

Project Milestone Report (due Sunday, Dec 3, 11:59pm)

Make sure your project schedule on your main project page is up to date with work completed so far, and well as with a revised plan of work for the coming weeks. As by this time you should have a good understanding of what is required to complete your project, I want to see a very detailed schedule for the coming weeks. I suggest breaking time down into half-week increments. Each increment should have at least one task, and for each task put a person's name on it.

- Very detailed schedule for webpage:
 - 12/06:
 - Finish code migration to C++. (Jordi)
 - Do milestone report and update website (Jordi)
 - Finish logging, finish inputs, and add memory-sandboxing. (Ajax)
 - 12/07:
 - Get AVX-512 backend into a good state. (Jordi)
 - Get CUDA backend into a good state. (Ajax)
 - 12/08
 - Finish our backends and develop some mechanism to ensure their soundness, laying a foundation for future days. (Both of us.)
 - We expect to find bugs in the process, and to have to spend a long time fixing them. Therefore, we expect to fix bugs. (Both of us.)
 - 12/09
 - Work on work-sharing across multiple backends and mutation strategies. (Both of us.)
 - 12/10
 - Work on techniques to reduce divergence and communication. (Both of us.)
 - 12/11
 - Keep working on techniques to reduce divergence and communication. (Both of us.)
 - 12/12
 - Buffer period. Everything prior to this point was a best-case-scenario in terms of productivity. If all works out, we each find things we can improve and just work on that, this day; otherwise, this day is helpful to help us if we miss prior days' deadlines. (Both?)
 - 12/13
 - In the morning: A buffer period like the day before. (Both)
 - In the afternoon: Work on the poster board. (Both)
 - 12/14
 - Finish the poster board and apply tweaks as needed. (Both)
 - 12/15
 - Present! (Both)

One to two paragraphs, summarize the work that you have completed so far. (This should be easy if you have been maintaining this information on your project page.)

- We have a RISC-V emulator framework with one working backend and two more parallel backends that are a work in progress.
 - We have tentative support for MPI, with the idea that we can run multiple backends in parallel.
- We have tentative support for logging and detecting when code might throw an exception.
- We have a system in place for building and running RISC-V code that can run under our emulator.

Describe how you are doing with respect to the goals and deliverables stated in your proposal. Do you still believe you will be able to produce all your deliverables? If not, why? What about the "nice to have's"? In your milestone writeup we want a new list of goals that you plan to hit for the poster session.

- We will likely have to cut nice-to-haves but want to hit as many deliverables as we can.
- The goals we want to hit most, therefore, are, for now, a working:
 - AVX-512 backend
 - MPI support
 - CUDA backend
 - Classical-backend
 - Basic fuzzing strategies
- Really sophisticated scheduling mechanisms, code transformations, and other such features are unlikely to make it. But, we fully intend to try.

What do you plan to show at the poster session? Will it be a demo? Will it be a graph?

- We would like to show both demos and graphs of our performance, including—ideally—stuff showing that our code can work and find bugs.

Do you have preliminary results at this time? If so, it would be great to include them in your milestone write-up.

- Nothing particularly compelling. However, we have a working RISC-V emulator.

List the issues that concern you the most. Are there any remaining unknowns (things you simply don't know how to solve, resource you don't know how to get) or is it just a matter of coding and doing the work? If you do not wish to put this information on a public web site you are welcome to email the staff directly.

- Time constraints are difficult. But it is purely a matter of programming and doing the work: we know what we have to do and fully intend to do it.

Meet with the course staff to discuss your progress.

- On Piazza, it was stated that this was optional. However, we did have a slight amount of communication with course staff due to a personal issue, if that helps at all.

