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# Final Project Report

The following report consists of a thorough explanation and discussion regarding the final project for EECS3311. The report focuses on design of the project, implementation of the project system, and testing of the project system.

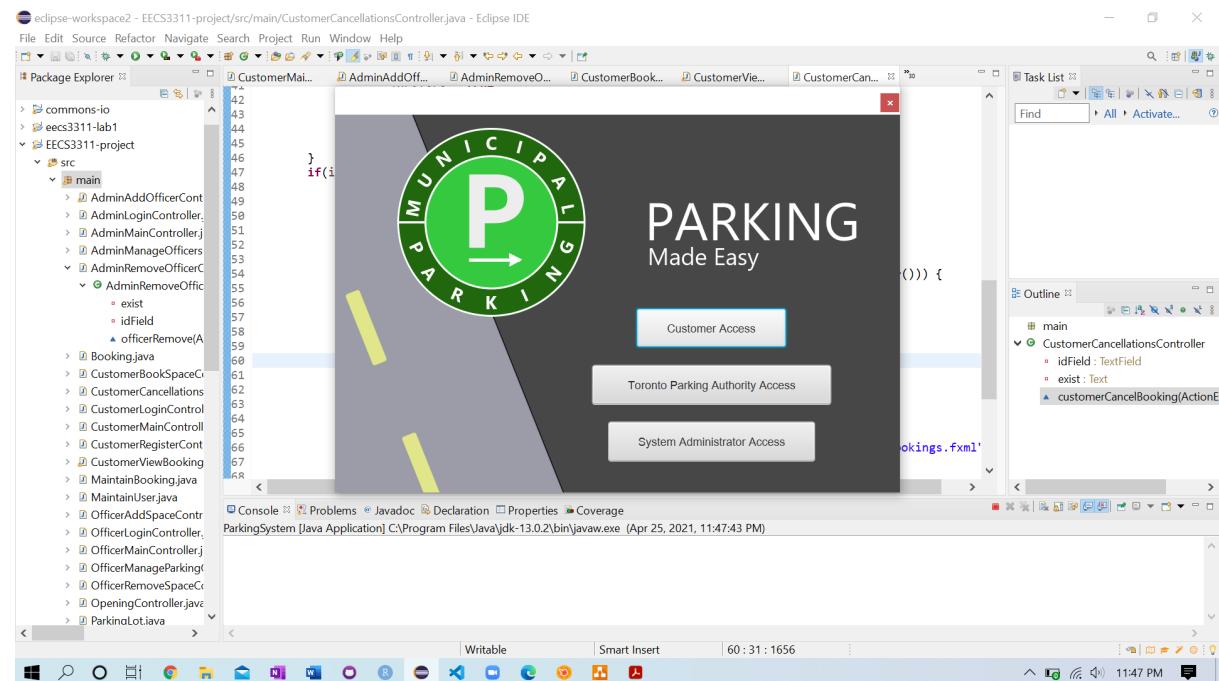
## Project Design

There were changes made to the original design. The observer pattern was not used. The User combined both the customer and the officer. The class diagram is included.

