**Processor Design Project**

**Interim Report**

**EE480**

Team Members: Alex Hendren & Zachary Sean McFeely

Date

# Introduction

# Instruction Set Architecture Development

## Implementation

### Add

|  |  |
| --- | --- |
| Instruction | Add |
| OPCode | 0000 |
| Flags | 00: Direct 01: Indirect 10: Immediate |
| Format | ADD FLAG OPERAND |
| Description | Adds the specified operand to the current contents of the ACC register. The Output from the ALU will be returned to the ACC register. |
| Operation | ACC ← ACC + OPERAND |
| Memory Addressing | Immediate, Direct, and Indirect |

### Sub

### Logical OR

### Logical AND

### Logical Complement (COMP)

### Multiply and Divide

### Arithmetic Left/Right Shift

### Conditional Branch

### Unconditional Jump

### Jump/Return to/from a Subroutine

### LOAD Accumulator from RAM

### STORE Accumulator to RAM

### INPUT Data Word to RAM

### OUTPUT Data Word from RAM

### LOAD Mask Register of HVPI

### NOP

# Accumulator Architecture Development

## Architecture Overview

## Instruction Implementation

### Add

### Sub

### Logical OR

### Logical AND

### Logical Complement (COMP)

### Multiply and Divide

### Arithmetic Left/Right Shift

### Conditional Branch

### Unconditional Jump

### Jump/Return to/from a Subroutine

### LOAD Accumulator from RAM

### STORE Accumulator to RAM

### INPUT Data Word to RAM

### OUTPUT Data Word from RAM

### LOAD Mask Register of HVPI

### NOP

# Conclusion

# References