

## Jinhao Sheng WORK LOG

### MILESTONE 1 WORK Monday,

October 5, 2020 Met with team[120 min]

We decided to build a stack based processor. We created a Google doc to begin our design document. We then decide to have two stacks and no registers and implement two types of instructions.

### Tuesday, October 6, 2020

Design procedure call convention[30 min]

Met with team[120 min]

We drafted out example assembly programs like relprime and other fractions. We also wrote the machine code for each example programs.

### M2 task assignment:

- 1st meeting: break instructions into small steps and move data from one register to another, determine single-cycle or multi-cycle
- Luke & Austin: RTL Description of each instruction\  
Jinhao & Yiju : A list of generic components specifications needed for RTL
- 2nd meeting: debug and test the processor through Xilinx ISE and fix existed problems

### MILESTONE 2 WORK

### Wednesday, October 14, 2020

Read through Design Document

### MILESTONE 3 WORK

### Saturday, October 17, 2020

Design Datapath for O-type Instruction[30 min]

### Sunday, October 18, 2020

Met with team[120 min]

We verified our RTL by iterate each instruction on a whiteboard. We then drafted out our initial design of our datapath.

Monday, October 18, 2020

Met with team[60 min]

We designed our stack register, and also finished design our datapath.

Drawing datapath on draw.io[30min]

Tuesday, October 20, 2020

Write out unit testing for multiplexer[60min]

Wednesday, October 21, 2020

Met with team[90min]

Refine datapath, Unit Specification, and write out integration plan

MILESTONE 4 WORK

Friday, October 23, 2020

Write out leftshifter and signextender. [40min]

Sunday, October 25, 2020

Met with team[120min]

We integrated the Push/Pop part of our integration plan.

Monday, October 26, 2020

Write out test for leftshifter and signextender, make changes to integration plan[60min]

Tuesday, October 27, 2020

Met with team[90min]

We integrated the second part of our integration plan.

#### MILESTONE 5 WORK

Monday, November 2nd, 2020

Figure out integration test testing and plan system testing [60min]

#### MILESTONE 6 WORK

Tuesday, November 10th, 2020

Prepare Presentation[30min]