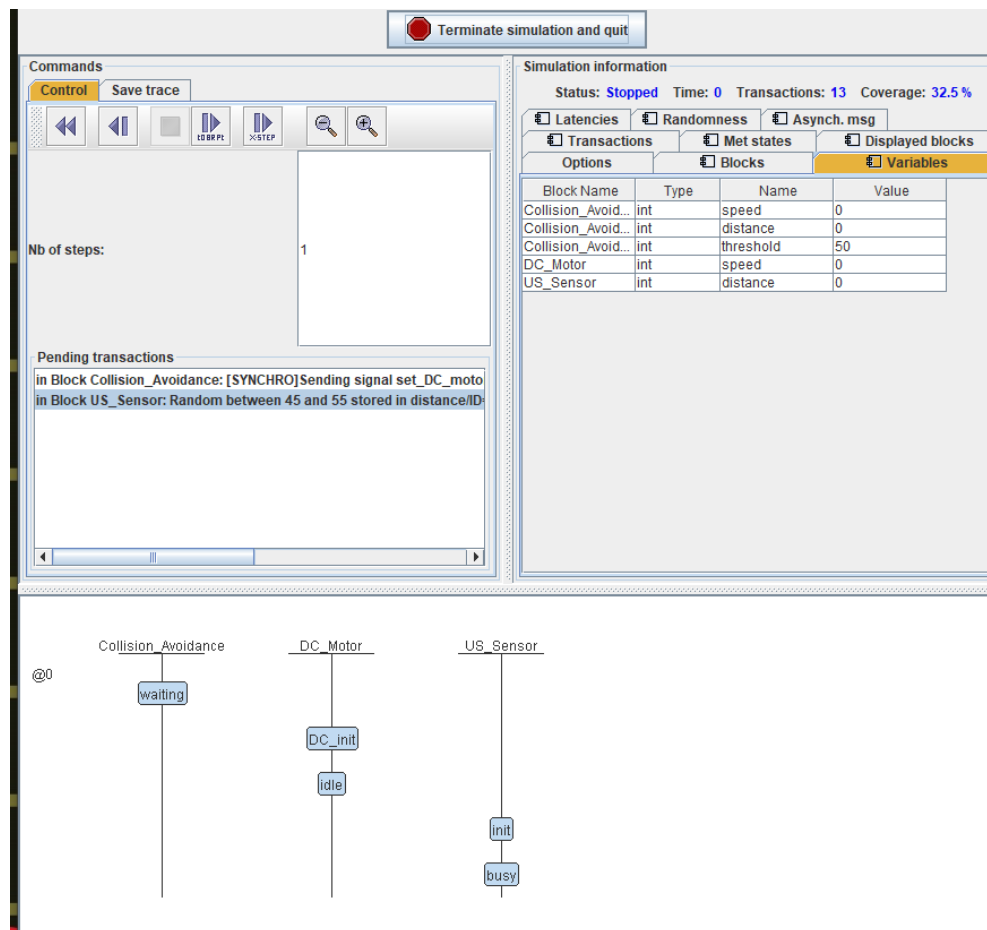


Collision avoidance project

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

Simulation information

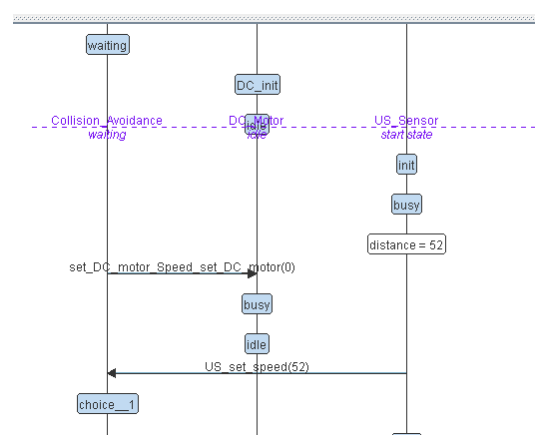
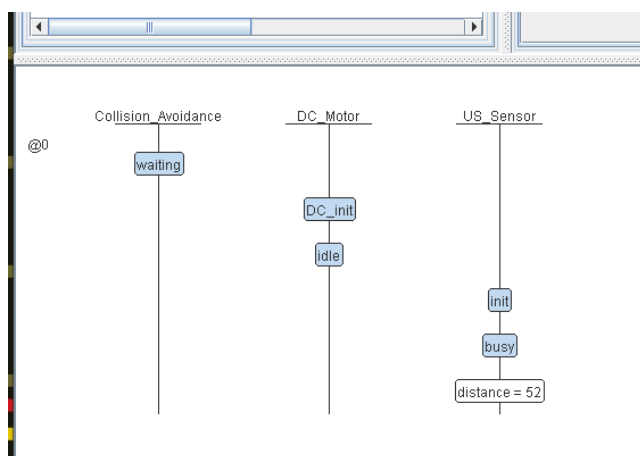
Status: **Stopped** Time: 0 Transactions: 16 Coverage: 40.0%

