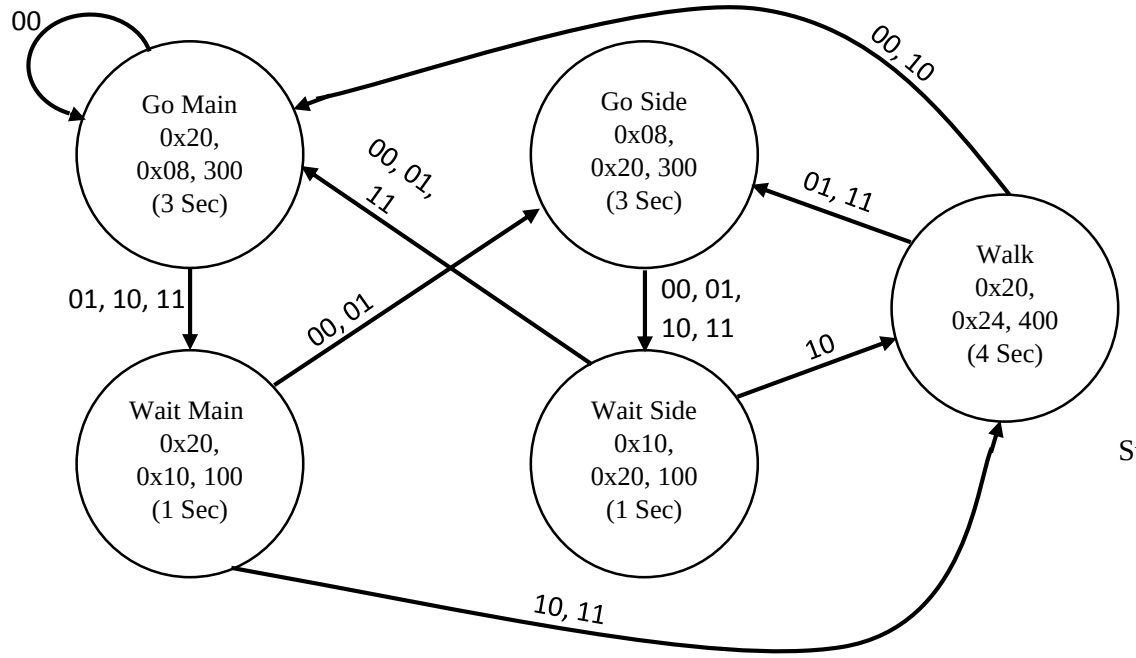
I. Finite State Machine(FSM)

- **State Table:**

INPUT / Present State and output	00	01	10	11
	Next State			
Go main 0x20, 0x08, 300 (3 Sec)	Go main	Wait Main	Wait Main	Wait Main
Wait Main 0x20, 0x10, 100 (1 Sec)	Go Side	Go Side	Walk	Walk
Go Side 0x08, 0x20, 300 (3 Sec)	Wait Side	Wait Side	Wait Side	Wait Side
Wait Side 0x10, 0x20, 100 (1 Sec)	Go main	Go main	Walk	Go main
Walk 0x20, 0x24, 400 (4 Sec)	Go main	Go Side	Go main	Go Side

Table#1: State Table

- **State Graph:**



Figure#1: State Graph