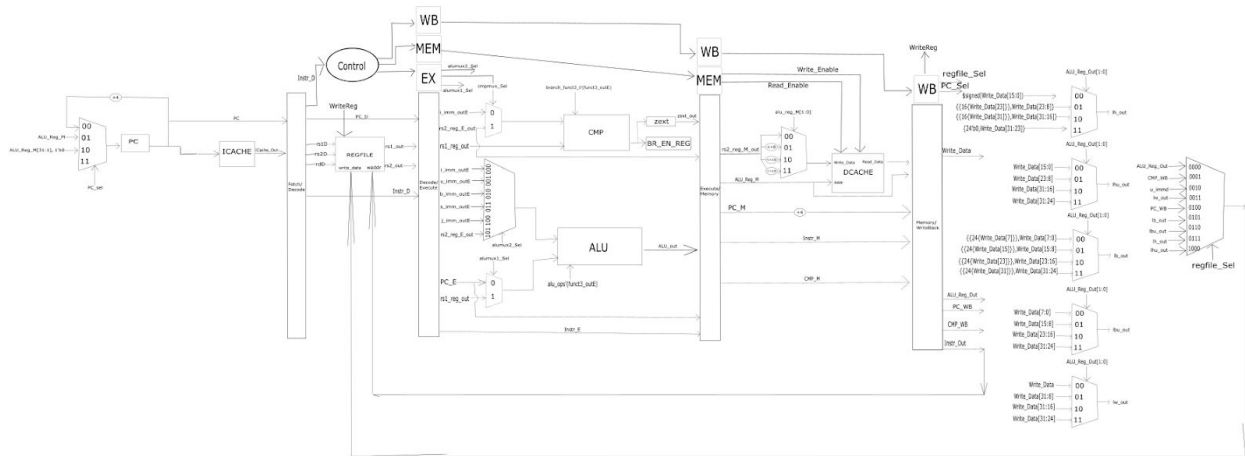


Progress Report:

For checkpoint 1, our group implemented the partial pipelined datapath. In addition to the pipelined datapath we designed the L1 caches and arbiters along with a general memory hierarchy design that is going to be put into use further along during the development of this MP. The cache, arbiter, and memory hierarchy designs were done by Taras with additional input and verification by Kevin and Shounak. The partial pipelined datapath implementation was done by Shounak and Kevin, with additional input and verification from Taras.

The Most recent Datapath:



Along with this image (since this is too small to read), a higher quality image is available on our Github.

Roadmap:

Regarding checkpoint 2, we plan to have a fully implemented pipelined datapath that handles all the instructions that are required. The full implementation of the datapath will be handled primarily by Kevin and Shounak with additional help from Taras if need be. The implementation will be verified by every member; as having different people try to find holes in your design will allow the most ground to be covered in regards to correct implementations. The instruction cache, data cache, and arbiter implementation will be handled primarily by Taras. Verification will once again be done by every member. Shadow memory checking both instruction and data cache will be implemented by all of us. We haven't really researched how to implement this so we suspect that all three members will be working on this. Data forwarding designs for our implementation will be handled by Kevin and Taras with additional help from Shounak. As for running into specific issues, we believe that we will have issues surrounding the shadow memory, and cache implementations. We plan to email our mentor TA as soon as we come across these issues in order to resolve them as quickly as we can. On a general note, with the Covid 19 virus going around and starting to gain traction, it is hard to say if that will affect our work productivity. By taking New York as a case study it appears to spread very quickly and we can't say for sure if any group member will become infected with it. Along with the virus itself, a lot of the other classes that we are taking are changing on the spot. Given these parameters

sticking to a strict schedule is borderline impossible. Therefore we plan to put in as much effort as we can to follow our roadmap, with no guaranteed certainties.