Dublin City Council require a system to allow the garages involved manage the National Car Test (NCT) scheme. The system should have the following features:

All interactions with the system should be performed through a graphical user interface

The system should allow two levels of users which are offered different functionality

- Administrators: allowed full access to details of all bookings and read access to all test results, but are not allowed to enter test results themselves

- Mechanics: allowed to enter test results for a car they have tested

1. Administrators should be allowed make a new appointment for a car owner, entering the details of the owner and their car and choosing a time and date for their appointment.
2. Administrators should be able to change the details of any appointment
3. Administrators should be able to cancel appointments
4. Administrators should be able to print the results of any test
5. When a mechanic logs into the system they should be given a list of all of the cars that remain untested on that day
6. Once a mechanic selects a car to test they should be allowed to enter the results of all tests for that car
7. Results of all tests should be saved and associated with the mechanic who performed the tests

**Design Approach**

For this project I'm gonna be developing an Android Application using the android studio IDE.

This application will allow the Employee's of this NCT Management be able to navigate the very easy with an easy to learn user interface. I will have a Login System that will allow a mechanic or administrator employee to their respective interfaces.

**The Administrator Panel**

The Administrator Panel will have a four buttons that do certain functions these are:

**Create Appointment**

This function will allow the **Admin** to create an appointment,

It will contain their basic personal details such as their first name,last name,phone number,email,address etc..

They must also be able to choose a **time** and **date** for when the vehicle will be tested.

It must also allow them to enter the vehicle details such as the vehicles plate number,model,make,year created,mileage,color etc..

**View Appointment**

For this functionality the Admin can go here to see a list of cars that's due for testing, he/she can also filter the list by entering the vehicles plate number.

On the list there will be a remove and edit Button that will modify that certain car that you clicked.

The remove button cancels/delete the appointment, it will delete all the details regarding that appointment such as the vehicles,customer and appointment details.

The edit button allows the admin to modify that cars appointment, when they click on it, it will display that appointment past entries for their customer,vehicle and appointment time and date details, and the database should be updated once done.

**View Results**

For this function this allows the Admin to view all the cars that are tested and they should also be able to filter the list using a search box like the appointment by entering the car's plate Number.

Once the admin choose a car from the list then they should be able to see the result of the tests, they'll be able to see the car parts test results if they fail or not, there will also be details on each parts that was entered by the mechanic.

**View Users**

For this function this allows the admin to view a list of the employees, he/she can also add new employees with either the mechanic and administrator type.

**Mechanic Panel**

For this Employee Type he only have a single job to do and it's to test the cars that he picked and enter the details for each part.

My plan for this user is to have a mechanic login and his main page will be show with the all the car that are due to be tested on the current date e.g if the date is september 25 2017 then all cars the are appointed on that date will be displayed else if there isn't any it will be empty.

When the mechanic pick a car there will be a list of parts that are need to be tested when a mechanic click a part he/she will be brought to a page or a dialog that will allow the mechanic to enter the details, then after he/she finish entering then that vehicle part would be deleted from the list.

The mechanic must test all parts before the test completes.