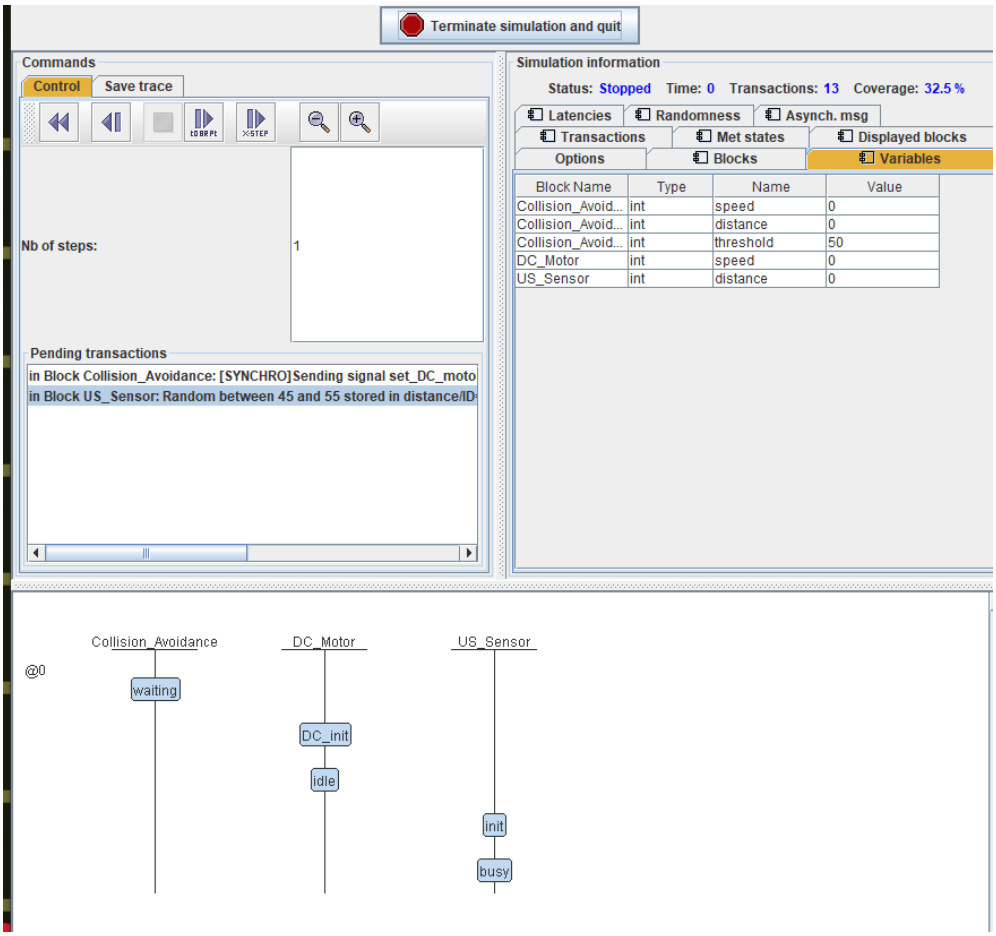
Collision avoidance project

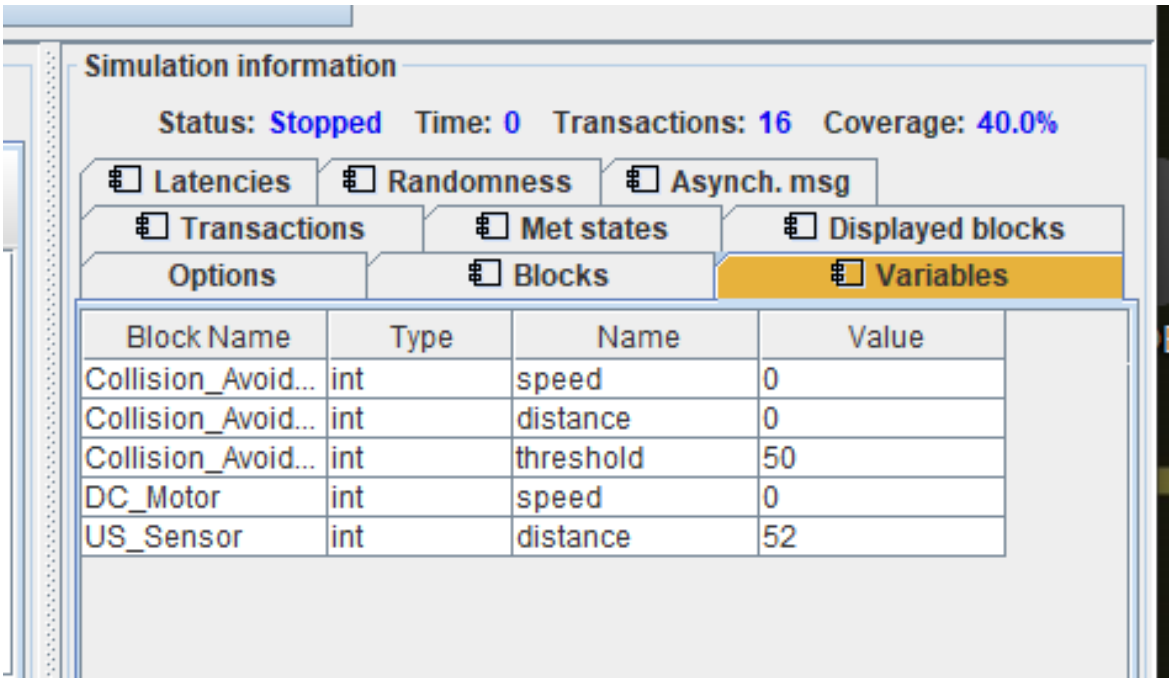
Description : A car that avoid obstacles by detecting distance between the car and the obstacle if it is above a threshold = 50 car stops else the car speed will be 30

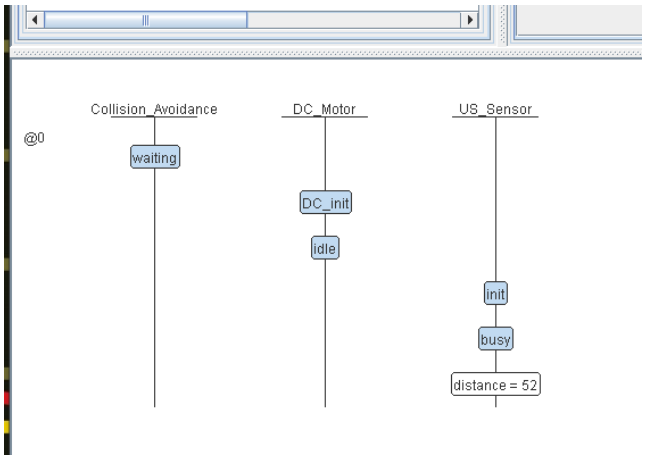