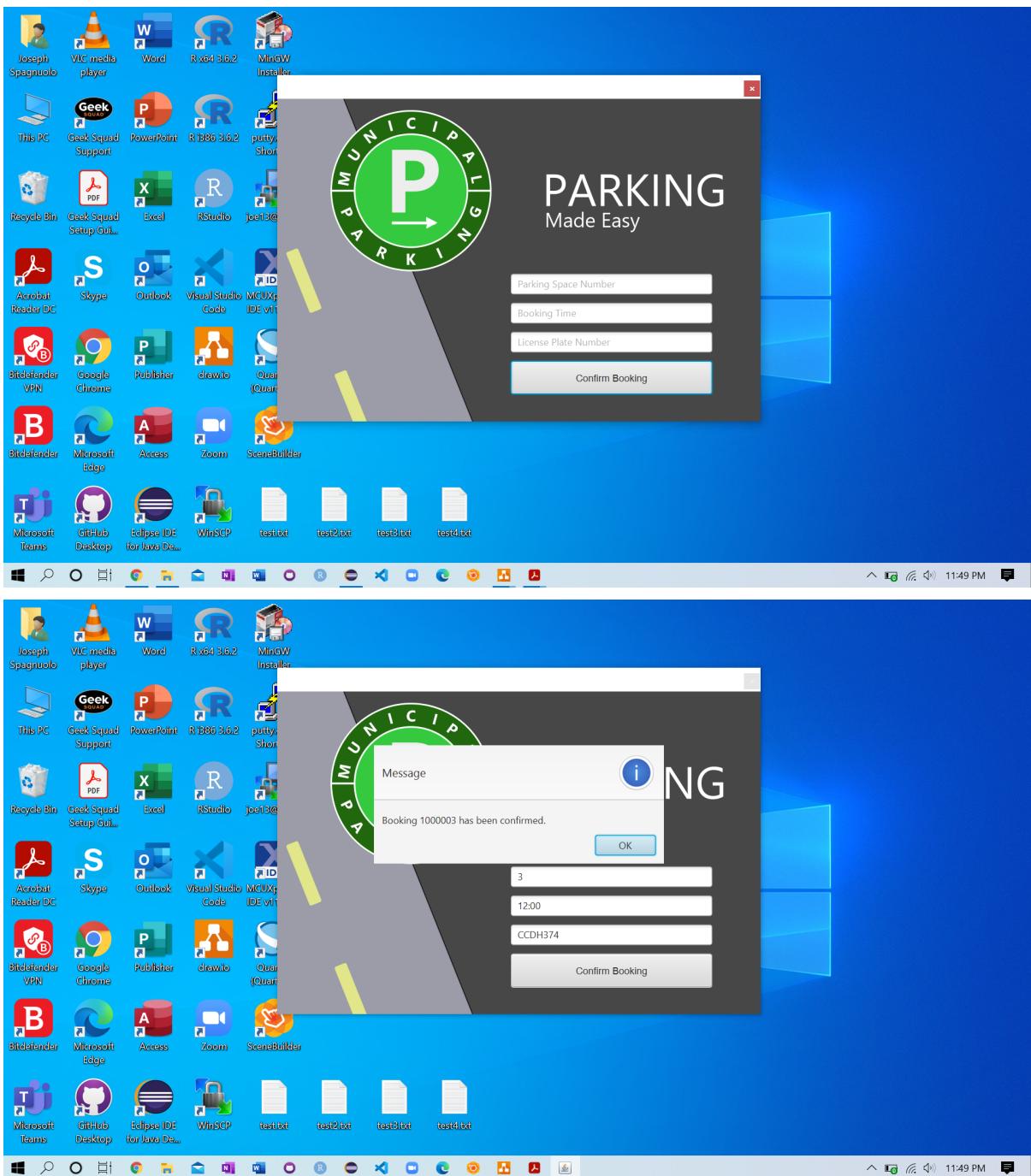
## Project Implementation

After careful consideration of the design methodology, the project was implemented in order to fulfill the requirements set out. The implementation began with creating highly impactful GUIs along with a smooth interface for all users.

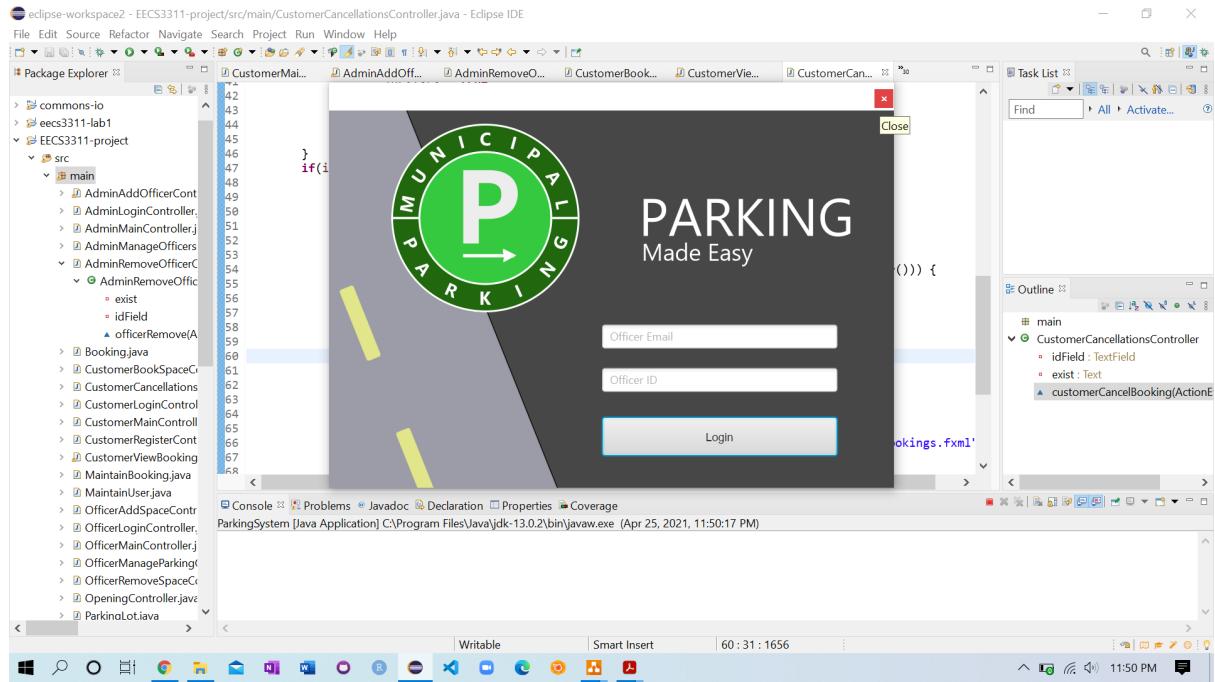
## Customer Interface:

