EE / CprE / SE 491 – sdmay20-43
Analysis of GitLab projects using BOA
Bi-weekly Report 3

2/13/2020 - 2/27/2020
Client: Simanta Mitra
Faculty Advisor: Simanta Mitra

Team Members
Diego Realpe - Team Leader | Test Engineer
Adrian Hamill - Test Engineer
Megan Miller - Test Engineer | Website Manager
Benjamin Carland - Test Engineer
Yi-Hsien Tan - Test Engineer | Organizer | Website Manager

Bi-weekly Overview
- These next two weeks have been marked by everyone in each subteam continuing their own tasks and developing more code for the project.
- Midterms and the career fair have slowed our progress down slightly as each of us gets ready for exams but we have all made the effort of putting a consistent amount of work in for the BOA analysis project.
- Backend team has been working on cleaning up code and setting up more bash scripts, reviewing some of the decisions made last semester and fixing bugs.
- Additionally backend has made good progress in SpotBugs and in fixing our authentication/command line issues.
- Front end team has some working queries for commit statistics which we hope can be tested against real student repos soon.
- Some people from front end team have started working with the Backend team to act as mediators for when the front and backend teams start combining their work.

Past Weeks' Accomplishments
- Diego and Adrian have written bash scripts to automate the process of installing and setting up SpotBugs, hoping to set up more configurations to tailor the installation and execution to our client's machine.
- Diego has also made a script using a wrapper called "hub" which allows us to create remote repos in GitHub without the need to use the browser interface, thing that was thought to not be able to be done via command line until now.

- Additionally the "hub" tool can deal with some of the nastyness regarding authentication to the repos without needing to deal with passing JSON objects
- Boa team created queries for determining the day of the week where the most commits occur, determining the number of revisions occuring in a project between two times of the day, and the total number of revisions. All of these queries were also sorted most to least using the Top output aggregator.
- Looking into the possibility of using AST boa queries to do the types of things that SpotBugs can do. Boa is limited in this capacity.

Pending Issues

- No significant issues have been reported by any of our members so far.

Individual Contributions

Name	Contributions	Bi-weekly Hours	Total Hours
Diego Realpe	I started implementing spotbugs in our bash solution and writting and researching "hub" tool to call git "create" and make remote repos	12	89
Adrian Hamil	Tested and got midway through integrating the "hub" wrapper to create private repositories in line with our data generation script.	11	127.5
Megan Miller	I spent time understanding how the backend part of the program works so that I can help the other members of Boa team when our projects come together.	12	103
Benjamin Carland	Wrote commit statistics queries, working on some AST queries to determine whether they are a feasible solution to the problem of determining code quality.	12.5	95.5
Yi-Hsien Tan	I'm seeing if I can understand enough to make queries we need from just boa	12	107

Plans For Upcoming Week

- Data Pipeline: Adrian Hamil & Diego Realpe
  - Meet up with front end team and attempt to get our first queries run against real repos
  - Keep working on the solutions we have found so far, automatize.

- ● Regarding private repos, test it again using the new scripts
- Boa Research: Ben Carland & Megan Miller & Yi-Hsien Tan
  - ● Connect with the data pipeline team to determine what the best course of action is regarding AST vs. SpotBugs
  - ● Continue working on Git statistics queries
  - ● Connect with the pipeline team about running queries on the intended repos