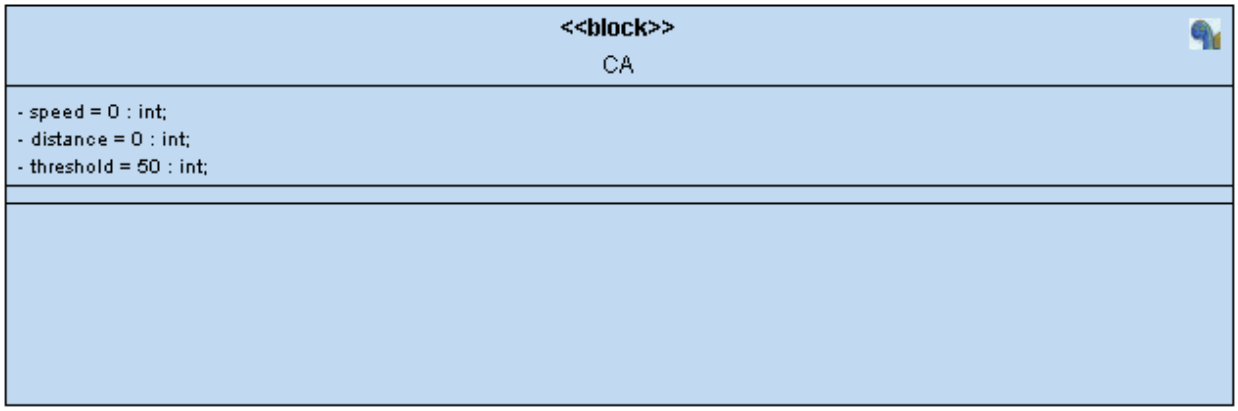
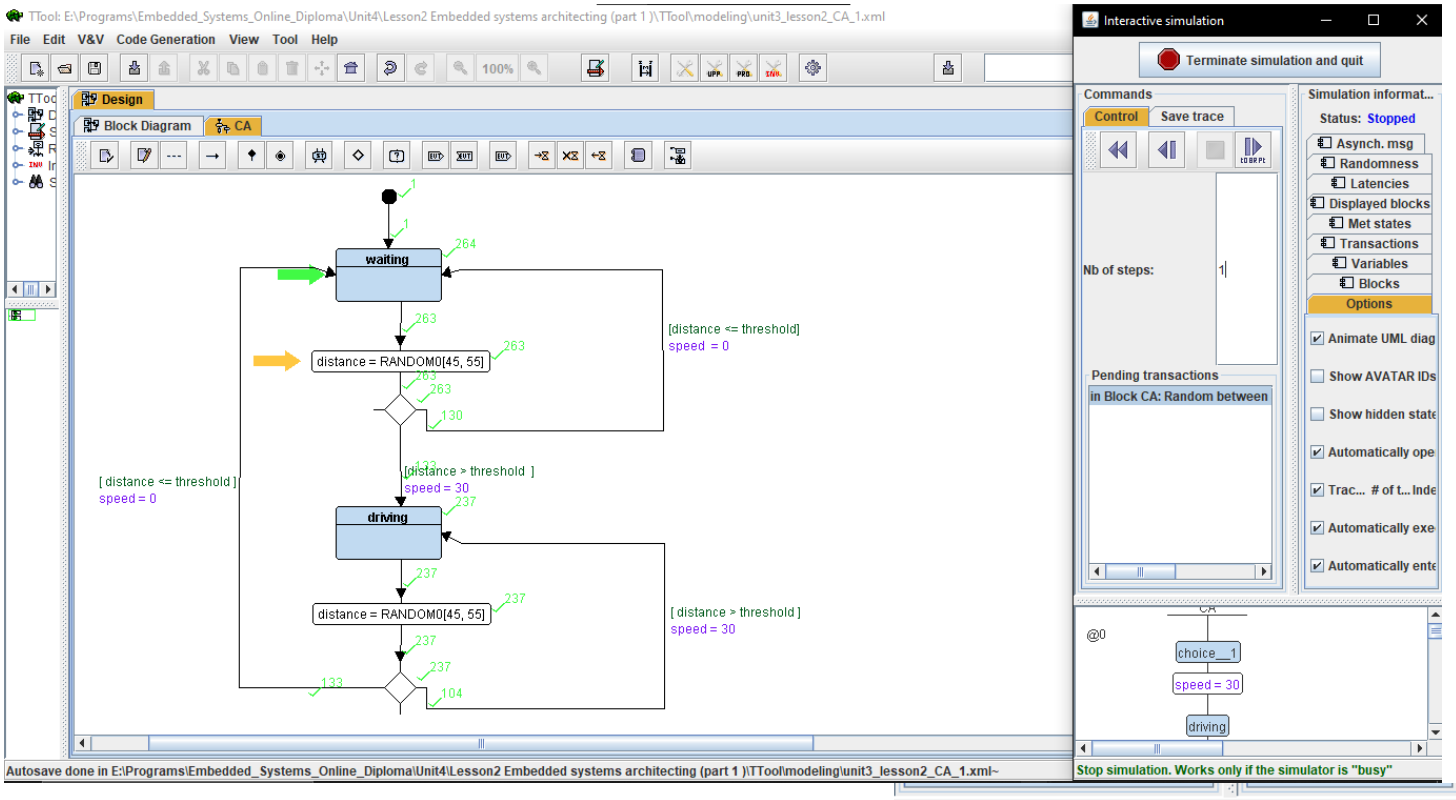
Ultrasonic Obstacle-avoiding

