# LECTURE - 14

### FFL (FIFO LOAD)

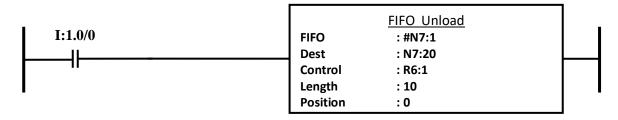
| I:1.0/0<br> | Source<br>FIFO<br>Control<br>Length<br>Position | FIFO Load<br>: #N7:0<br>: N7:1<br>: R6:1<br>: 10<br>: 0 | $\left  - \right $ |
|-------------|---|---|--------------------|
|             | Position  | : 0   |                    |

FFL and FFU output instructions are used in pairs. The FFL loads words into a user-created file called a FIFO stack on successive false-to-true transitions of the rungs controlling input logic. The FFU (FIFO Unload) unloads words from the FIFO stack in the same order as they were entered. This instruction is helpful in applications where it is necessary to load and unload values in the same order.

Outputs :: EN Enable => When block gets a positive pulse it is high. DN Done => When length = position this bit is high.

EM Empty => When no data has been entered this bit is high.

#### FFU (FIFO UNLOAD)



FFL and FFU output instructions are used in pairs. The FFL loads words into a user-created file called a FIFO stack on successive false-to-true transitions of the rungs controlling input logic. The FFU (FIFO Unload) unloads words from the FIFO stack in the same order as they were entered. This instruction is helpful in applications where it is necessary to load and unload values in the same order.

Outputs ::

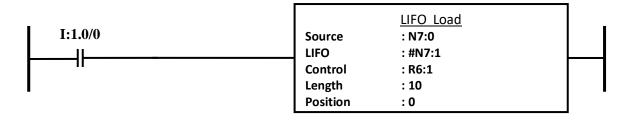
EN

Enable => When block gets a positive pulse it is high.

DN Done => When length = position this bit is high. EM

Empty => When no data has been entered this bit is high.

#### LFL (LIFO LOAD)



## FFU (FIFO UNLOAD)

| _       |          | <u>LIFO Unload</u> | - I |
|---------|----------|--------------------|-----|
| I:1.0/0 | LIFO     | : #N7:1            |     |
|         | Dest     | : N7:20            |     |
| 11      | Control  | : R6:1             |     |
|         | Length   | : 10               |     |
|         | Position | : 0                |     |

LFL and LFU output instructions are used in pairs. The LFL loads words into a user-created file (34 words maximum) called a LIFO stack on successive false-to-true transitions of the rungs controlling input logic. When the stack is filled the DN bit is set, inhibiting further loading. On a false-to-true rung transition, the LFU (LIFO Unload) selects the last data that was loaded to the stack and unloads that data first. When the stack is empty, the processor sets the empty bit (EM).