☐ Latencies ☐ Randomness ☐ Asynch. msg

☐ Transactions ☐ Met states ☐ Displayed blocks

Options ☐ Blocks ☒ Variables

Block Name	Type	Name	Value
Collision_Avoid...	int	speed	0
Collision_Avoid...	int	distance	0
Collision_Avoid...	int	threshold	50
DC_Motor	int	speed	0
US_Sensor	int	distance	52



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

Simulation information

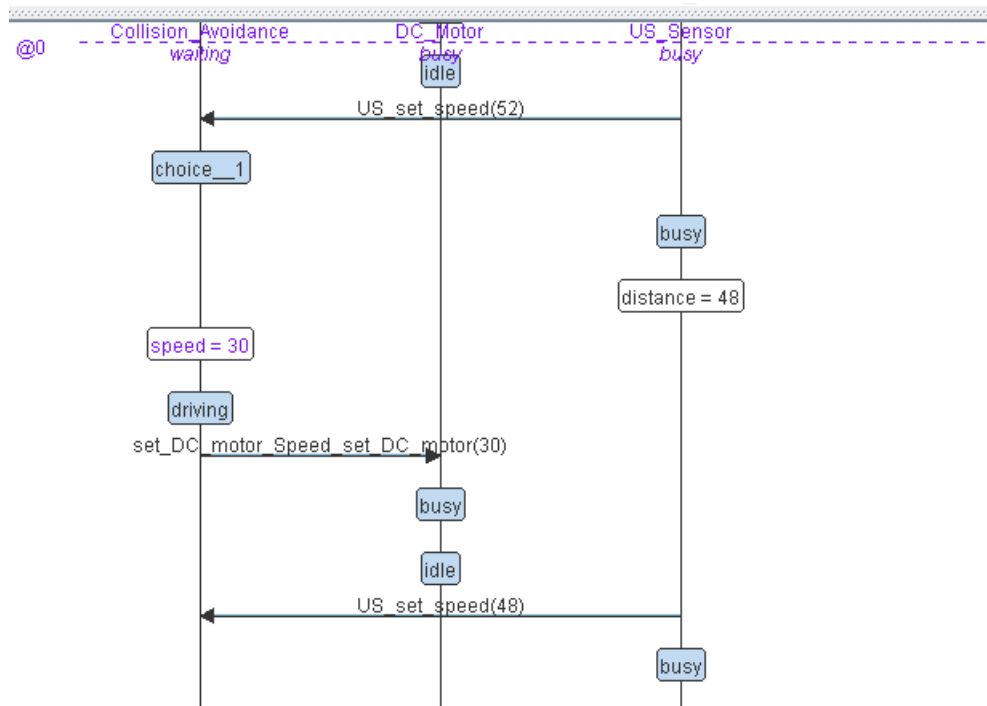
Status: **Stopped** Time: 0 Transactions: 51 Coverage: 92.5%

