSTRUCTIONS**

**The Loan Class.**

The Loan class accepts a loan amount and a time period for the loan. Based on the amount and the time period it calculated the interest rate to be applied. The class will calculate and return the monthly payment amount or the total payment amount.

Loan amount can be between 500 and 10000 euro. Loans can be for 1 to 5 years. Interest is applied as follows.

|  |  |  |
| --- | --- | --- |
| **Loan amount** | **Period** | **Interest rate applied** |
| 500-5000 | 1-3 years | 10% |
| 5001 – 10000 | 1-3 years | 8% |
| 500-5000 | 4-5 years | 6% |
| 5001-10000 | 4-5 years | 5% |

**Part A**

Using your Specification testing techniques identify the test conditions and the test cases required.

**Part B**

Take the code giving to you for the Loan class and implement the tests created in part A using Junit. When testing a class you should follow the following steps.

1. Test the constructor

2. Run a positive test through each of the public methods.

3. Run your specification based tests. You can divide these into positive tests and negative tests.

4. Turn on code coverage. Include a copy of the code coverage report in your answer folder. Are there any parts of the code that require more testing. If so add the required tests. Include a comment in your test file to indicate any such tests and why you are including them.

5. Error Guessing. Are there any other tests you think should be run.

**Part C**

In the project folder create the Customer Class (the code is in the assignment folder). The customer can take out a loan. You want to test the Customer takeOutLoan method but don’t want to call the Loan class.

Create a new test class for the customer class. Run **ONE** positive test for the takeOutLoan method using mock objects.

**Submission**

Create a folder and name it – **your name – Tnumber** eg Claire Horgan T000123

Copy your project into this folder.

Also copy your word document where you completed your specification test techniques.

Include a copy of the code coverage report.

Drop you folder into the **Software\_Testing \_CA\_Dropbox** folder.

Note the once you submit it, you will not be able to see it so make sure you have everything included before you submit.

If you have any questions please email me at [Claire.horgan@staff.ittralee.ie](mailto:Claire.horgan@staff.ittralee.ie)