

UML Diagrams for Collision Avoidance System

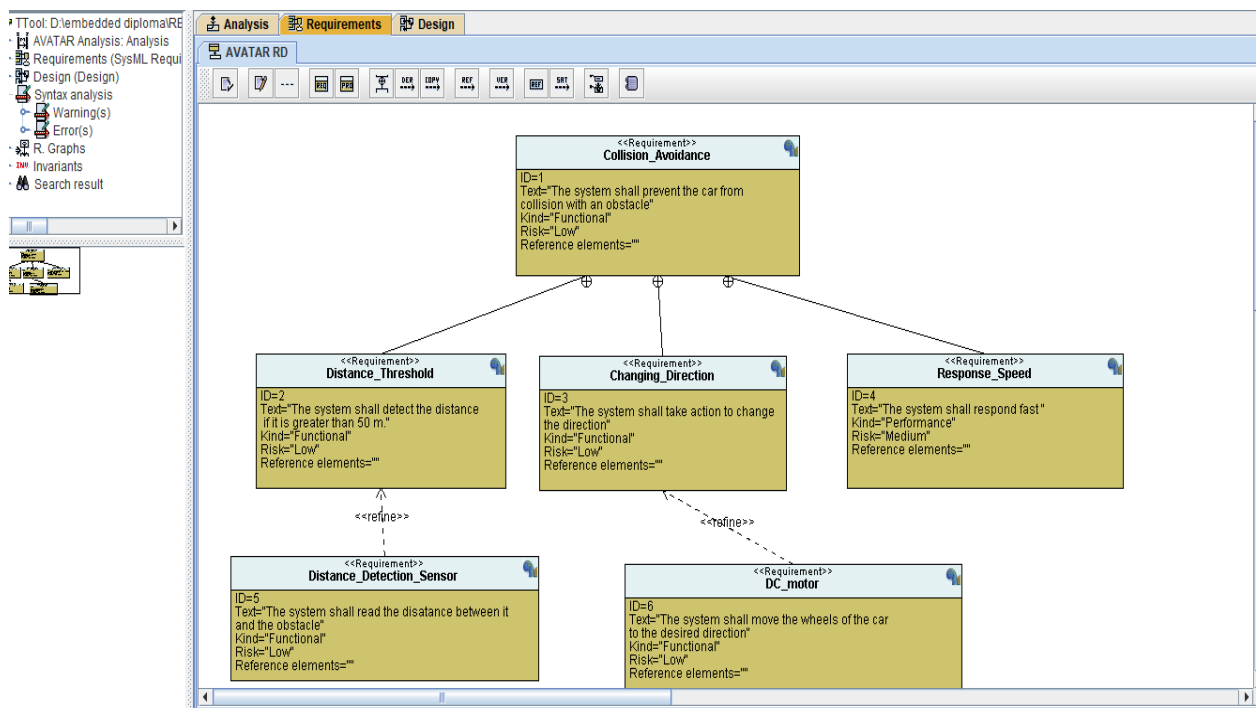
Submitted by

Salma Sherif

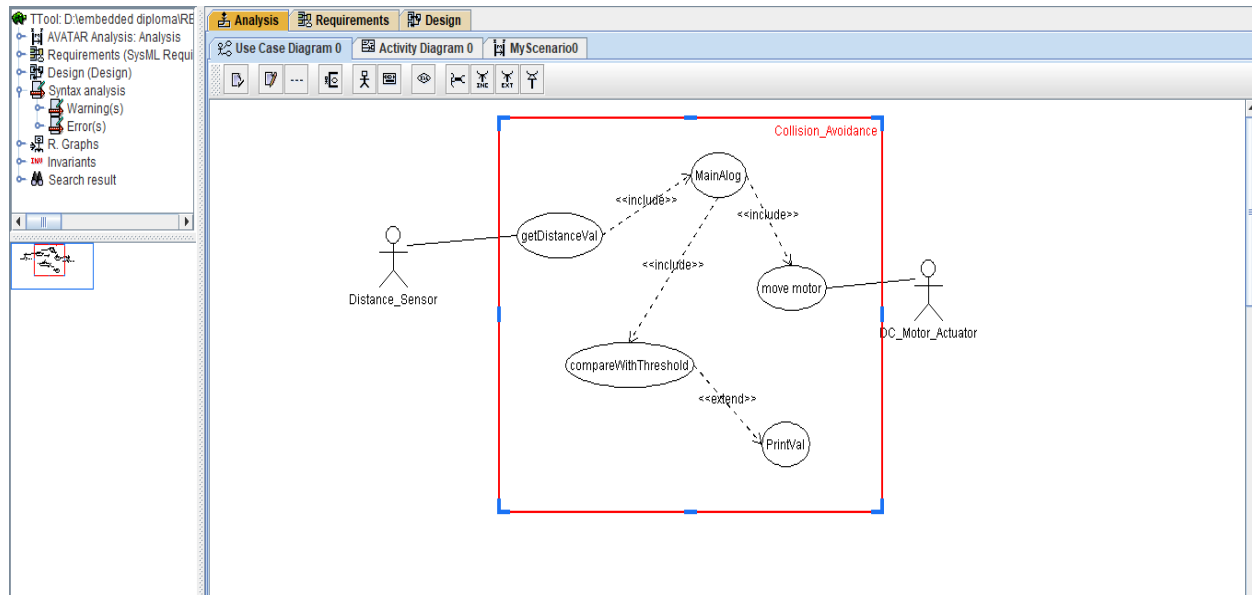
1- Case Study:

The system shall be a part of an Car system to be able to detect the distance between the car and an obstacle in front of it, then controls the speed of the motor to stop it if the distance is less than 50 m.

