Mastering Embedded Systems

Online Diploma

Unit 4 Lesson 2 Report

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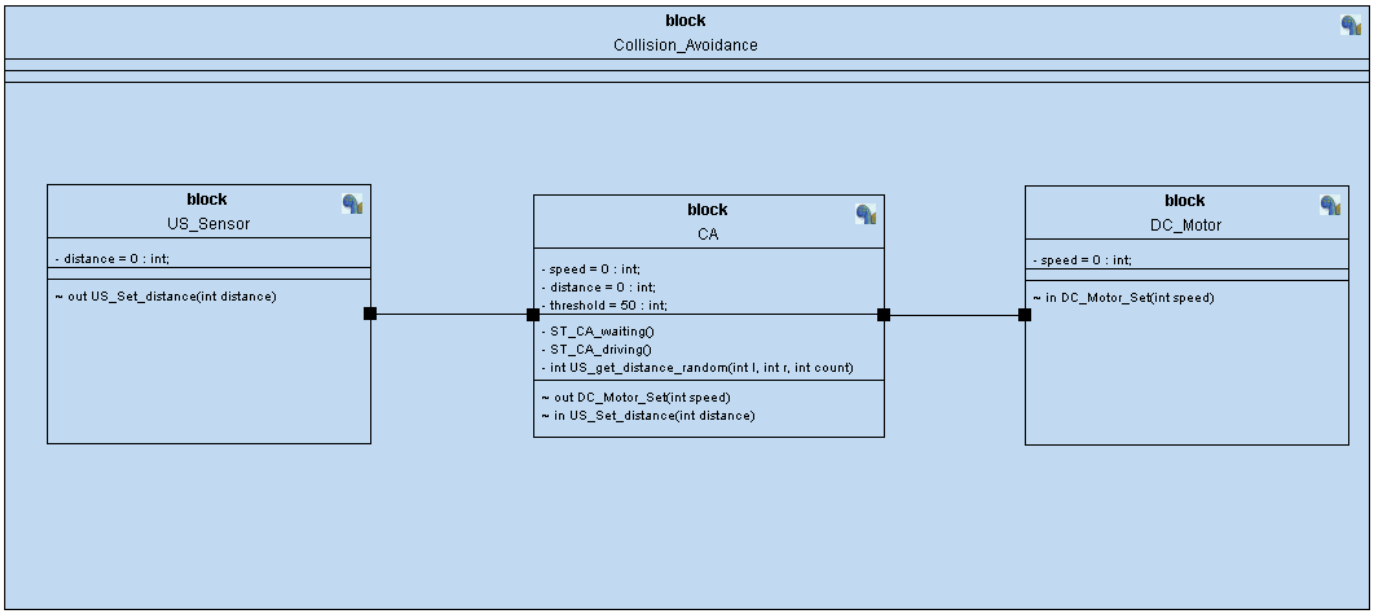
Learn In Depth

Be Professional In Embedded System

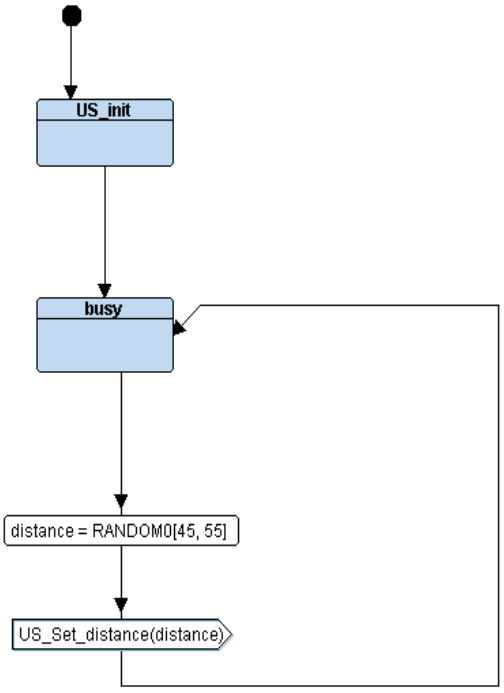
Eng. Keroles Shenouda

Modules Level:

