Program 9 :

Suppose we input a data from port 2. Write a program to find the bit 1 (A1) is zero or One. If the bit is 1, load accumulator with Y (59H), else load N (4EH). The accumulator data should be available at output port 4.

Address	Label	OP Code	OPerand	Comments
8004h		IN	02h	Input data to A from port 2.
8006h		ANI	02h	Perform AND operation with $(02)_{16}$ to Accumulator.
8008h		JZ	N	Jump to N^{th} inst. when A contains zero.
800Bh		MVI	A, 59h	Move immediate Y into A
800Dh		JMP	P	Jump to - P^{th} instruction
8010h	N	MVI	A, 4EH	Move immediate N into A.
8012h	P	OUT	04H	Output Acc. data to Port 4
8014h				Halt