CS385 – Final Report

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# Introduction

# Architecture

**Description –**

**Single Cycle Datapath–**

# Instruction Set

|  |  |  |
| --- | --- | --- |
| **Instruction Set** | | **Instruction Format** |
| add |  | |  |  |  |  |  | | --- | --- | --- | --- | --- | | op | rs | rt | rd | Unused | | 4 | 2 | 2 | 2 | 6 | |
| sub |  |
| and |  |
| or |  |
| slt |  |
| addi |  | |  |  |  |  | | --- | --- | --- | --- | | op | rs | rt | value / address | | 4 | 2 | 2 | 8 | |
| sw |  |
| lw |  |
| beq |  | |  |  | | --- | --- | | op | address | | 4 | 12 | |
| bne |  |

# Components

## Registers

**Description –**

**Diagram –**

**Truth Table –**

## Instruction / Data Memory

**Description –**

## ALU

**Description –**

**Diagram –**

**Truth Table –**

## Pipelines

**Description –**

**Diagram –**

# Program

# Simulation Results