In this report I am writing about testing using black box testing, white box testing, quadrant 3 testing and quadrant 4 testing. The reason that testing is important is because you do not want random people accessing the system which contains users personal and sensitive information, by testing you check that people who should not have access to the system do not get access to the system. We also want to make sure that doctors, nurses, receptionists and patients are not allowed to see data that they do not have access to. By testing we also confirm that no data is going to be lost in any way e.g. if the system breaks or unauthorised access. Testing also ensures that patient records are correct and no errors or mix ups are being done in the system that could lead to risk to the patients health.

Black box testing is done at the beginning of the sprint or system discovery. For this kind of testing you create a feature file for the function or business requirements that need to be tested. Here the business analyst and customer can create or draft the feature files. Then the tester and developer can implement the behaviour driven development testing using cucumber gherkin in a programming language of their choice.

White box testing happens iteratively along the way as the code is being written, it is being checked and updated along the way. At this stage you would use a mocking framework as you would not have access to or set up the database, e.g. Mockito. In this stage you can do static code analysis such as sonarqube to check for inefficient code, dead code, and code coverage. Here the developers would test the code as they have written it and the testers would assist them with it.

Quadrant 3 testing happens iteratively as more features and sections of the system are built. This testing is based on visual, so making sure that you can see the login screen or any other screen when you need to, making sure that al components are visible on screen. The people doing the testing in this section would be the business analyst and customers making that the system being built meets the requirements.

Quadrant 4 testing happens when certain features or sections of the system has been built. In this stage you can do end to end testing, smoke testing, and stress test to make sure that the system performs in the correct way as expected. Testers would do all the testing here as they have the whole view of what needs to be tested.

The best architecture to use for good quality testing would be MVC. This is because each layer could be mocked so that you can mimic the results returned. You also don’t care if there is a database or not and if the business logic and services are available or coded.