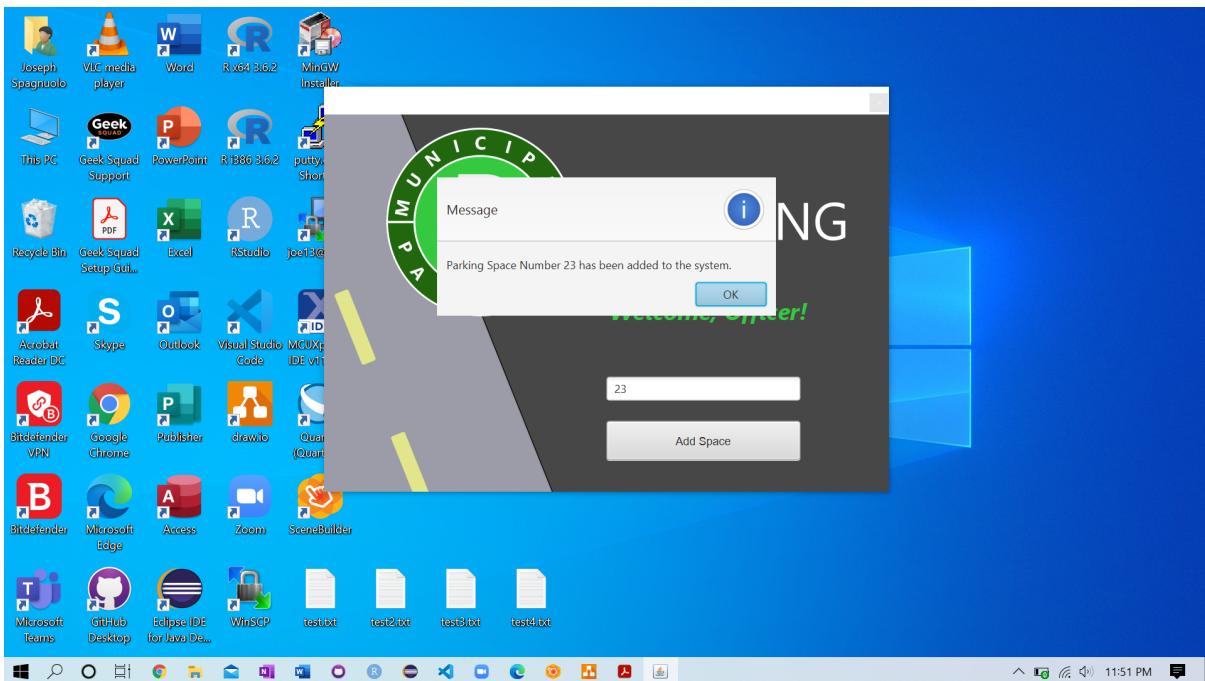






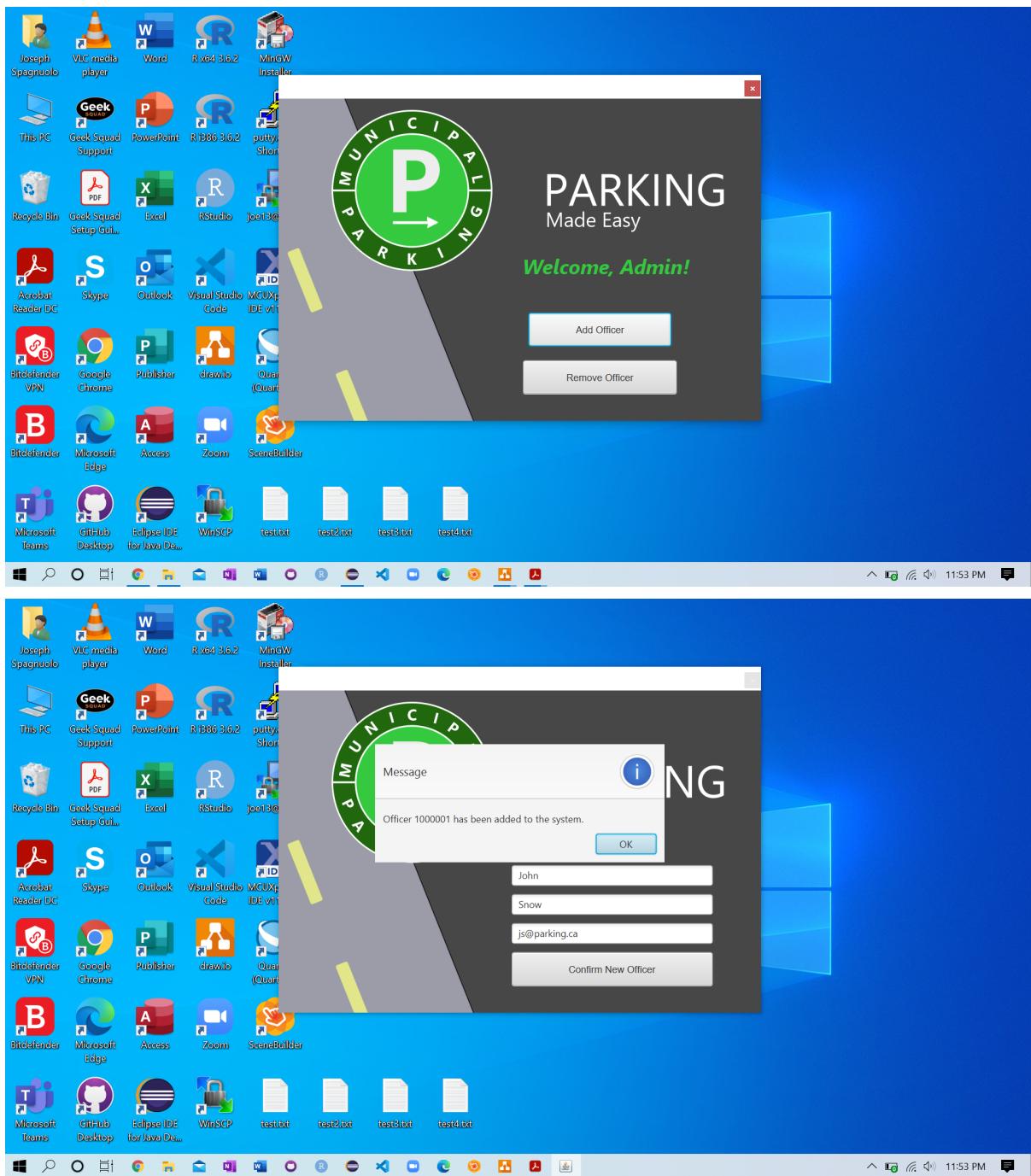
Officer Interface:





Admin Interface:





## Project Testing

In order to ensure that the project was designed and implemented correctly and effectively, the system must be thoroughly tested. The main testing procedure for the program focused on if the program was passing test cases and if the program had effective code coverage. Many test cases were created in order to accurately test the required features of the program. All test cases must pass in order for the program to be considered satisfactorily meeting the requirements. The code coverage for all non-GUI classes was assessed to meet a goal of 80% average coverage. As shown below, these two criteria were met sufficiently.

eclipse-workspace2 - EECS3311-project/src/test/ParkingSystemTest.java - Eclipse IDE

File Edit Source Refactor Navigate Search Project Run Window Help

Package Explorer JUnit CustomerMail... AdminAddOff... ParkingSyst... CustomerBook... CustomerView... CustomerCan... Task List

Finished after 0.031 seconds

Runs: 4/4 Errors: 0 Failures: 0

test.ParkingSystemTest [Runner: JUnit]

```
10 public class ParkingSystemTest {
11     @Test
12     public void test1() throws Exception {
13         String path = "C:\\Users\\Joseph\\Desktop\\test2.txt";
14         MaintainUser maintain = new MaintainUser();
15
16         maintain.load(path);
17         assertEquals(maintain.officers.size(), 1);
18     }
19
20
21     @Test
22     public void test2() throws Exception {
23         String path = "C:\\Users\\Joseph\\Desktop\\test.txt";
24         MaintainUser maintain = new MaintainUser();
25
26         maintain.load(path);
27         assertEquals(maintain.users.size(), 6);
28     }
29
30     @Test
31     public void test3() throws Exception {
32         String path = "C:\\Users\\Joseph\\Desktop\\test.txt";
33         MaintainUser maintain = new MaintainUser();
34
35         maintain.load(path);
36     }
37 }
```

Failure Trace

Console Problems Declaration Properties Coverage

ParkingSystemTest (Apr 25, 2021 11:55:51 PM)

Element	Covered...	Covered Ins...	Missed Instr...	Total Instr...
> CustomerViewBooking	0.0 %	0	34	34
> UniqueID.java	0.0 %	0	13	13
> MaintainUser.java	96.7 %	263	9	272
> User.java	100.0 %	72	0	72
> test	100.0 %	102	0	102

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