

Automated Commentaries for Simulated Soccer

Iterations Unit Testing Design

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1. Introduction

This document will describe the process that should be carried out for unit testing the initial iterations of this project. With the XP approach it is important to frequently iterate over the different stages of the lifecycle to adhere strictly to the requirements both logically and timely.

Unit testing is testing individual parts 'units' of our system. As we are only scoping initial stages, these units will represent one iteration within the Requirement Specification document.

2. Aim

The aim is to limit the amount of errors that may be introduced at this initial stage. It is crucial to get the foundations correct in order for the project to adhere to the objectives. The unit testing will also enable us to reduce the amount of system testing to be carried out towards the end of the project.

3. The Process

Each test will defer according to the Iteration that we are trying to test. Each Unit Testing Template should be created from the Master Unit Testing Template found in the templates folder. The Iteration Unit Testing Tracker must be updated accordingly.

3.1. Testing Template

Each testing template will have the following fields that should be filled appropriately:

Test ID: The number of the iteration that we are testing

Test Objective: A short description on what we're trying to test.

Items being Tested: Methods/classes that are tested

Test Prerequisites: Preconditions before the test is executed.

Test Iteration: Starting from 1 increasing by 1 for every test that needs repeated.

Start Date/Time: The date and time of the test

Test Steps: Starting from 1 increasing by 1 for all the steps for this test

Test Action: How to carry out the test.

Expected Result: The behaviour that is expected.

Actual Result: The real behaviour.

Pass/Fail: if Expected Result = Actual Result.

Notes: Provide any notes to elaborate further on a test. Possible CRs

Name of Tester: The user that is running the tests

Approver: Signature of person validating this test (project manager)

All completed tests must be saved in the testing/unit testing/iterations/iteration number folder with the following convention:

Iterationnumtestdate.doc

3.2. Test Execution

All tests at this initial phase are to be carried out manually as we are still in the research phase of the server and protocol. The following process should be carried out when testing:

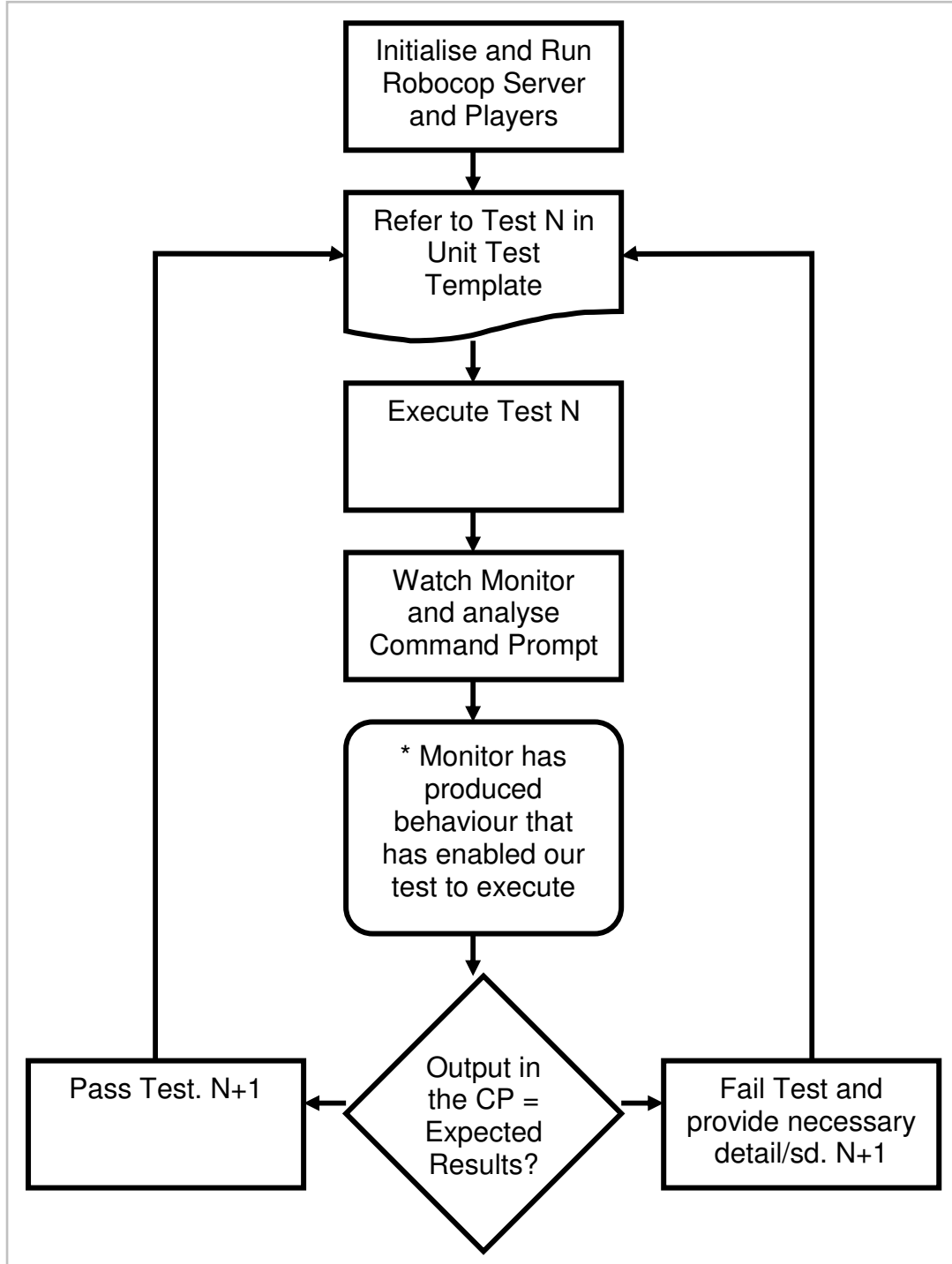


Figure 1: The process to be followed when carrying out a Unit Test
*For iteration 1 (pmode iteration) there is no need to wait for a desired event. Right click the Windows monitor and select the appropriate playmode that you are testing.

3.3. Post Test Analysis

Once all tests have been carried out the tester must analyse tests and provide the necessary documents to enable a fix. Tests that are marked has failed will need attention at high priority to enable continuation of further phases. The tester must either provide an immediate fix or discuss with other team members the problem that has arisen. Once the fix has been provided the test must be repeated using the same steps as described above. The Iteration Unit Testing Tracker must be 'Passed' once all tests for that iteration have passed.