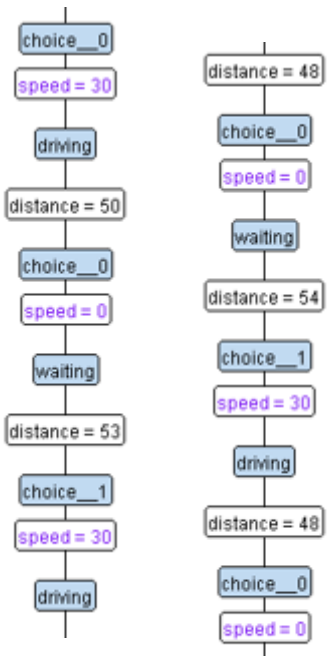
Using 1 Module

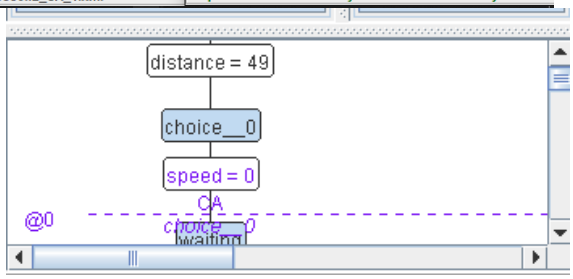
The module Block diagram



State machine





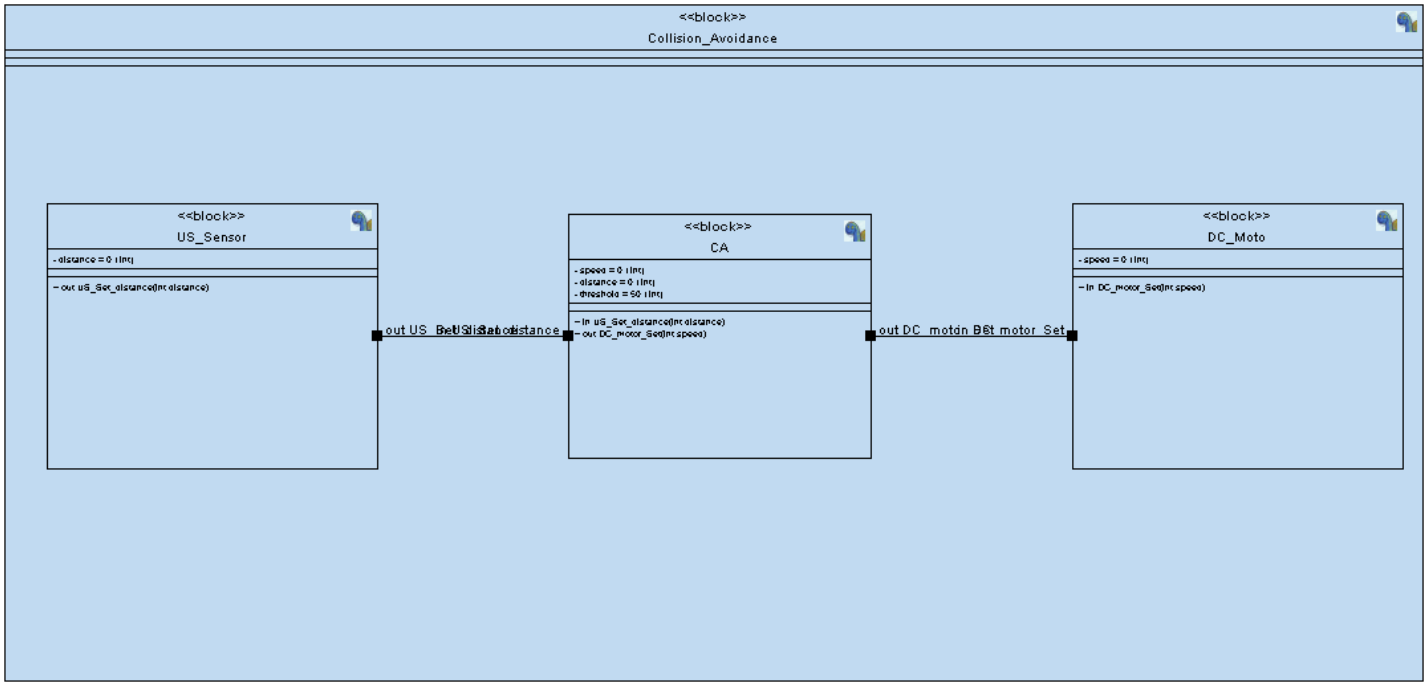


Output code

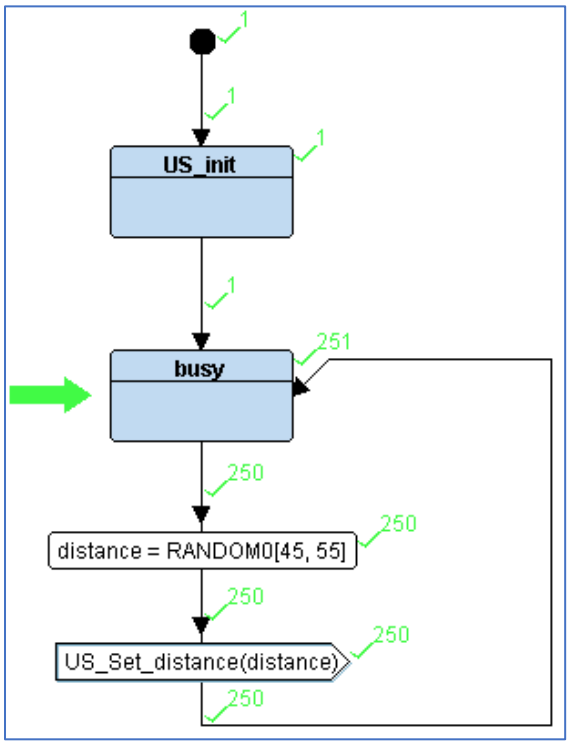
```
CA_Wainting State: distance = 18 Speed = 0
CA_Wainting State: distance = 15 Speed = 0
CA_Wainting State: distance = 42 Speed = 0
CA_Wainting State: distance = 20 Speed = 0
CA_Wainting State: distance = 35 Speed = 0
CA_Wainting State: distance = 18 Speed = 0
CA_Wainting State: distance = 52 Speed = 0
CA_Driving State: distance = 55 Speed = 30
CA_Driving State: distance = 43 Speed = 30
CA_Wainting State: distance = 28 Speed = 0
CA_Wainting State: distance = 17 Speed = 0
CA_Wainting State: distance = 24 Speed = 0
CA_Wainting State: distance = 21 Speed = 0
CA_Wainting State: distance = 7 Speed = 0
CA_Wainting State: distance = 34 Speed = 0
CA_Wainting State: distance = 46 Speed = 0
CA_Wainting State: distance = 32 Speed = 0
CA_Wainting State: distance = 19 Speed = 0
CA_Wainting State: distance = 10 Speed = 0
CA_Wainting State: distance = 22 Speed = 0
CA_Wainting State: distance = 7 Speed = 0
CA_Wainting State: distance = 14 Speed = 0
CA_Wainting State: distance = 35 Speed = 0
CA_Wainting State: distance = 53 Speed = 0
CA_Driving State: distance = 55 Speed = 30
CA_Driving State: distance = 55 Speed = 30
CA_Driving State: distance = 8 Speed = 30
```

