ICA: Regression Testing

ICA - Overview

Goal: Perform regression test selection using the DejaVu method

1. Build control flow graphs of servlets
2. Track test case coverage of the model
3. Identify test cases to be rerun
4. Calculate “savings” of regression testing

Nov 18th in class.

Blank

Activity

1. Generate test suite for bookstore with >10 test cases that gets over 38% statement coverage for target servlets
2. Identify test cases to be rerun, given the “changes”
3. Calculate time “savings” of your technique

Grading

100 total points

- 12 points for the quiz
- 20 points for in-class completion
- 20 points for automation
- 6@8 points for correct regression tests
  - 2 points time analysis
  - 6 points correct test cases

Complete checkoff by Dec 1 EOH

Submit

- Java code/scripts for your implementation
- Original test suite (1)
- Mapping of test cases to statements (1)
- Test reports (6)
  - Detected changed statements
  - Answer for test case selection
  - Running time analysis
- Coverage report (1)

Instructions:

- Only one zipped file with name format "Last name_first name_ICA#“
- Submit all reports in one submission. TA will only grade the last submission.

Automation

- Show me mapping of tests to statements (after execution)
- Show me output of change detector (i.e. lines detected as changed)
- Show me evaluation of time savings
- One command for all problems

The “Changes”

- Login.jsp
  - {15, 150}
- ShoppingCart.jsp
  - {167, 435*}
- MyInfo.jsp
  - {157*, 264}

Treat each one as a separate test suite problem.

*Flip the branch condition