Micro - Processor Assignment 1

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Solution: using a 3-to-8 decoder:

Address Lines → (A_0, A_1, A_2)

Outputs → (Y_0, Y_1, Y_2, Y_3, Y_4, Y_5, Y_6, Y_7)

To get Port Addresses:

D	Address	Port
0	000	0
1	001	1
2	010	2
3	011	3
4	100	4
5	101	5
6	110	6
7	111	7

where: Port 0, Port 1, Port 2, Port 3 → Input Ports

Port 4, Port 5, Port 6, Port 7 → Output Ports

Connecting Output → Port:

Y_0 → Port 0 (Input)

Y_1 → Port 1 (Input)

Y_2 → Port 2 (Input)

Y_3 → Port 3 (Input)

Y_4 → Port 4 (Output)

Y_5 → Port 5 (output)

Y_6 → port 6 (output)

Y_7 → Port 7 (output)

Diagram: