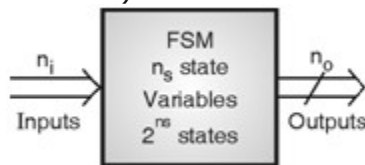


A Lift Controller

Our Project is based on Lift Controller which uses Finite State Machine .

Finite State Machines:-

For a sequential logic system number of outputs (no) depend on the present and past, values of the inputs. Sequential logic systems are known as finite-state machines (FSMs). FSMs are considered to have a number of internal states, which are determined by some combination of values of the n_s state variables. The FSM changes to a new state depending upon the present state and the inputs. The outputs depend on the present state and the inputs (Mealy machine) or just the present state (Moore machine).



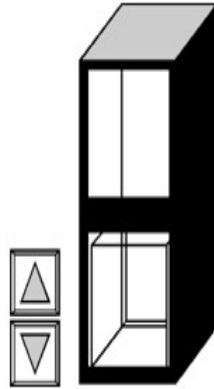
There are two types of FSMs, synchronous FSM and asynchronous FSM.

Assumptions to be made in designing a lift controller:-

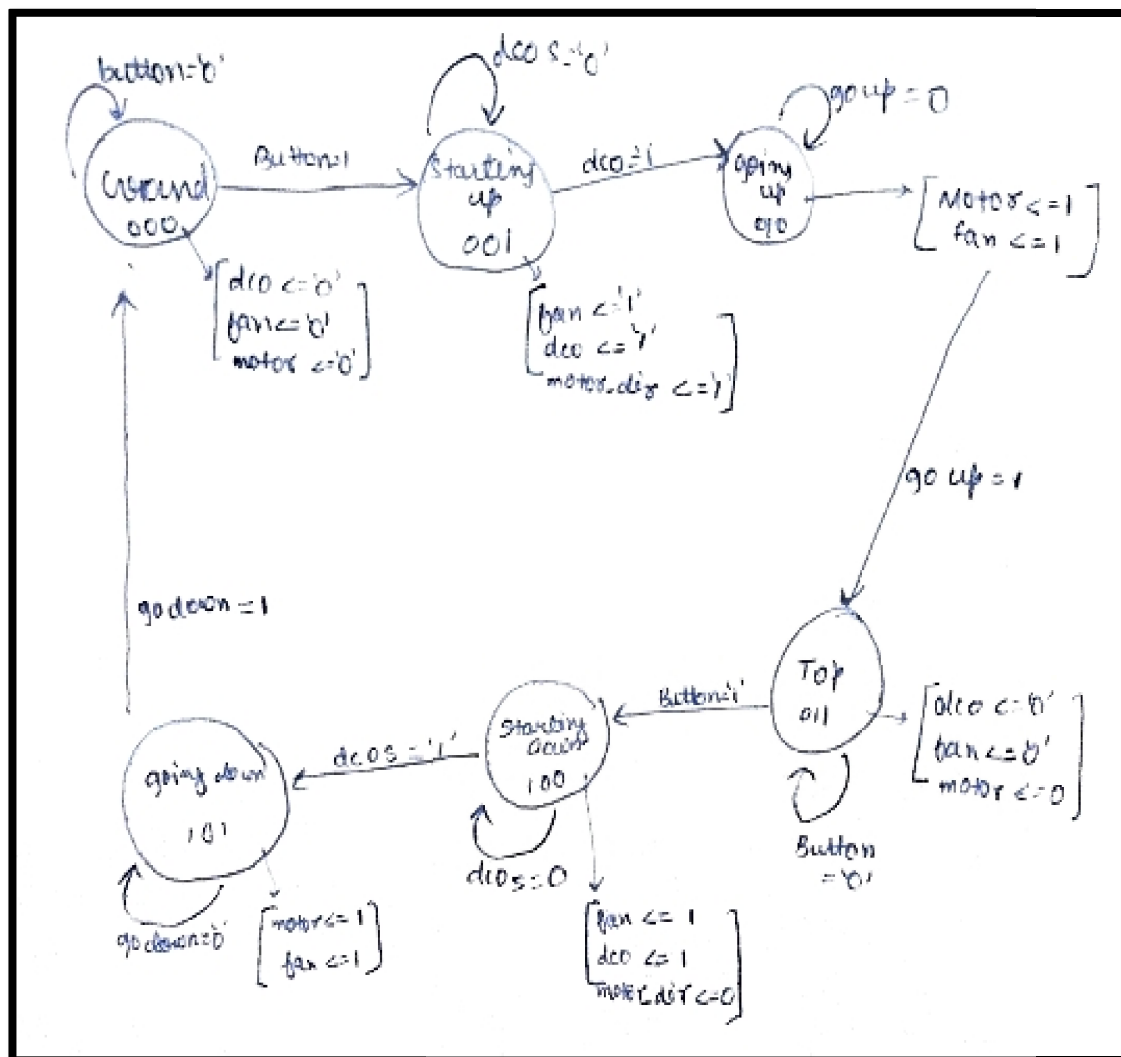
- Lift service is between two floors only.
- Lift doors closed /opened automatically.
- Lift fan switch on/off automatically (used only when lift is in use).
- If lift doors remain open due to malfunctioning of door etc. lift will not start.
- The direction of motion of motor changed automatically according to position of lift.
- No lift calling system .

Lift controller operation :

- If the lift is downstairs,
 1. Close the doors
 2. Start the lift fan and check for closed door.
 3. Select the motor direction to upward
 4. Start motor and go up.
 5. Check for top floor position
 6. Switch off lift fan and motor
 7. Open the doors
- If the lift is upstairs,
 1. Close the doors
 2. Start the lift fan and check for closed door.
 3. Select the motor direction to downward
 4. Start motor and go down.
 5. Check for ground floor position
 6. Switch off lift fan and motor
 7. Open the doors



State Diagram :-



Schematic:-

