Software Testing Techniques

We have worked with different testing techniques and strategies. From week 1, we started with introduction to these software tools and techniques. Later, we worked on why the role of testing is important. In week 2, we have learned about continuous integration which means sharing all the development tools and work on one platform. Moreover, we also have learned about the difference between dynamic and static testing. Static testing comes before dynamic testing. From week 3, we have been introduced to Junit testing, which is important step of testing. In Junit testing, different test cases where run to check the validity of java programming. From week 3 to 5, we have continuously developing java programs through milestones and then implementing Junit testing through various strategies. The program we created involve Contact Service, Task Service and Appointment Service. Junit testing is a framework of testing, we mainly learn how to run Junit4 testing.

In Junit 4 testing, we do the basic testing. We learned about Junit 5 testing too but did not

implement it yet. Junit 5 is the latest version of Junit family. It works with including dependencies to the system. Junit 5 consist of three main parts while Junit 4 have all in one place. Junit 4 requires java 5 while Junit 5 requires java 8 or above to run. In Junit 4 we use org.junit.assert while Junit 5 contains org.junit.jupiter.assertions.

Static and dynamic testing are performed to check the code from errors. But static testing is run before compiling the code while dynamic is performed after compilation. Both are perfect but dynamic testing is performed before static testing to check the requirements data with some sample data. Before running dynamic testing, we will not be sure about the defects. The dynamic testing while running help reduce the cost of execution and time. We will find the errors before executing the real product. The main difference is that static testing runs after dynamic and dynamic can only be generated when the code is ready to be executed. Both of the testing are really important in performing real world tasks.