# Test Plan

## Introduction

Testing is a crucial part of designing a software system. Testing enables us to make a clear concise design decisions early in development and by providing tests that match these designs ensures that if these design decisions are changed, appropriate attention and fair warning will be given to their impact. Kaner (2006) suggests that tests should not be absolute and final but should start off simply and evolve over time with the system. In line with this we aim to start with few, basic tests and add new tests as we add new features via Test Driven Development.

In this sense, we are closer to using Exploratory Testing rather than Automated Testing- that is, the responsibility for running tests belongs with the developer and not an automated system. We must vigilantly run tests ourselves.

We intend to test the system using Unit and Integration Tests, both Black-Box and White-Box, including boundary cases. Unit Testing will likely necessitate that we use stubs and build our system in a component-oriented or modular way (ISTQB Exam Certification, n.d.).

## Test-Driven Development

We will follow test-driven development, writing interfaces or stubs of our components first and tests for those unimplemented components.

## Tests

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Test name** | **Component being tested** | **Input** | **Expected output** | **Purpose** |
| ShouldConnectToDatabase | DatabaseConnection | n/a | An open database connection | Can generate a database connection |
| ShouldCloseDatabase | DatabaseConnection | n/a |  | Can close a generated connection |
|  |  |  |  |  |

# References

ISTQB Exam Certification. (n.d.). *What is Component testing?* Retrieved 11 26, 2016, from ISTQB Exam Certification: http://istqbexamcertification.com/what-is-component-testing/

Kaner, C. (2006, Novemer 17). *Exploratory Testing from Florida Institute of Technology, Quality Assurance Institute Worldwide Annual Software Testing Conference, Orlando, FL.* Retrieved from Kaner.com: http://www.kaner.com/pdfs/ETatQAI.pdf