
CSCI 3901

Software Development Concepts

Final Project

Test Plan

Prepared By
Bhavisha Oza (B00935827)

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1. Introduction

The purpose of this test plan is to outline the testing approach for the PublicationLibrary class that is being developed as part of the CSCI 3901 Final Project. The testing approach will ensure that the class meets the functional requirements and that it is robust, reliable, and performs as expected.

The plan identifies the things that need to be tested, the features that need to be tested, the sorts of tests that need to be done, the people in charge of doing the tests, the materials and time needed to finish the tests, and the risks connected to the plan.

1.1.1 In Scope: All the features mentioned below are need to be tested:

- Add publication
- Add references
- Add venue
- Add publisher
- Add area
- Get publications
- Add Author citations
- Seminal papers
- Collaborators
- authorRessearch area
- convert citations in a paper into actual IEEE references.

1.1.2 Out of Scope: The given features are not tochecked on any User Interfaces as it is mentioned in requirement that “This project is `_not_` expected to include a user interface.”

2. Test Methodology

The testing will be done through a combination of manual and automated testing. Unit testing will be done for each method of the PublicationLibrary class, and integration testing will be done to ensure that the methods work together seamlessly. The testing will be done using a combination of positive and negative test cases.

2.1 Types of Testing:

- Unit testing
- Integration testing
- Functional testing
- Non-functional testing
- Smoke testing
- Bug Regression testing
- Iteration/Regression testing
- User Acceptance testing

2.2 Test Coverage:

The test coverage for the PublicationLibrary class will include the following aspects:

- Method functionality
- Exception handling
- Error messages
- Data insertion

2.3 Test Strategy:

Identify Entry level and Exit level criteria

3. Test Deliverables

Test deliverables are provided as below:

Before testing phase:

- Test plan document.
- Test cases documents.

During the testing:

- Test Data
- Bug ids

After the testing cycles:

- Test Results/reports
- Defect Report

4. Environment Needs

- Java 11 or later
- IDE: preferably IntelliJ IDEA CE
- Programming Language: Java
- Git version control
- Testing Framework: JUnit 5