Working :

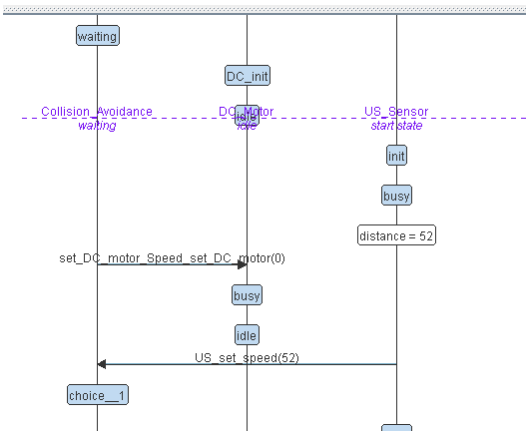
1 . distance = 0 , speed = 0



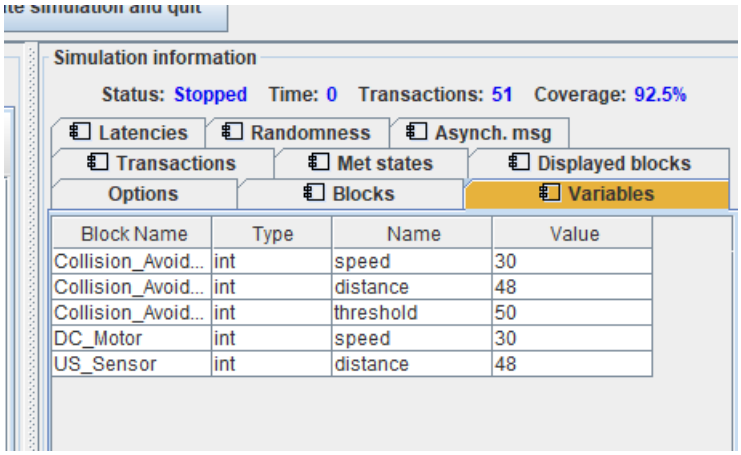
2 . distance = 52 which is under 50 then ultrasonic sensor sends distance to the main program which sets the speed as 0 and then sends it to the motor to stop

