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| **CSE 140 Project Report**  **Team** *ID* **:** *Member 1 and Member 2*  **Date**: *submission date* |

1. **Single-cycle RISC-V CPU** 
   1. Overview

// Explain the overall structure of your single-cycle CPU program

* 1. Code Structure

// Explain the detailed code structure that shows the functions and variables with how you implemented and how those are interacting with the other functions or variables.

* + 1. Functions
    2. Variables
  1. Execution Results

// Show how to run your program and a sample output screenshot

* 1. Challenges and Limitations

// If you encountered any challenges while implementing the code, discuss here

// If you think your program has any limitations (e.g., some part is not working properly), explain here with potential reasons.

1. **Extended RISC-V CPU** 
   1. Overview

// Explain how you extended the single-cycle CPU for the two instructions.

* 1. Baseline Code Structure

// Explain the detailed code structure for JAL and JALR.

* + 1. Functions
    2. Variables
  1. Execution Results

// Show how to run your program and a sample output screenshot

* 1. Challenges and Limitations

// If you encountered any challenges while implementing the code, discuss here

// If you think your program has any limitations (e.g., some part is not working properly), explain here with potential reasons.

1. **Pipelined RISC-V CPU (optional – only for extra credit)**
   1. Overview

// Explain the overall structure of your pipelined CPU program

* 1. Baseline Code Structure

// Explain the detailed code structure that shows the functions and variables with how you implemented and how those are interacting with the other functions or variables.

// Especially in pipelined CPU, explain how you handled NOPs and Flushes (e.g., implementing dependency checking logic and so on)

* + 1. Functions
    2. Variables
  1. Optimizations

// If you implemented data forwarding, explain how you implemented here. If otherwise, don’t need to add this section.

* 1. Execution Results

// Show how to run your program and a sample output screenshot

// If you implemented data forwarding, please add one more sample output with data forwarding that may have fewer cycles.

* 1. Challenges and Limitations

// If you encountered any challenges while implementing the code, discuss here

// If you think your program has any limitations (e.g., some part is not working properly), explain here with potential reasons.