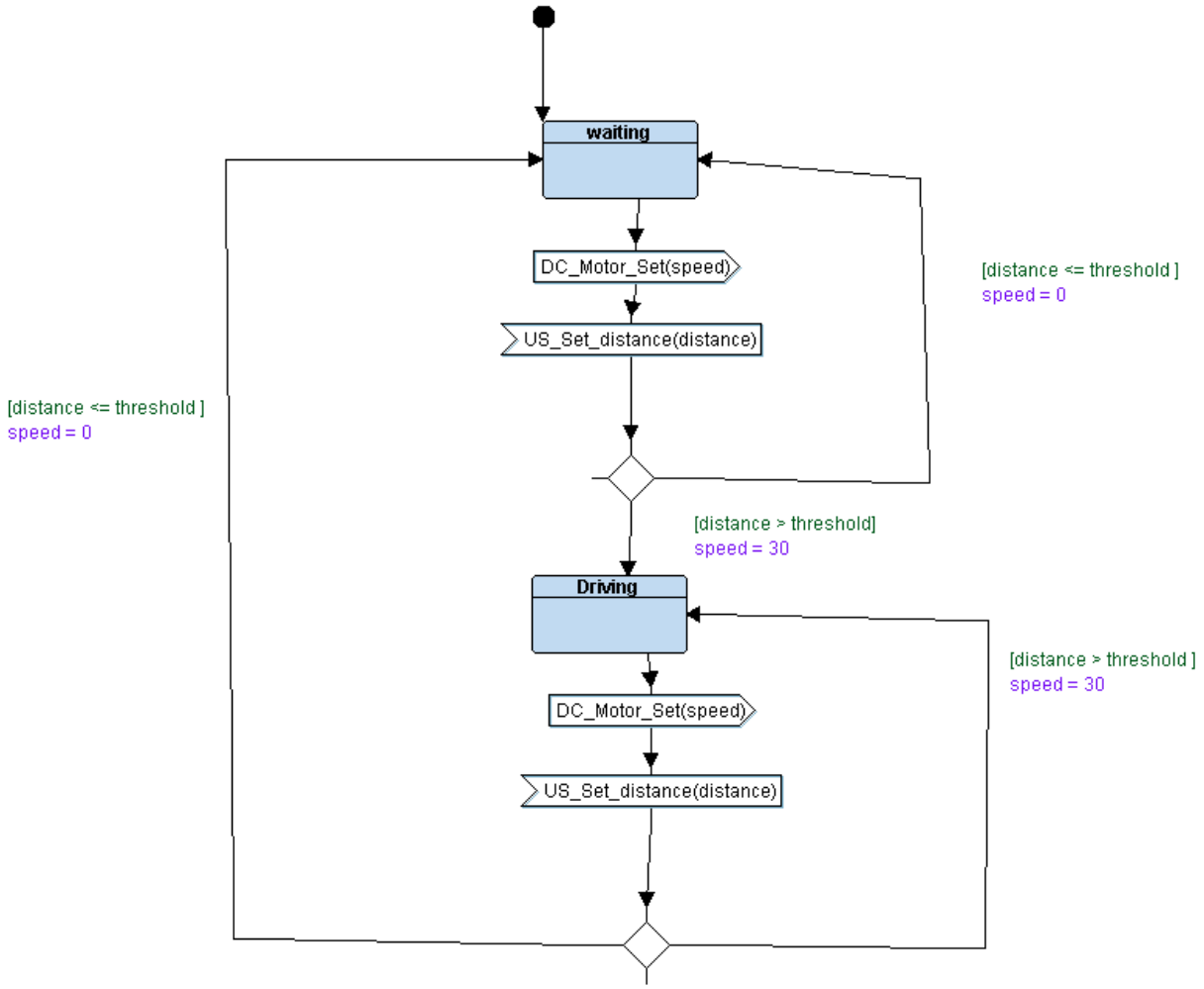


Logical Design

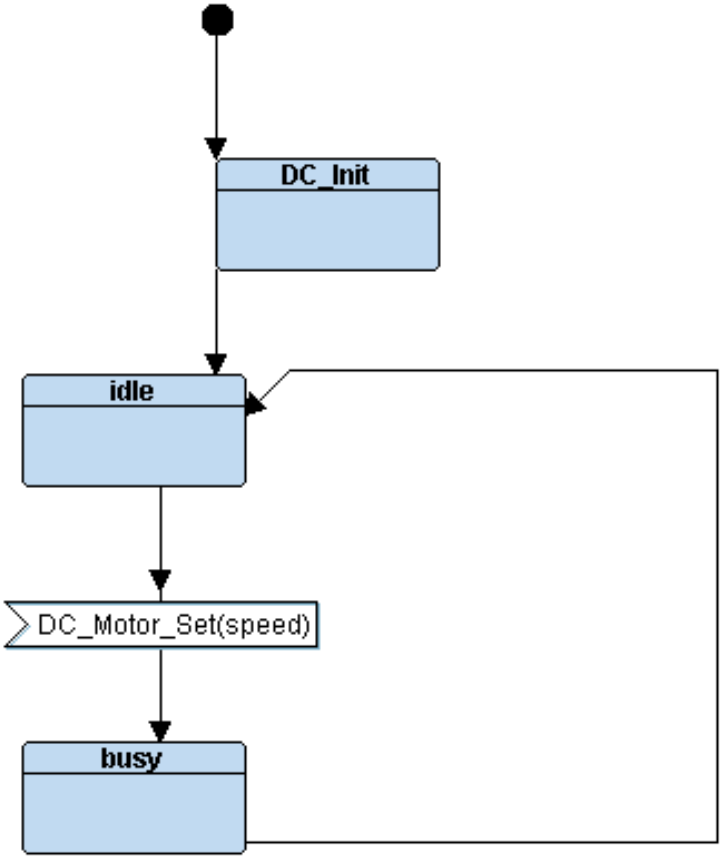
I. Ultrasonic Sensor



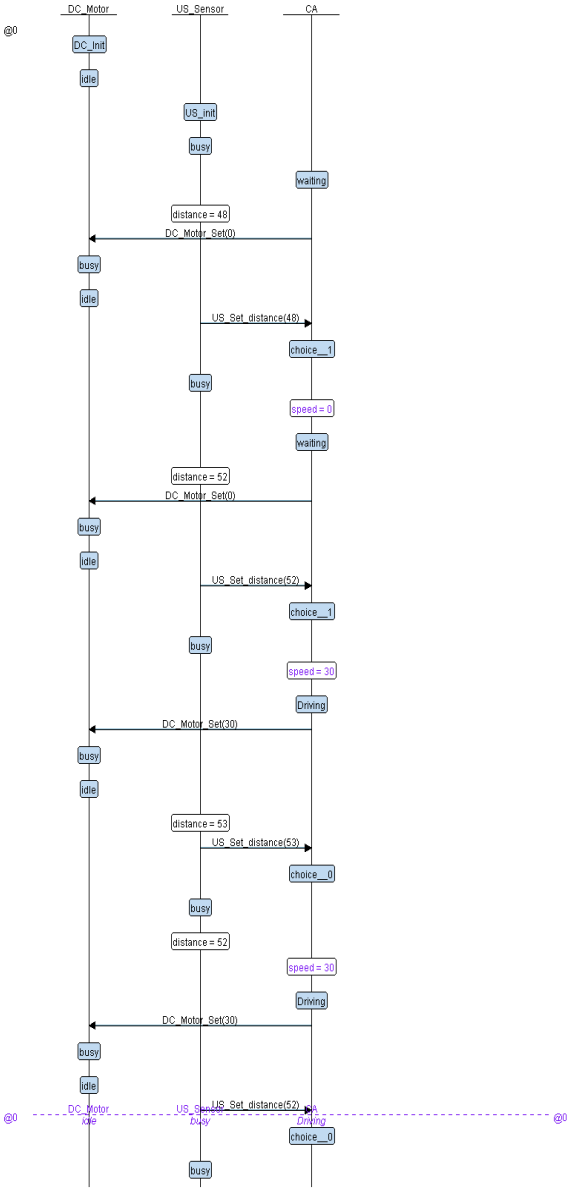
II. Collision Avoidance



III. DC Motor



SW Logical verification




```
US_init
DC_init
US_waiting state: distance = 42
US ---------distance=42-------> CA
CA_waiting state: distance = 42 , speed = 0
CA ---------speed=0------->DC
DC_busy state: speed = 0
US_waiting state: distance = 43
US ---------distance=43-------> CA
CA_waiting state: distance = 43 , speed = 0
CA ---------speed=0------->DC
DC_busy state: speed = 0
US_waiting state: distance = 10
US ---------distance=10-------> CA
CA_waiting state: distance = 10 , speed = 0
CA ---------speed=0------->DC
DC_busy state: speed = 0
US_waiting state: distance = 46
US ---------distance=46-------> CA
CA_waiting state: distance = 46 , speed = 0
CA ---------speed=0------->DC
DC_busy state: speed = 0
US_waiting state: distance = 30
US ---------distance=30-------> CA
CA_waiting state: distance = 30 , speed = 0
CA ---------speed=0------->DC
DC_busy state: speed = 0
US_waiting state: distance = 50
US ---------distance=50-------> CA
CA_waiting state: distance = 50 , speed = 0
CA ---------speed=0------->DC
DC_busy state: speed = 0
US_waiting state: distance = 39
```

```
US ---------distance=53-------> CA
CA_driving state: distance = 53 , speed = 0
CA ---------speed=30------->DC
DC_busy state: speed = 30
US_waiting state: distance = 7
US ---------distance=7-------> CA
CA_waiting state: distance = 7 , speed = 30
CA ---------speed=0------->DC
DC_busy state: speed = 0
US_waiting state: distance = 52
US ---------distance=52-------> CA
CA_driving state: distance = 52 , speed = 0
CA ---------speed=30------->DC
DC_busy state: speed = 30
US_waiting state: distance = 26
US ---------distance=26-------> CA
CA_waiting state: distance = 26 , speed = 30
CA ---------speed=0------->DC
```