State chart:

We propose a state flow to solve the algorithm of multi store parking system the algorithm start with an

Events:

- R_F_S (request free slot)
- R_R_S (request retrieve slot)

Inputs:

- U (Object detection sensor)
- Index_enterd for the retrieve event
- S_B (safe Button)
- P_S (power switch)
- Emergency Button

Outputs:

- Counter for the full slots
- Index, for specifying the slot that is in position of parking
- M_F, Move forward one step
- M_B, Move backwards one step
- Emp1~6 specify if the slot is empty
- Full1~6 specify if the slot is full

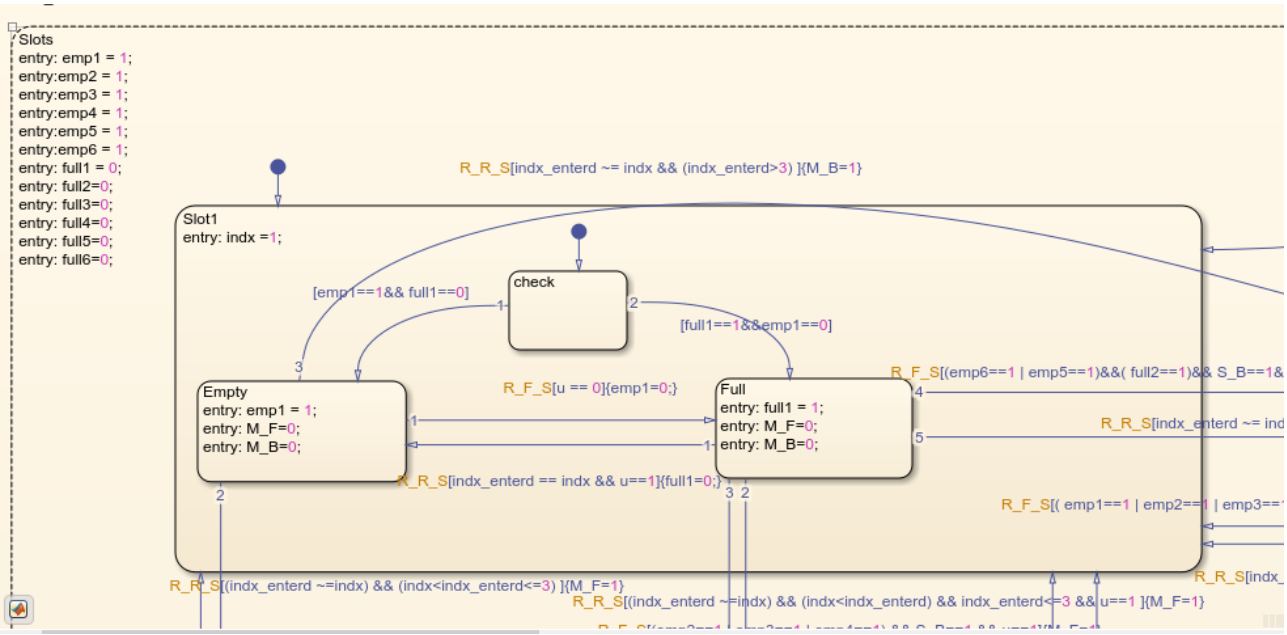
The state chart block is consisting of System, Emergency

System:

1. Power OFF
2. Power ON

Power ON:

- Slots which contain the parking slots of the system for our model we use 6 slots.



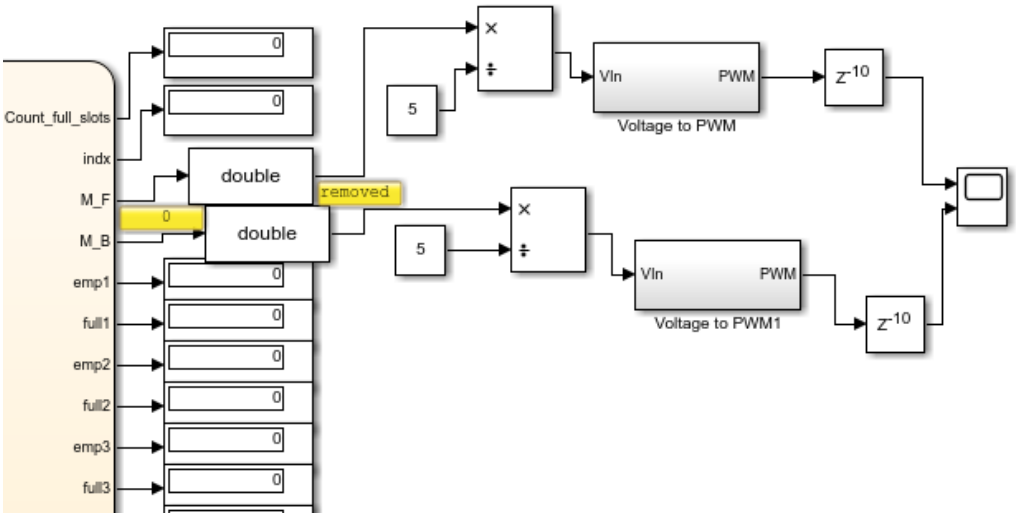
Whine the algorithm initial starts with chick to know if the slot is full or empty. The algorithm move form one slot to other by two events which specified above

EX:

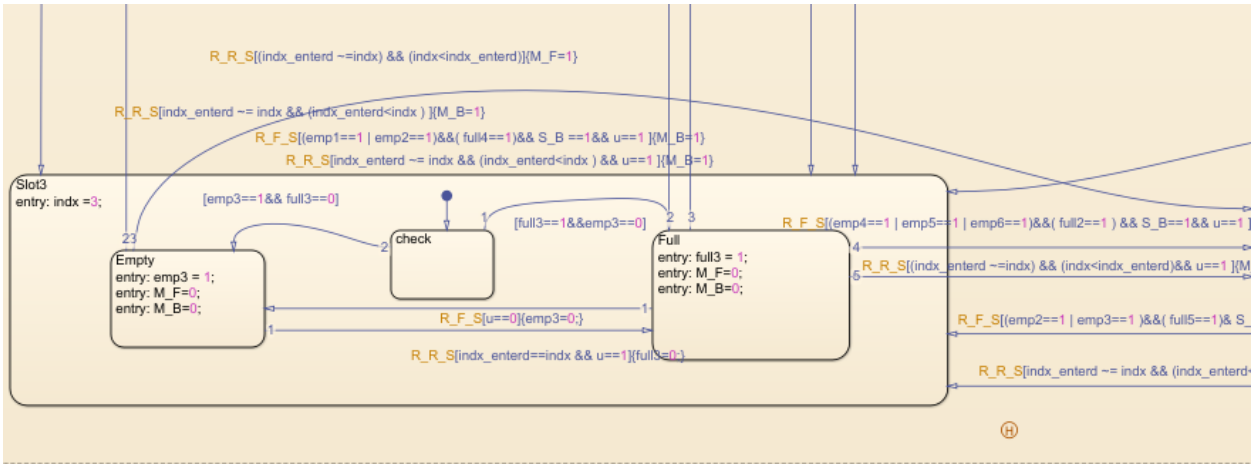
- R_R_S[(indx_enterd ~=indx) && (indx<indx_enterd) && indx_enterd<=3 && u==1]{M_F=1}
- R_F_S[(emp2==1 | emp3==1 | emp4==1) && S_B==1 && u==1]{M_F=1}

There is a conditions for the algorithm to move and there is an action which is taking place.

(M_F==1) and (M_B==1) creates a PWM for control of the motor



There is a history for the system which is in the slots block:



An LCD for the counter