PyramidTech Internship PTI 22

RTL Design, Validation, and Implementation of an Elevator Controller

Elevator Controller Description

It consists of 3 main parts to perform the required functionality correctly:

- control_unit
- request_resolver
- 7 segment decoder
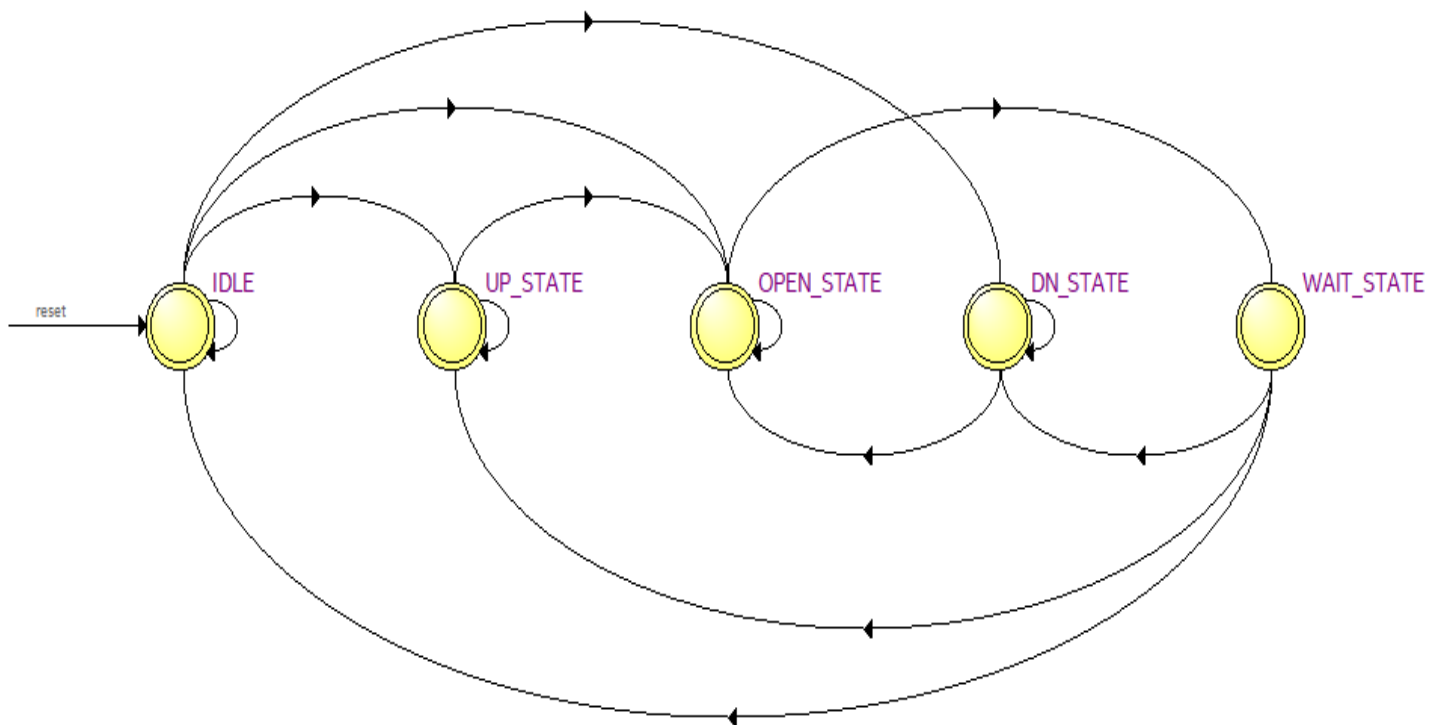
Control Unit