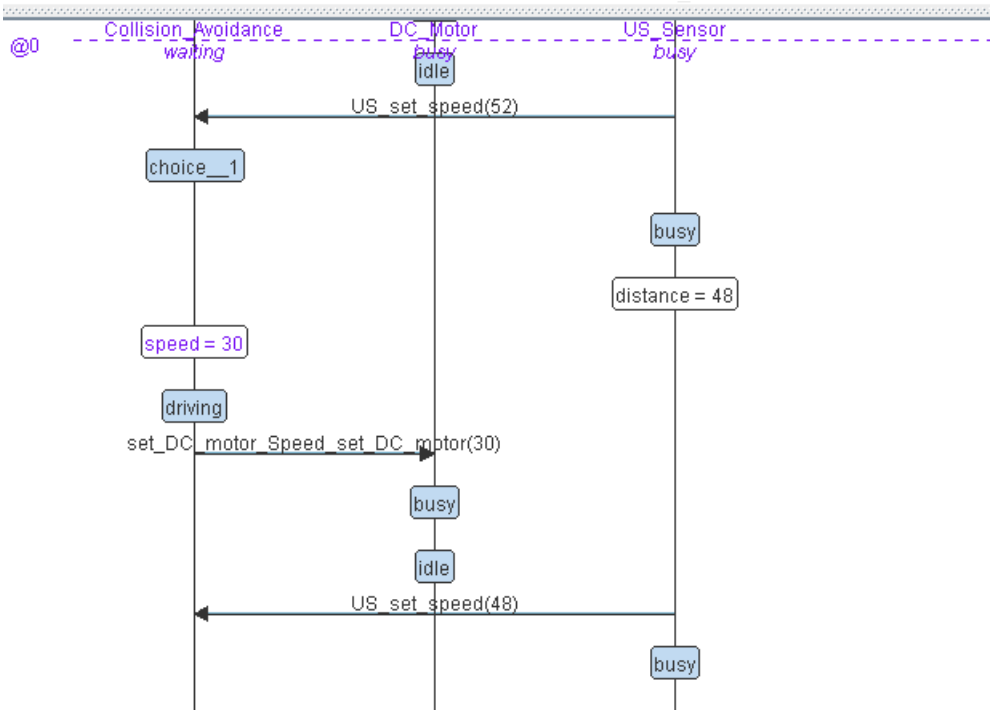




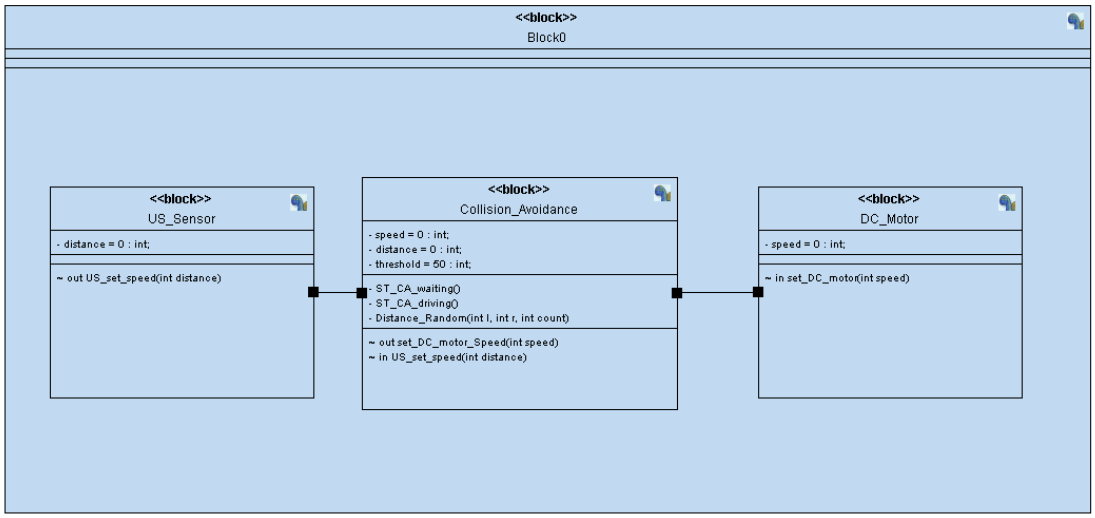


3 . Now ultrasonic sensor reads 48 which is above 50 then ultrasonic sensor sends distance to the main program which sets the speed as 30 and then sends it to the motor to move

