CS 489 Proposal

Git Integration for CS 319: Introduction and Evaluation

Kerem Yilmaz
keremyilmazcs@gmail.com

Advisor: Asst. Prof. Eray Tuzun
Bilkent University, Ankara
Spring, 19-20

1 Objective:

The objective of this teaching project is to introduce the students of CS 319 course with intermediate usage of Git and related practices. A tutorial and an assignment for them to gain hands-on experience will be delivered. Also, this project aims to improve means of Git usage evaluation for CS 319 term project. This tool is supposed to evaluate a project’s git usage activity (committing and branching patterns) and maybe predict which of the common practices it follows given a GitHub repository. GitHub usage is already a must for CS 319 term project.

2 Rationale:

Git is the most widely used version control system in the world. A lot of projects both open and closed source rely on Git as a version control system. However, during my past years, I’ve come to notice that most students are not equipped enough with the necessary information and practice in order to use Git. I want to address this issue in a course such as CS 319 which also forces GitHub usage for its term project. Also, by the addition of an automated Git usage evaluation tool, the evaluation process can be less time consuming for the term project.

3 Approach:

I plan on doing an extensive research on the usage practices of Git. After gathering enough information, I will form these research outcomes into a tutorial which can be taught by me. Then, I will prepare a laboratory assignment. This assignment will contain a hand-tailored repository that consists of simulated real world situations. Students will be asked to perform the given set of tasks on this repository. The tasks will be designed to test the student’s knowledge and abilities of Git after attending the tutorial. The assignment can be graded or not depending on the instructor. After these are completed, I will focus on the automatic Git usage evaluation tool until the end of the semester.

It is important to understand the effects of this work. For this purpose, I will prepare two surveys for the students. One of them will be distributed after the tutorial and the laboratory assignment and the other one will be distributed at the end of the semester.
4 Timeline

The tentative timeline for the project is as follows.

1. 24-28 February 1 class hour of theory
2. 24-28 February 2 class hours of lab
3. TBA Assessment (%5)
4. 2-6 March First survey
5. 11-15 May Running the evaluation script and discussing the results
6. 18-22 May Second survey

5 Requirements

For the execution of this project, there are some requirements.

- A computer laboratory with 50 computers which has JetBrains IntelliJ IDEA and git command line tool.