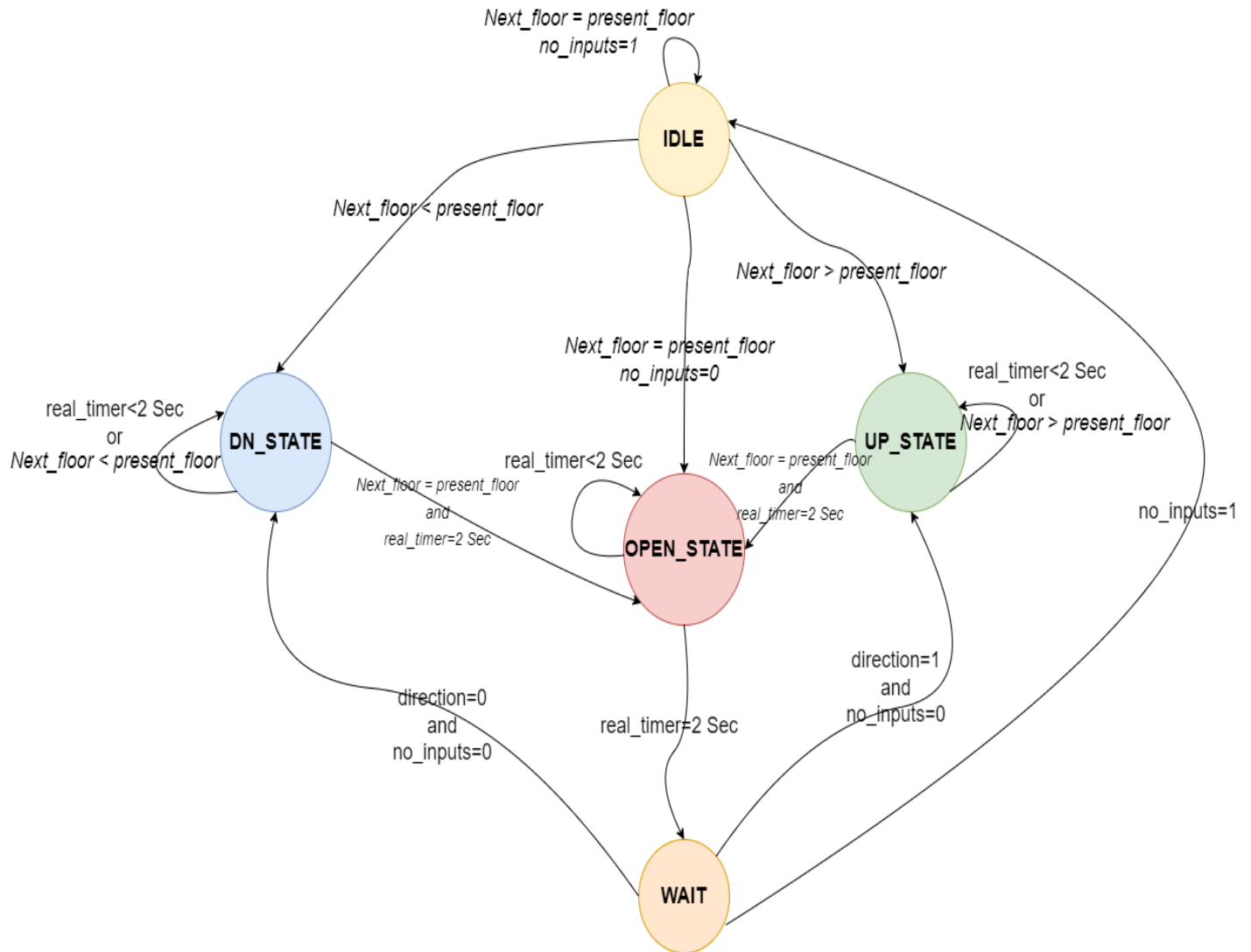- **State Diagram:**

Figure 1: State diagram from Qartus tool

Figure 2: State diagram with states conditions

- **Output Signals:**

States	Output signals			
	Open	**Up**	**Down**	**Direction**
IDLE	0	0	0	Don't care
UP_STATE	0	1	0	1
DOWN_STATE	0	0	1	0
OPEN_STATE	1	0	0	Don't care
WAIT_STATE	0	0	0	No change