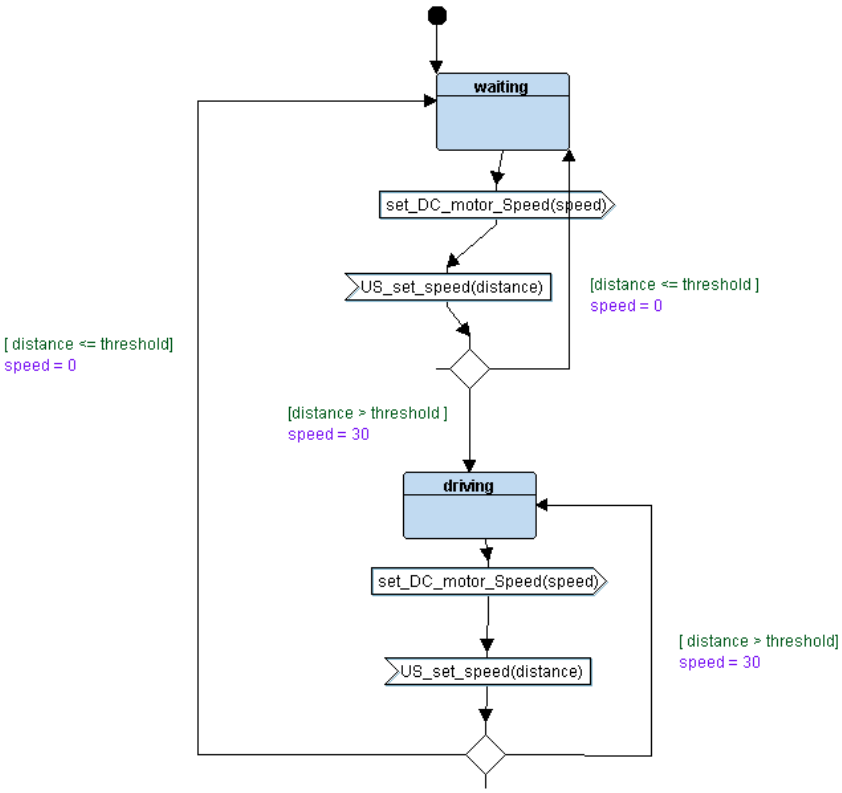




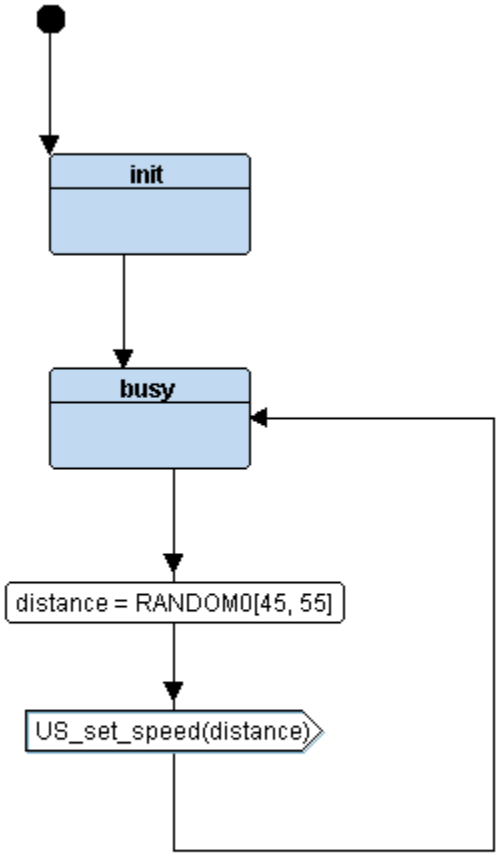
Block diagram



Main prog state machine



Ultrasonic sensor state machine



DC motor state machine