

Is doubling/mocking hiding bad code smells?

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Project Outline

Motivation

Few articles on the web have suggested that mocking is hiding bad code. Mocking other mocks is a bad practice since you are not actually testing the system but only relying on tests based on other tests. It has been seen in day-to-day life that many developers are mocking other mocks. This project is interested in how often we are seeing this pattern and whether it is a significant issue now.

Aims

This project aims to research literature on mocking hiding bad code smells and develop a script which would help evaluate if developers are using test mocks in a way that it is hiding bad code smells i-e do projects have test mocks that mock other test mocks. The script part is broken down into two scripts: one script for sampling repositories and one for the actual research question. Also create a how-to guide which describes what mocking is, its challenges and how it is hiding bad code smells. This guide can be as simple as a word document or the dissertation itself can be considered a guide.

Progress

- *Background research completed.*
- *Sampling script completed and obtained the required sample by running it against GitHub repositories.*

Problems and risks

Problems

- *Issue with the repository path ending in a “dot” which prevented it from cloning on local machine. Had to create a new repository after trying all the possible solutions.*
- *Significant time spent on background research, but it was not “time wasted” as was able to understand things better and find a gap in the literature.*

Risks

- *Storage issue might arise due to downloading large number of repositories. Mitigation: if this happens, I might have to use one of the SoCS computer clusters.*

- *Script completion might not follow the provisional plan for Sem 2. Mitigation: Aim to make significant progress on the script during the winter break, complete parts of dissertation that can now be completed so if unexpected happens, can use dissertation weeks for script.*
- *Not being able to keep up with the plan due to health issues related to pregnancy. No clear mitigation available.*

Plan

Winter Break

- Aim to at least complete half of the script.

Week 13 (10/1/22)

- *Complete the script and test it on few repositories.*

Week 14 (17/1/22)

- *Run the script on sampled repositories and gather results.*

Week 15 (24/1/22)

- *Evaluate the results - appropriate visualisations, stats.*

Week 16 (31/1/22)

- *Extra data gathering? Final tweaks to the script.*

Week 17 (7/2/22)

- *Create a how-to guide for mocking and its challenges.*

Week 18 (14/2/22)

- *Complete how-to guide.*

Week 19 (21/2/22)

- *Possible Maternity leave.*

Week 20 (28/2/22)

- *Possible Maternity leave.*

Week 21 (7/3/22)

Week 22 (14/3/22)

- *2 weeks dedicated solely to the Dissertation.*

Week 23 [TERM ENDS] (21/3/22) Dissertation submission deadline and presentations.