



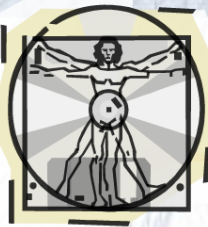
UNIVERSITY OF
CALGARY

SENG 438

Software Testing, Reliability & Quality

Assignment 1

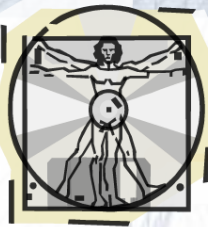




Assignment 1

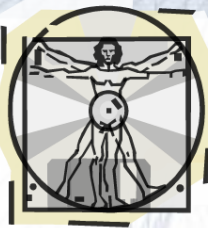
- Issue tracking systems
- Exploratory testing
- Scripted testing
- Manual regression testing





Bug Reporting

- Testers report bugs to programmers
- “Problem Report” forms are commonly used
- If the report is not clear and understandable, the bug will not get fixed
- To write a fully effective report you must:
 - Explain how to reproduce the problem
 - Analyze the problem so that it can be described with a minimum number of steps
 - Write a report that is complete, easy to understand, and non-antagonistic

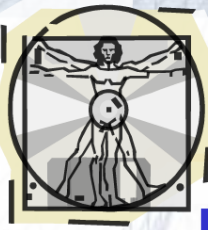


What to Report?

- Coding error
- Design issue
- Requirements issue
- Documentation / Code mismatch
- Specification / Code mismatch



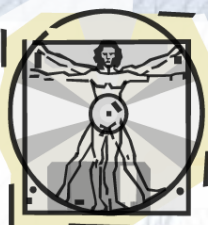
Catalogue of Common Software Errors
(in D2L)



Bug Report

- **Bug Report** is your main asset
 - Bug reports are your **primary work product** as a tester
 - This is what people outside of the testing group will notice and remember of your work
 - A bug report is a tool that you use to sell the programmer on the idea of spending time and energy to fix a bug
- A **good tester** is not someone who finds the most bugs or who embarrasses the most programmers
 - The best tester is the one **who gets the most bugs fixed**





Problem Report Form /1

■ Typical internal problem report

Status : open/closed

Severity class: (low) 1 2 3 4 (high)

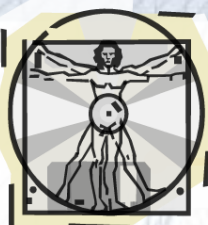
Priority: (low) 1 2 3 4 (high)

Resolution:	Pending	Fixed	Irreproducible
	Deferred	As designed	Can't be fixed
	Withdrawn	Need more info	Disagree

Resolved by: (date)

Tested by: (date)

Treated as deferred: Yes / No



Problem Report Form /2

■ Typical external problem report

Report no.

Date:

Program:

Release:

Version:

Report type:

Coding error

Design issue

Suggestion

Documentation

Query

Hardware

Problem summary:

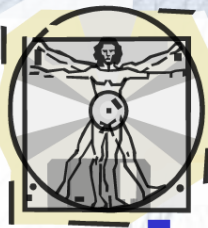
Reproducible: Yes / No

Problem and how to reproduce it:

Suggested fix (optional)

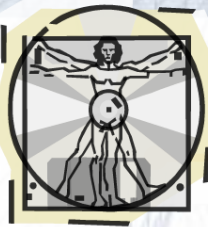
Reported by:

(date)



When you Find a Failure

- When you run a test and find a failure, you're looking at a symptom, not at the underlying fault
- You may or may not have found the best example of a failure that can be caused by the underlying fault
- Some follow-up work to try to prove that a failure:
 - is more serious than it first appears
 - is more general than it first appears
- LOOK FOR FOLLOW-UP ERRORS
 - Follow-up: vary your behavior
 - Follow-up: vary options and settings
- IS THIS BUG NEW TO THIS VERSION?
- Show it is more general



Bug Tracking Systems

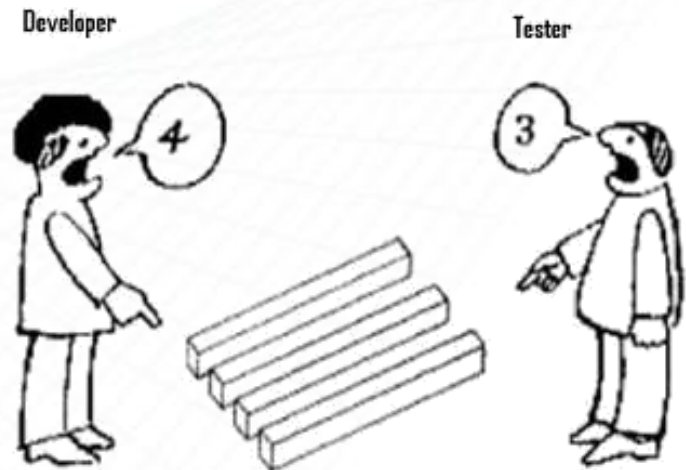
■ Backlog

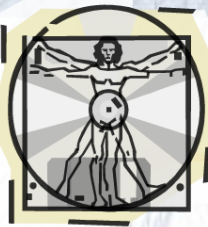
<https://backlog.com/bug-tracking-software/>

Or similar repositories

Additional useful info (in D2L):

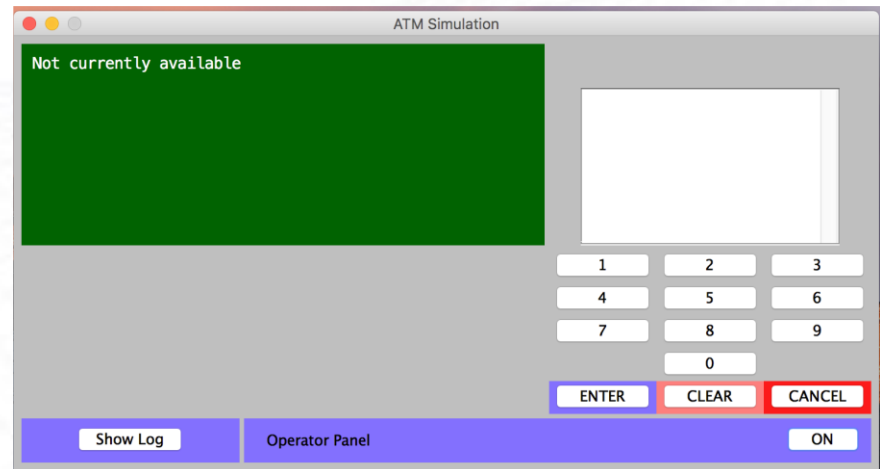
- Sample test case (Excel file)
- Sample test plan
- Common software errors

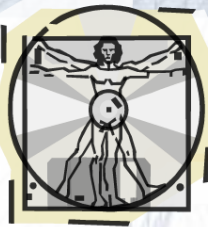




Manual Scripted Testing

- Assignment 1
 - Running your tests following a script
 - Finding a new failure
- SUT:
 - Version 1





Manual Regression Testing

- Assignment 1
 - Running your tests from the older version in the new version to see if
 - You spot a new failure
 - Any fault has been fixed
- SUT:
 - Version 2 vs. Version 1