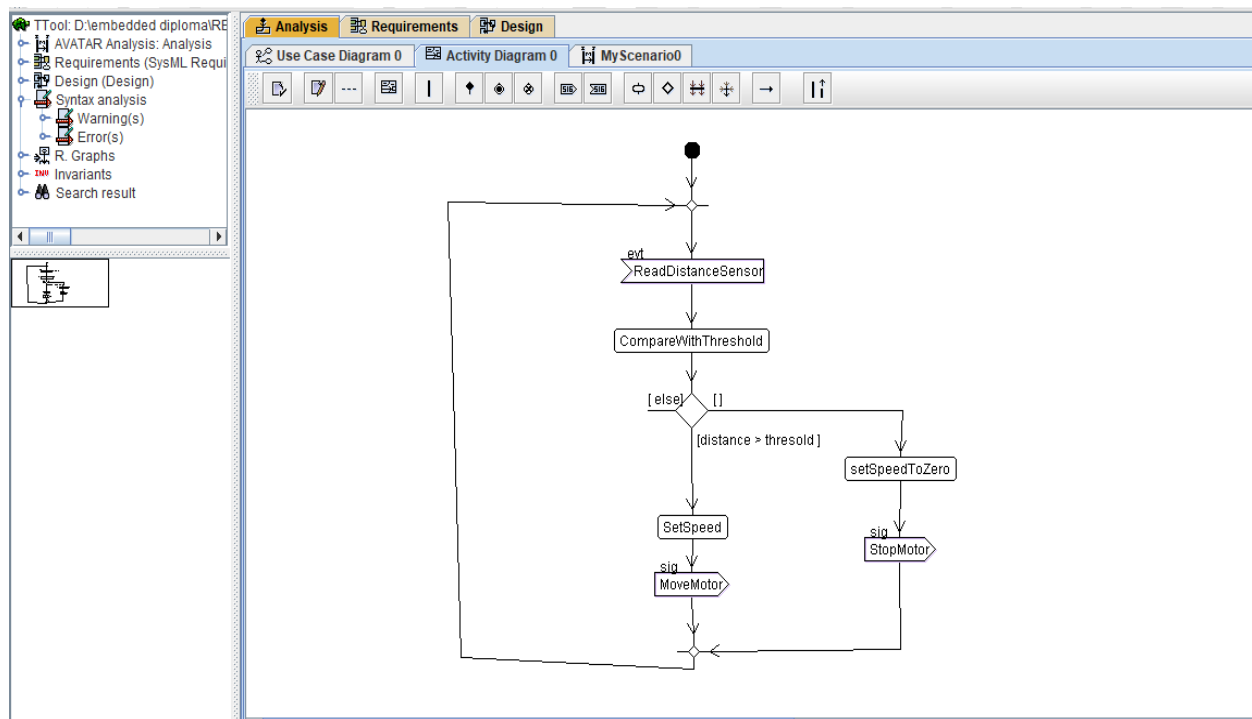
2- Requirements Diagram



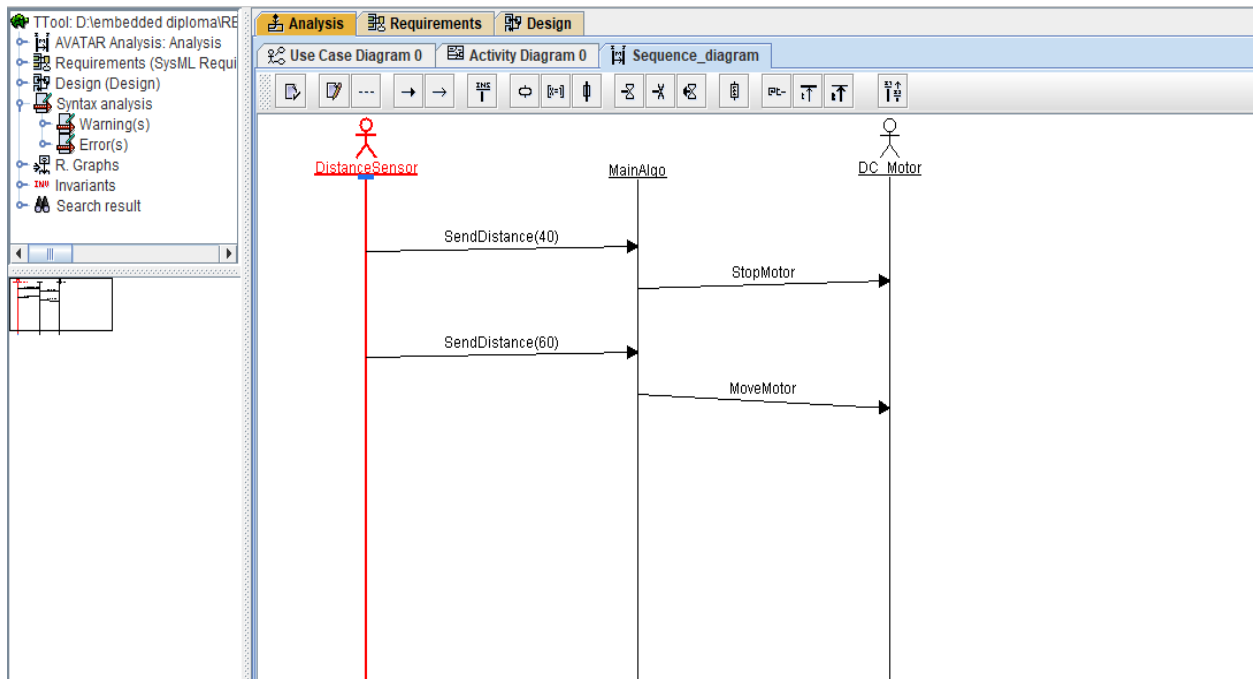
