

CMPT 473
Software Quality Assurance
Regression Testing

Nick Sumner - Fall 2014

The Story So Far

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Why is this a problem?

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How often did you run regression tests in co-ops/internships?

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How else can we address this problem?

Limiting Regression Suites

- Be careful not to add redundant test to the test suite.

When have you found it useful/required to add tests?

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Why might this be?

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What strategies have you encountered?

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 - Run more thorough tests nightly
 - “ ” weekly
 - “ ” preparing for milestones/ integration

Limiting Regression Testing

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What else could we do?

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Is the cheap approach enough?

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 - **Middle ground**: Run those tests affected by how changed propagate through the software?

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- **Change Impact Analysis**
 - Identify how changes affect the rest of software
- Can decide which tests to run on demand
 - **Conservative:** run all tests
 - **Check** In practice, tools can assist in finding related to the **out** which tests need to be run
 - **Middle ground:** Run those tests affected by how changed propagate through the software?

Failure

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Honestly. What do you do?
We are no longer *measuring* quality.

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Why might this happen?

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 - Test **inputs are stale** and must be fixed
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 - It depends...
- If the new and old versions should be equivalent:
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 - Keeping these cases separate is important.
How can we do that?
 - The expected behavior has changed & must be fixed

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 - A failing tests indicates misbehavior to correct
- Otherwise:
 - The software has a bug to fix
 - Test inputs are stale and must be fixed
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- Maintaining regression tests is **costly**

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Addressing these burdens is a major focus of *automated testing* and *testability*