# CO224 - Lab 5 Part 5 - Report

**Group: 41**

| Functionality Implemented | OP Code | ALUOP | Additional Signals Generated | Description |
|---|---|---|---|---|
| bne | 00001101 | 001 | MUX_SEL_BNE = 1 | The jump target will be added to the next pc address if the MUX_SEL_BNE signal is high and the ZERO signal of the ALU is low (indicating the two operands are not equal) |
| mult | 00001100 | 100 | - | |
| sll | 00001110 | 101 | SHIFT_DIRECTION = 0 | Both sll and slr operations have the same ALUOP and is differentiated by the SHIFT_DIRECTION signal provided to the ALU |
| slr | 00001111 | 101 | SHIFT_DIRECTION = 1 | |
| sra | 00010001 | 110 | - | |
| ror | 00010000 | 111 | - | |

# Circuit Diagram of CPU