3- Use Case diagram



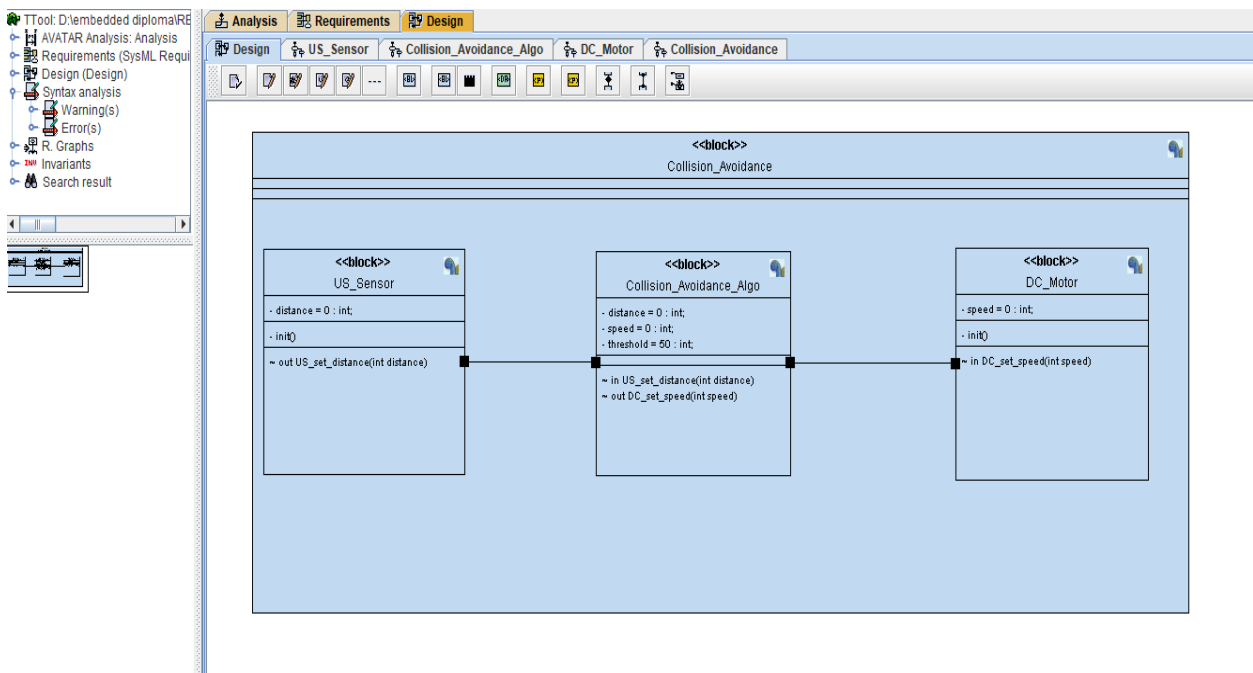
4- Activity Diagram



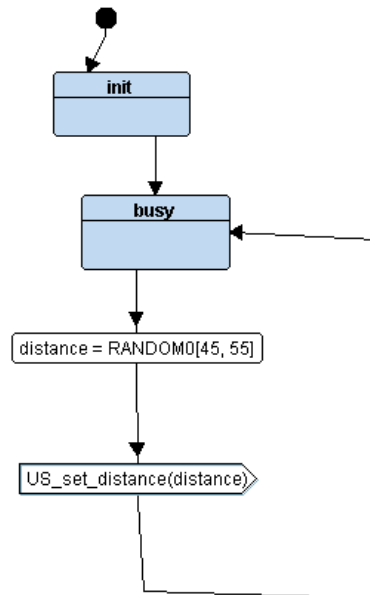
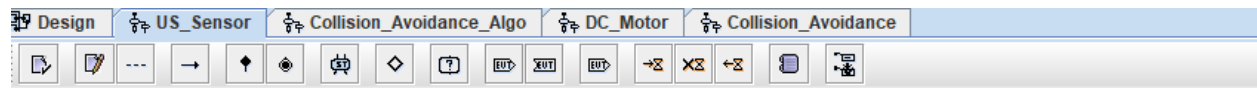
5- Sequence diagram for 2 different scenarios



