

Bug Sharing and Regression (Total: 30 points + 5 bonus points)

Deadline: 15 December, 11.59pm

The goal of this assignment (Invitation link: <https://classroom.github.com/a/anonymous>) is for students to learn about regression testing on their selected app. Assume your selected app is A.

List your name and student id in the README.md.

All answers (except for the code modifications) should be written in README.md.

1. Check out the latest versions of your selected app A. Run all the tests within the test suite.

a) Has the code changed since the start of the class project? Include the link of the latest commit. (1 point)

b) Are all tests passing when you run them? If some tests fail, you may have found a regression bug, check if the test failure is valid. (1 point)

c) Construct 2 test cases that verify the correctness of the changed code from the latest commit (If the latest commit is modifying non-code elements like code comments, then select the second latest commit)at the GUI level. *These test cases can be either hand-written (e.g., "Edit Text field with username=cs123"->"Edit Text field with password=12345"->"Click button Login".) or record-and-replay using MonkeyRunner.*

(4 points)

2. Go to the list of open source Android apps:

<https://github.com/pcqpcq/open-source-android-apps/blob/master/README.md>

a) Select a different app B from the same category as your selected app A. Include the category of A and B. (1 point)

b) Select 5 GitHub issues from B. Answer the following questions for each issue:

i. Why is this issue selected? You answers could be: (1) most recently closed issues, (2) most recently open issues, (3) most commented issues, (4) Most recently commented issues. (5) Most relevant issues (most relevant issues with similar functionality with A) (5 points, 1 point for each issue)

- ii. Could you reproduce similar bug in your selected app in A? If not, explain the reason. *(5 points, 1 point for each issue)*
- c) Select a different app C from different category as your selected app A. *Include the category of A and B. (1 point)*
- d) *Select 5 GitHub issues from C. Answer the following questions for each issue:*
 - i. Why is this issue selected? Your answers could be: (1) most recently closed issues, (2) most recently open issues, (3) most commented issues, (4) Most recently commented issues. (5) Most relevant issues (most relevant issues with similar functionality with A) *(5 points, 1 point for each issue)*
 - ii. Could you reproduce similar bug in your selected app in A? If not, explain the reason. *(5 points, 1 point for each issue)*

3. *Compare the bug-finding method in Question 1 (Code Changes) and Question 2 (Similar Bug from different apps).*

- a) *Have you found any bug using any of the above method? Which method do you think is more effective in finding new bugs? Why? Explain the reason in terms of efficiency (time taken) and effectiveness (likelihood of finding new bugs) (2 points)*

You can do either of the following to get bonus points (5 points):

- a) If you find a bug, post the bug that you find in GitHub by posting in your team discussion. If all your team members check that your bug reports fulfilled the bug reports requirement, post it at: <https://github.com/>
- b) If you read a GitHub issue in the GitHub Discussion (Team or All-Students discussion) within your group and could use the information in the GitHub issue for finding a “similar” bug in your selected app, comment in GitHub by posting at: <https://github.com/>. *You need to add a bug reports (check the bug report requirement) and add a comment on “What information is useful for sharing this bug?”*