LECTURE - 15

Program Control
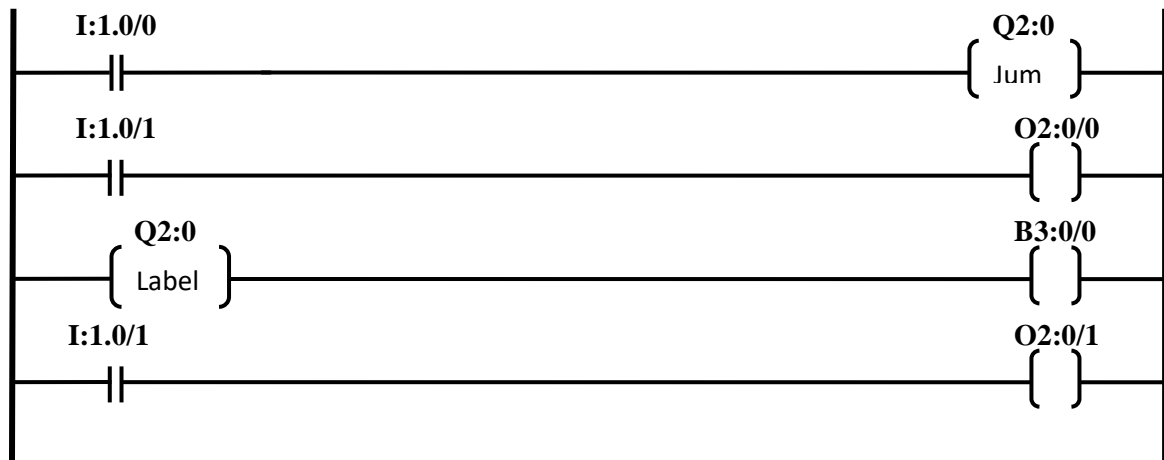
JMP   (Jump)

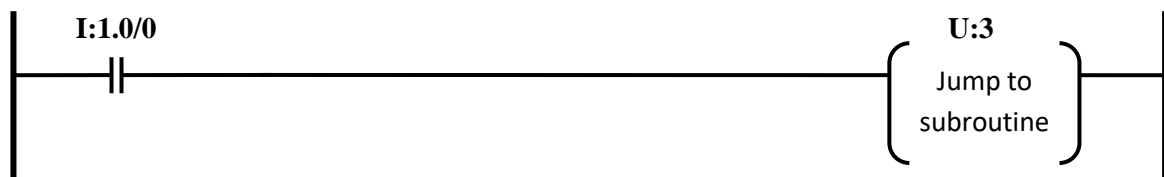**LBL   (Label)**

JSR   (Jump to subroutine)

MCR   (Master Control Reset)

JMP & LBL (JUMP AND LABEL)

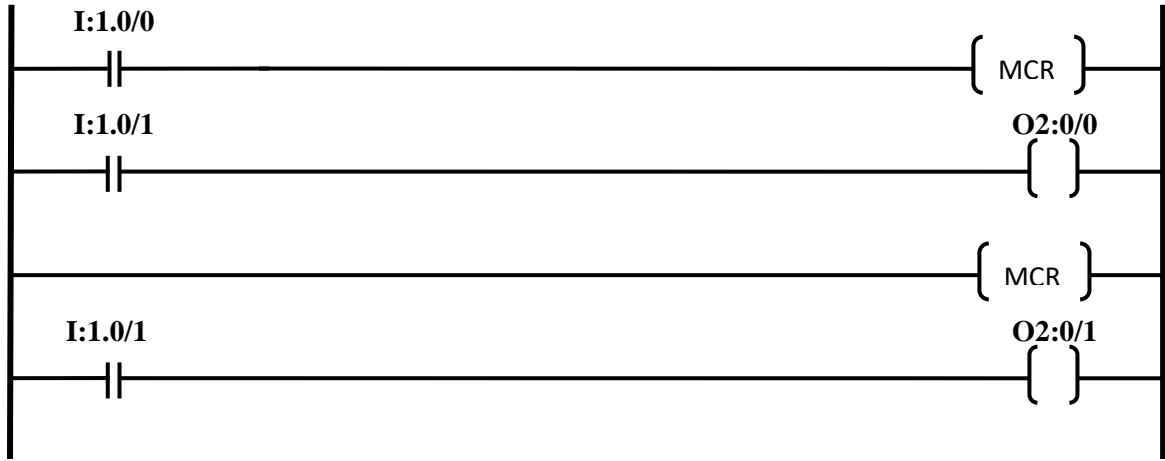**If jump is active then the outputs in between jump and label will remain unchanged irrespective of the inputs.**

JSR (JUMP TO SUBROUTINE)

When rung conditions are true for this output instruction, it causes the processor to jump to the targeted subroutine file. You can only jump to the first instruction in a subroutine. Each subroutine must have a unique file number (decimal, 3-255).
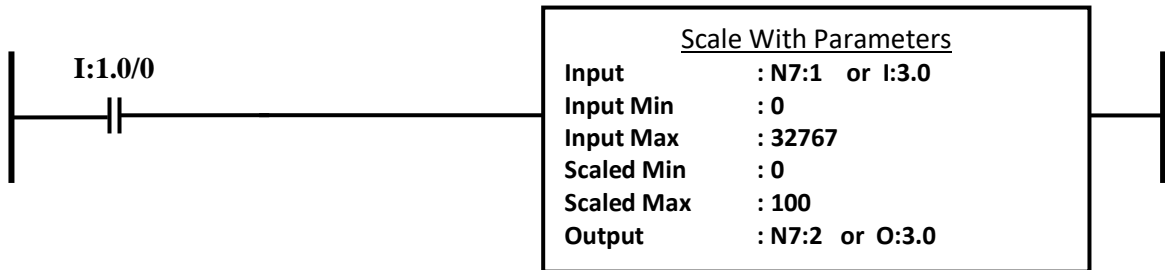
MCR (MASTER CONTROL RESET)

```
        I:1.0/0
        ─┤├─────────────────────────────────────────────────┤ MCR ├──
        I:1.0/1                                              O2:0/0
        ─┤├─────────────────────────────────────────────────( )──────

        ─────────────────────────────────────────────────────┤ MCR ├──
        I:1.0/1                                              O2:0/1
        ─┤├─────────────────────────────────────────────────( )──────
```

If MCR is active then the outputs in between both the MCR's will become low irrespective of the inputs.

Scalling

SCP

```
        I:1.0/0        ┌─────────────────────────────────────┐
        ─┤├────────────┤        Scale With Parameters        ├──
                       │ Input        : N7:1   or  I:3.0     │
                       │ Input Min    : 0                    │
                       │ Input Max    : 32767                │
                       │ Scaled Min   : 0                    │
                       │ Scaled Max   : 100                  │
                       │ Output       : N7:2   or  O:3.0     │
                       └─────────────────────────────────────┘
```

The Input value is scaled to a range determined by creating a linear relationship between input min and max values and scaled min and max values. The scaled result is returned to the address indicated by the output parameter.