**Unit Test and Refactoring Questions**

1. Write a program using TDD to do the following (20 marks):
2. This program will generate a random number between 1 to 100. User will be asked to guess the number or enter ‘q’ to quit the program. The program will keep asking the user to guess the number until the user guesses it correctly or has quitted. Once the user has guessed it correctly or quitted, the program will tell the user how many attempts have been taken.
3. Refactor your code – Code smell can give indications that there is some issue with the codes and can be solved by refactoring. Identify issues and their related code smells in your code. Include solutions to fix up the issues and implement them.
4. Create a Git directory for your assignment (including word or pdf documents and programming code)
5. Capture screenshots and write briefly the steps you have taken to create this program

**Answer**

Requirement 01 - Input validation – Here I written 4 test cases to check the user’s input is valid or not.

* 1. When input is above 100
  2. When input is 0
  3. When input is between 0 – 100
  4. When input is empty

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Refactoring

Requirement 02 –

When input is empty, Application should display “Please enter a number between 0-100”.