CHAPTER 7: TESTING

7.0 INTRODUCTION

Testing phase is the last phase in SDLC model. Testing is the process of finding differences between the expected behavior specified by system models and the observed behavior of the implemented system. This phase is the most important part that useful for system to identify error in the system. The errors that have been identified in the system can be corrected and we can find the best solutions to handle the problems occur.

7.1 TYPE OF ERROR

7.1.1 Runtime Error

This type of error required us to have more special requirements for that system, the purpose is to ensure the system can be run successful without hangs. System can be terminate abnormally or not responding in during runtime because lack of the memory size.

7.1.2 Compilation Error

This type of error often occur when the syntax error are happen in the code. It can occur when the common error are detected in that code, such as brackets ( ; ), or forget to put ‘ end ’ after ‘ if-else’ statements. Therefore, command window from MATLAB tools are very helpful when we want to trace the erroneous of the code.

Here are the example of the error occurs:
7.2 SYSTEM TESTING PROCESS

There are variety steps that can be taken to testing the system, such as Unit Testing, Integration Testing and System Testing. Unit testing focuses on the building blocks of the software system, that is, objects and subsystems. Integration testing detects faults that have been not detected during unit testing by focusing on small groups of components, while System Testing ensures that the complete system complies with the functional or non functional requirements.

7.2.1 Unit Testing

- Check the radio button on that interface, if user click on that radio button, it supposed display image, figure below show that when user click on that button, the image does not appear:
Check the push button on that interface, if user click on that find object button, it will appear a blue line color along the object detected. This figure below show that the image does not being process:

7.2.2 Integration Testing

This testing allowed the system to be testing from bottom-up or top-down. In this project we use bottom-up testing, it can be test by using the sub module that are tested each component of the bottom layer individually, and then
integrates them with components of the next layer up. The first testing starts from every unit from sub module a (1) until c (2). The next step is integrated all A, B and C sub system.

7.2.3 System Testing

System Testing or sometimes called as System Level Testing will ensure that integrated system are fully functionally. It then ensure the navigation button are functional to the object that being processed, if the requirement are not successful run we can identified it through command window in MATLAB command, by finding the error.