# CMSC 345

### Software Design and Development

# (Adapted from Susan Mitchell)

# Testing Report Template

Writing Instructions

Use the materials posted under the Writing Resources button on Blackboard as references for grammar, spelling, punctuation, formatting, and writing style.

Be sure that your document is

* Complete - No information is missing
* Clear - Every sentence's meaning must be clear to all parties
* Consistent – The writing style and notation is consistent throughout the document and the document does not contradict itself
* Verifiable - All requirements and other facts stated are verifiable

Remember that you are required to do a team review of this document.

**Purpose of This Assignment**

* To appreciate the complexity and necessary formality of the testing process.
* To learn how to devise comprehensive test suites while minimizing overall testing effort.
* To understand the use of equivalence partitions and boundary values in the testing process.

**Required Activities**

* Each team member should develop and apply a set of comprehensive specification-based (black box) test cases for at least one top-level use case from your Systems Requirements Specification. Cover all use cases. If you have fewer top-level use cases than team members, you may divide the testing of one or more uses cases between members.

**Notes**:

* Thoroughly test your program prior to demo and transition. Defects that were detected but not repaired prior to testing report submission should be repaired prior to your demo.
* In order to run some of your tests, you may find it necessary to repair some of the other errors that you found. Note that it is not required that you fix all of the bugs that you find prior to submission of the testing report. At this point, you only need to fix "fatal" errors that make it difficult or impossible for you to conduct other tests.
* Do not intentionally insert bugs yourself only to remove them so that you have something to report.

[Put product name here]

Testing Report

#### Table of Contents

Page

1. Introduction

1.1 Purpose of This Document

1.2 References

1. Testing Process

2.1 Description

2.2 Testing Sessions

2.3 Impressions of the Process

1. Test Results

Appendix A - Peer Review Sign-off

Appendix B – Document Contributions

### 1. **Introduction**

* 1. Purpose of This Document

State the purpose of the document and indicate the intended readership. Briefly summarize the content. [One substantial paragraph]

* 1. References

Provide a list of all applicable and referenced documents and other media (e.g., the Sommerville text, documents provided by the customer, documents provided by your instructor, websites) that were used in the creation of this document. Minimally, your SRS should be referenced. See the Writing Resources on Blackboard for the appropriate formats for references.

2. **Testing Process**

* 1. Description

Briefly describe the testing process your team followed. Give the process *really* followed, not the "ideal" process. If your process was relatively far from the ideal, explain why you chose to diverge as well as how.

* + Credit will **not** be taken off for following a non-standard process if that process seems likely to have led to your reported results.
  + Credit **will** be taken off for describing a process that does not seem to match your reported results.

[Two to three substantial paragraphs]

2.2 Testing Sessions

For each testing session, specify the date, location, time started, time ended, who performed the tests, and which use case(s) was covered.

2.3 Impressions of the Process

Summarize your general impressions of the testing process (e.g., was it effective, why/why not). Also summarize the quality of your program both prior to testing and after any repairs were made.

* + Indicate the "best" one or two modular units in your program (in terms of relatively small likelihood of remaining flaws) and why you think so.
  + Indicate the "worst" one or two modular units in your program (in terms of relatively large likelihood of remaining flaws) and why you think so.

If your choice of the “best” and/or “worst” modular units has changed since your Code Inspection Report, explain why you changed your mind. [Two to three substantial paragraphs]

3. **Test Results**

Report the following for each use case. (Note: It is useful to devise a form on which to record the required information. This will not only help with the testing process, but your document may then include the filled-in form, with an introduction, for this section. Expect this section to be lengthy.)

Testing Suite

For each use case, define a set of equivalence partitions and their corresponding boundary cases. Be sure to cover all classes of valid and invalid inputs.

Describe one or more test cases for each equivalence partition, including the purpose of each test, the test input data (the exact data, if possible, not a general description), any prior inputs that would have been necessary to get to a point where the test input is applicable, and the expected output.

Test Results

State the name of the tester for the particular use case. Summarize those test cases from the above that you were not able to execute, for any reason, and briefly explain the difficulty. Summarize those test cases that ran and the actual result was identical to the expected result. Summarize those test cases that ran and the actual result was not the same as the expected result, but was nevertheless correct. Explain the discrepancy. Describe each defect detected. For each defect, outline either a suggested repair or the actual repair you made. In the cases where you successfully removed the bug, or at least tried to fix the bug but were unable to do so, briefly describe any changes you made to the program, including the modules, functions, classes, data structures, etc. affected. Try to explain the underlying logical cause of the defect in the program code.

**Appendix B – Team Review Sign-off**

Place on a separate page. Provide a brief paragraph stating that all members of the team have reviewed the document and agree on its content and format. Provide lines for typed names, signatures, dates, and comments for each team member. The comment areas are to be used to state any minor points regarding the document that members may not agree with. Note that there cannot be any major points of contention.

**Appendix C – Document Contributions**

Identify how each member contributed to the creation of this document. Include what sections each member worked on and an estimate of the percentage of work they contributed. Remember that each team member must contribute to the writing (includes diagrams) for each document produced.