**Team 9: Minimal-ToDo**

**Summary:**

Minimal ToDo is an android app where you can track your daily todos. With this app, you can create your own todo list and manage by setting date and time. Along with date and time, you can set reminder and snooze options for created todos. Also, receives notification for each todo on set date and time.

For our project we chose an Android application. As recommended we chose an application which we felt had limited test coverage, but on exploration turned out that it did not have unit test coverage at all. This was something we discovered during the learning process. We added a unit test to an entire class using Mockito, JUnit and test runner, the frameworks recommended by Android on their site <https://d.android.com/testing> . We learnt the way to create and write tests and implemented it for class.

**Experiences and Learnings:**

Unit Testing:

Code Coverage:

Regression Testing:

Stress Testing:

Stress testing is the process of determining the ability of a computer, network, program or device to maintain a certain level of effectiveness under any conditions. This process measures the frequency of errors or system crashes. Stress testing benefits by revealing application issues that only become apparent under these extreme conditions. Proper stress tests can also help you uncover the Synchronization and timing bugs, Interlock problems, Priority problems, Resource loss bugs, Memory leaks, Data loss & corruption etc. So, with stress testing you can identify the potential breaking points in your application, which will allow you to correct them before they become expensive issues in production.

For this app, we have done stress testing for 100 Processors and 100 loops. It takes around 115mins to complete entire activity.

*./StressTestApp.sh -NumBackGroundProcesses 10 -NumberLoop 10*

Monkey Testing:

The Monkey is a command line tool that runs on your emulator or device and generates random streams of user events such as clicks, touches, or gestures, as well as a number of events. Basically, Monkey is used to stress-test applications that you are developing, in a random yet repeatable manner.

To run monkey testing, we have to launch the Monkey using a command line on our development machine. Because the Monkey runs in the emulator/device environment, we had to launch the application from a shell in that environment and entered Monkey commands directly. Below is the syntax:

$ adb shell monkey [options] <event-count>

and in case of our application the command will look like:

$ adb shell monkey -p com.avjindersinghsekhon.minimaltodo -v 500