Gitoxide

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Gitoxide is an implementation if Git written in Rust for devliering future-proof applications which strive for correctness and performance while providing a pleasant and unsurprising developer experience.

Introduction

This was my 4th semester as an RCOS student and I wanted to try something different. I had always wanted to contribute to a public code base to get the full open source software experience. After reaching out to the maintainer of Gitoxide, I chose to make it my RCOS project for the semester.

Objective

- Learn the Rust language
- Contribute to a public project
- Help improve an interesting technology

Goals

My goal was to take some of the planned submodules and create an implementation that complied with the existing expectations of git users and satisfy the project managers.

Contributing to public repositories

Gitoxide parent repository

Results

My work was primarily with the gix-fetchhead crate. This module was planned to manage the FETCH_HEAD files produced by git. FETCH_HEAD files are an artifact created the fetch process with information about different remotes. The crate is intended to provide and interface for parsing and interacting with this data. I had a few setbacks in this process. I originally had a difficult time picturing what my solution needed to accomplish. Sebastion directed me to the original git source code which provided me the direction I needed. I also struggled with the build system to some degree. I incorrectly setup the testing for my submodule which lead to an inconsistency in running directory. This prevented me from pushing up my code and delayed work until I realized I needed to reformat the testing structure. Now I have a functioning and tested parsing interface for FETCH_HEAD files.

Conclusions

Overall this RCOS semester was a great experience in which I learned quite a bit about the open source process. If I did this again I would do somethings differently. Mainly, I would choose a project working with tech I am more familiar with so that I am less reliant on the limited mentorship from other project contributors.