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CS: 568 | Fall 2020 Project Update I:

Completed Milestones:

- Downloaded and set up toolchain
 - Emscripten
 - A popular compiler for C, C++ to WASM
 - o Wasabi
 - The best known WebAssembly analyser with binary instrumentation
- Initiated review of open-source C libraries

At the time of this update, we have familiarized ourselves with the toolchain. Installed Emscripten popular compiler for C/C++ for web assembly. We are writing a few exploratory C programs that were successfully compiled to web assembly. We have also successfully deployed and written and ran basic C/C++ programs on the command line. This completes phase one of the proposal's milestones.

We are currently in phase II of the project; our main focus is reviewing open source software from https://awesomeopensource.com/projects/c. Based on popularity and functionality we will focus on three to seven libraries for analysis.

We hope to have a short discussion with our professor in the near future to better align the topics of our final paper.

Milestones:

(10/16) We plan to deploy a functional web app using Web assembly, originally written in a language like C.

(10/23) We will identify an open source library in C or C++ and incorporate them into example applications or find some open source programs in C or C++.

(10/30) After identifying an app or app group we will start working more indepthly with <u>Wasabi</u> to try to detect the vulnerabilities. We will attempt to find a way to programmatically probe or scan the attack surface on any given C library when compiled into WASM.