6.0: Sample Testing Chapter

6.1 Overview

This document presents a sample testing chapter. This format is a little bit different from what we described in class. It describes the software needed to run tests first. Then the document describes three different test cases.

You may use either this format or the format discussed in class for your thesis. This format concentrates on test cases. The in-class format concentrates on requirements. Use whichever format seems best.

6.2 Test Setup Requirements

Install the following software on the test system:

- Java source files.
- Compilation and execution command files.
- SQL database control file.
- Client database program.
- Java 2SE SDK.
- JMF subcomponent.
- JAI subcomponent.
- MySql relational database.
- JDBC and ODBC drivers for above.
- Microsoft Access.

6.3 Test Plan

The following steps verify the project works and the requirements have been met:

6.3.1 Preparation

Before beginning any testing, perform the following system administration tasks.

1. Install software mentioned previously.
2. Use the following command to initialize the database:

   ```
   mysql < createTables.sql
   ```

3. Load the access client and verify the database tables exist but are empty.
4. Verify the stills directory is empty.
5. Compile the Java code and verify there is no error.

After these steps have been performed, we are ready for testing.

6.3.1 Execution Pass One

We first test frame extraction from one video file. Perform the following steps to run this test:

1. Run the Java code against the crawford.mpg test input file.
2. Verify stills are written to the directory. Verify there is no other file.
3. Open the client and verify the clip was inserted into the MySql database.

The results of this test are the following:

1. A series of new video stills are written to the web server directory.

2. The MySql database tables have new metadata records.

3. The proper reports are available in Access.

6.3.1 Execution Pass Two

We repeat the test with another video clip to verify the database can contain more then one:

1. Run the code against the train.mpg test input file.

2. Verify more stills are written to the directory. Verify there is no other file besides those from the video clips.

3. Open the client and verify the second clip was inserted into the MySql database.

The test results should be similar to the previous test.

6.3.1 Generate Web Pages

The final test demonstrates we can meet the requirement to automatically generate an index web page for any record in the database. Perform the following test steps:

1. Keeping the client open, click the Generate Web Page button for the first clip.

2. Verify the first .htm file is written to the stills directory.

3. Click the Generate button for the second clip.

4. Verify the second .htm file is written out.

We demonstrate the test passed by examining the .htm files with a web browser.