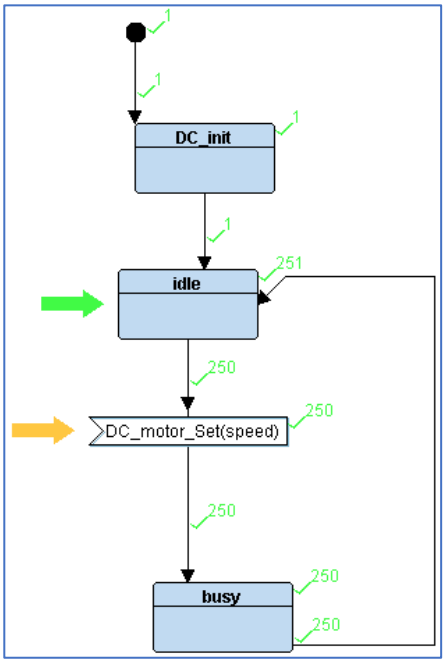
Using 3 Modules

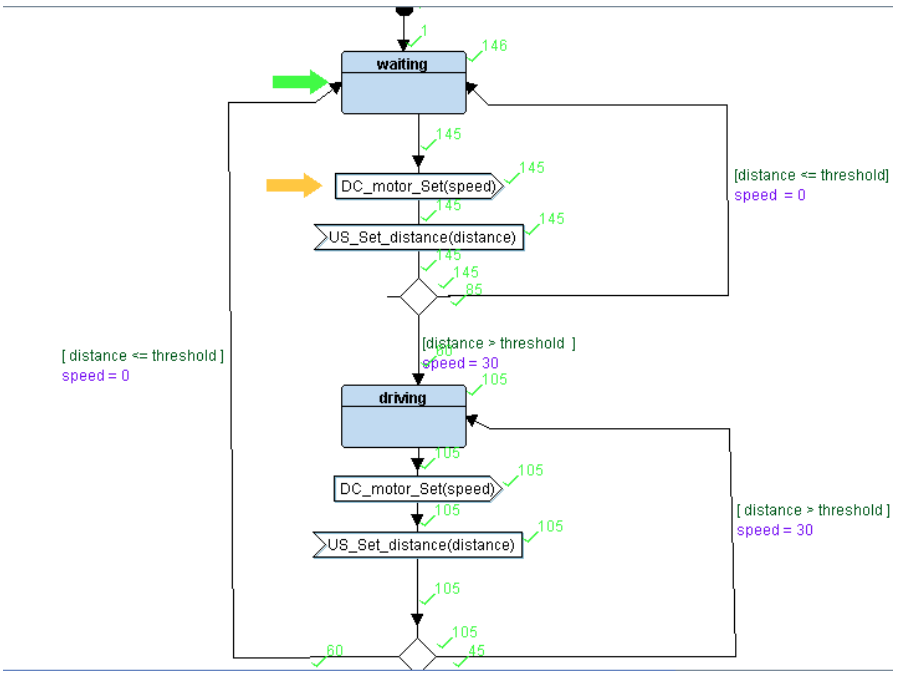
The block diagram for modules



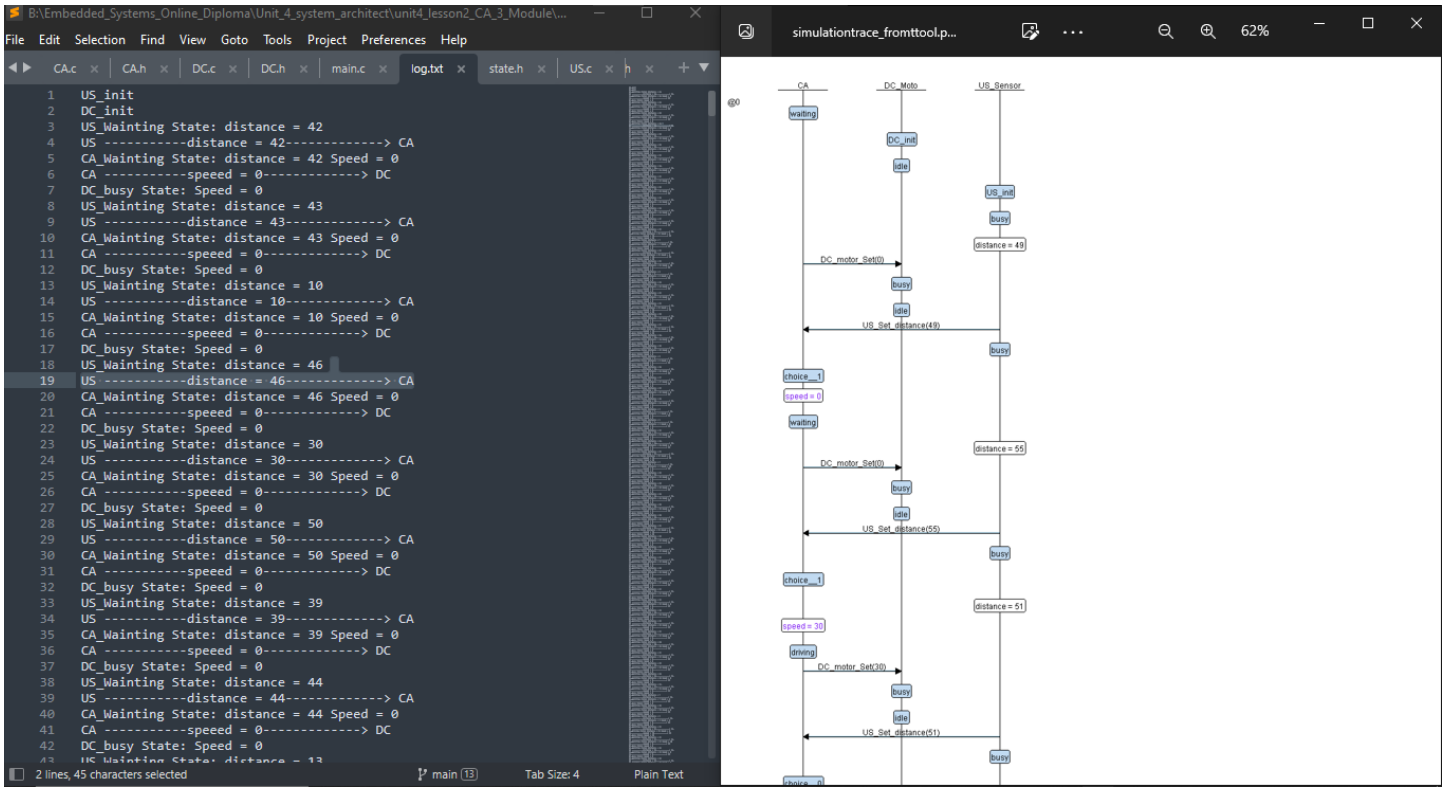
State machines







Output




```
74   US ----------distance = 7----------> CA
75   CA_Wainting State: distance = 7 Speed = 30
76   CA ----------speeed = 0----------> DC
77   DC_busy State: Speed = 0
78   US_Wainting State: distance = 52
79   US ----------distance = 52----------> CA
80   CA_Driving State: distance = 52 Speed = 0
81   CA ----------speeed = 30----------> DC
82   DC_busy State: Speed = 30
83   US_Wainting State: distance = 26
84   US ----------distance = 26----------> CA
85   CA_Wainting State: distance = 26 Speed = 30
86   CA ----------speeed = 0----------> DC
87   DC_busy State: Speed = 0
88   US_Wainting State: distance = 8
89   US ----------distance = 8----------> CA
90   CA_Wainting State: distance = 8 Speed = 0
91   CA ----------speeed = 0----------> DC
92   DC_busy State: Speed = 0
93   US_Wainting State: distance = 43
94   US ----------distance = 43----------> CA
95   CA_Wainting State: distance = 43 Speed = 0
96   CA ----------speeed = 0----------> DC
97   DC_busy State: Speed = 0
98   US_Wainting State: distance = 47
99   US ----------distance = 47----------> CA
100  CA_Wainting State: distance = 47 Speed = 0
101  CA ----------speeed = 0----------> DC
102  DC_busy State: Speed = 0
103  US_Wainting State: distance = 52
```