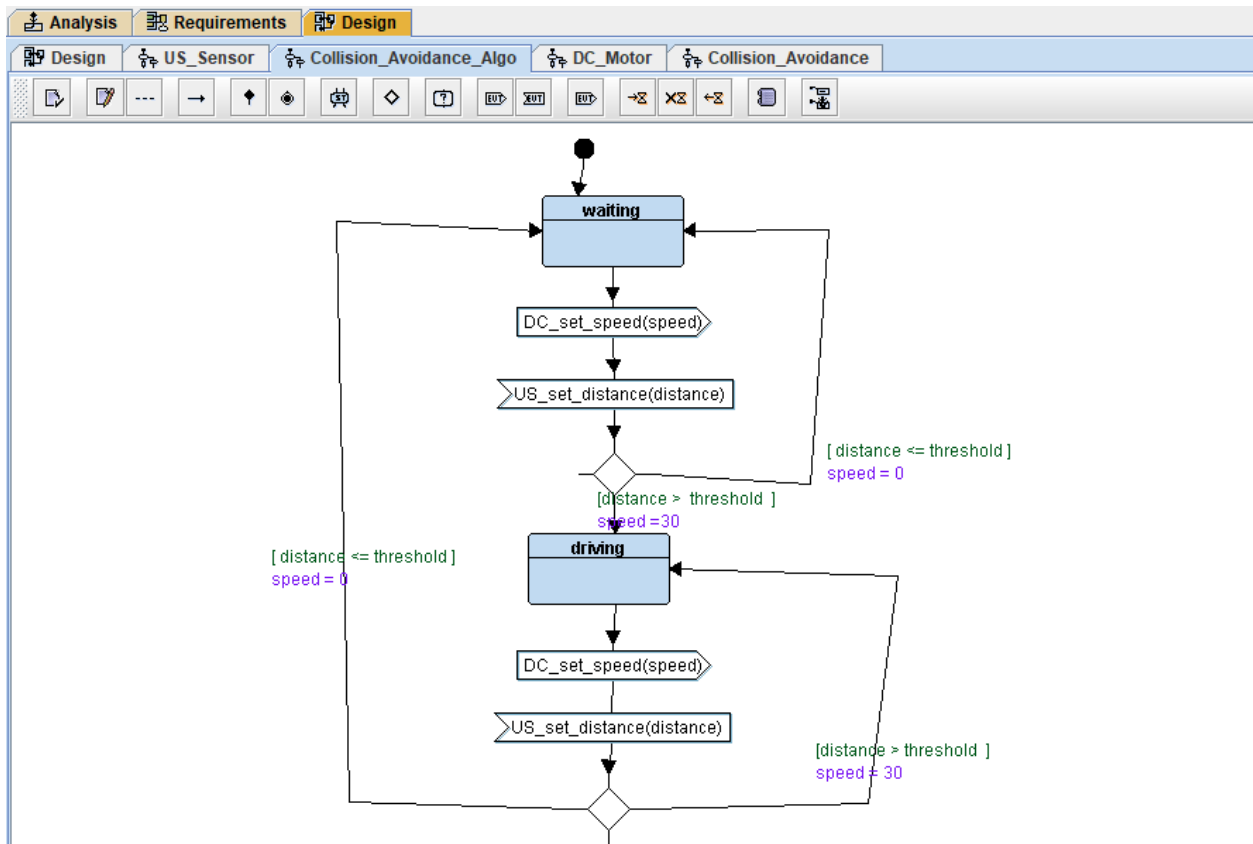
6- System Design Diagram



6.1. State machine for US_Sensor Block



6.2. State machine for Collision_Avoidance_Algo Block



6.3. State machine for DC_Motor Block

