

Assignment #2

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For each task, write your answers and findings in a README file together with any code.

1 REFLECTIONS

1.1 COMPUTER MOUSE

Identify the types of testing you would perform on a computer mouse, to make sure that it is of the highest quality.

1.2 CATASTROPHIC FAILURE

Find a story where a software system defect had a bad outcome. Describe what happened. Can you identify a test that would have prevented it?

2 TWO KATAS

Complete the following using TDD. Remember the TDD mantra.

2.1 STRING UTILITY

Use TDD to create a string utility with the following methods:

- Reverse string (aBc -> cBa)
- Capitalize string (aBc -> ABC)
- Lowercase string (aBc -> abc)

Don't use any built-in string utility – create your own. Remember, the exercise here is to use TDD, not to deliver a working utility without tests. If there are no tests in the solution, it won't be accepted.

2.2 BOWLING GAME KATA

Complete the Bowling Game Kata using TDD. The slides can be found here:

<http://butunclebob.com/files/downloads/Bowling%20Game%20Kata.ppt>

3 INVESTIGATION OF TOOLS

3.1 JUNIT 5

Investigate JUnit 5 (Jupiter). Explain the following, and how they are useful.

- @Tag
- @Disabled
- @RepeatedTest
- @BeforeEach, @AfterEach
- @BeforeAll, @AfterAll
- @DisplayName
- @Nested
- assumeFalse, assumeTrue

3.2 MOCKING FRAMEWORKS

Investigate mocking frameworks for your preferred language. Choose at least two frameworks, and answer the questions. (One could be Mockito, which we saw in class.)

- What are their similarities?
- What are their differences?
- Which one would you prefer, if any, and why?

4 HAND-IN

Make the katas individually. The other things may be done in groups. Handin on the date given in peergrade. The hand-in should be code in a repository or zip-file, and a README.md with the written answers.