Latencies Randomness Asynch. msg

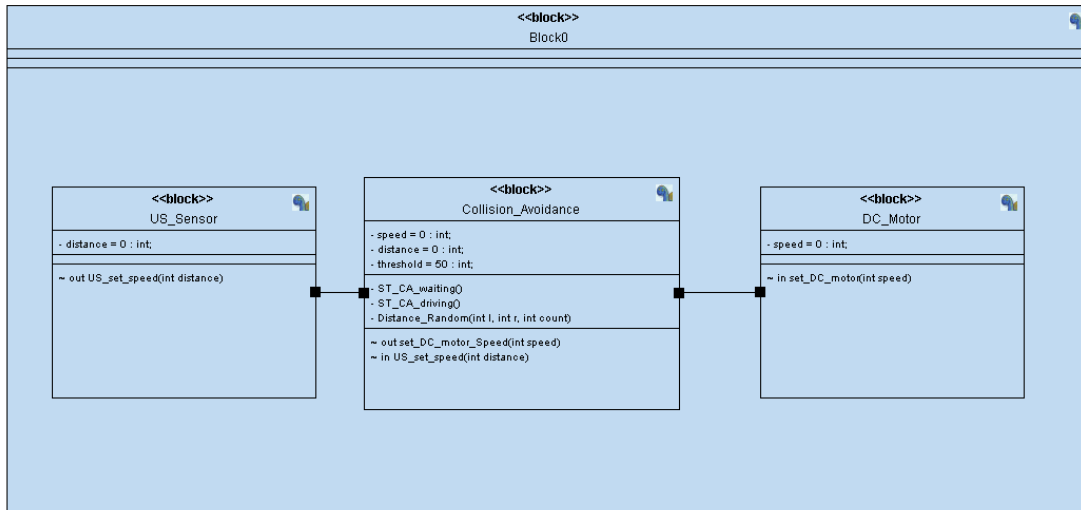
Transactions Met states Displayed blocks

Options Blocks **Variables**

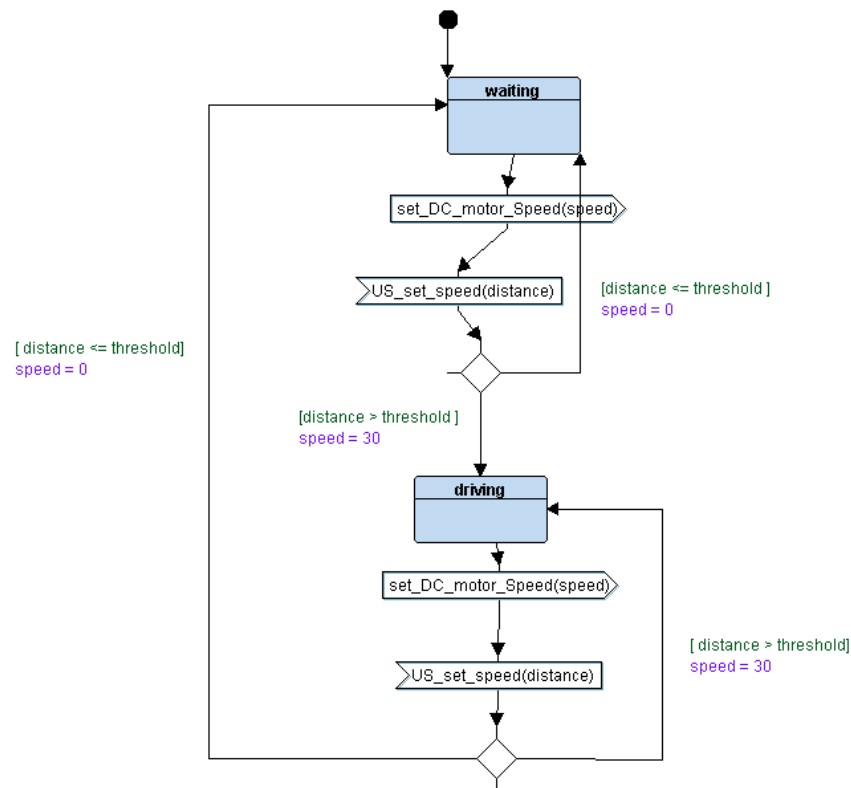
Block Name	Type	Name	Value
Collision_Avoid...	int	speed	30
Collision_Avoid...	int	distance	48
Collision_Avoid...	int	threshold	50
DC_Motor	int	speed	30
US_Sensor	int	distance	48



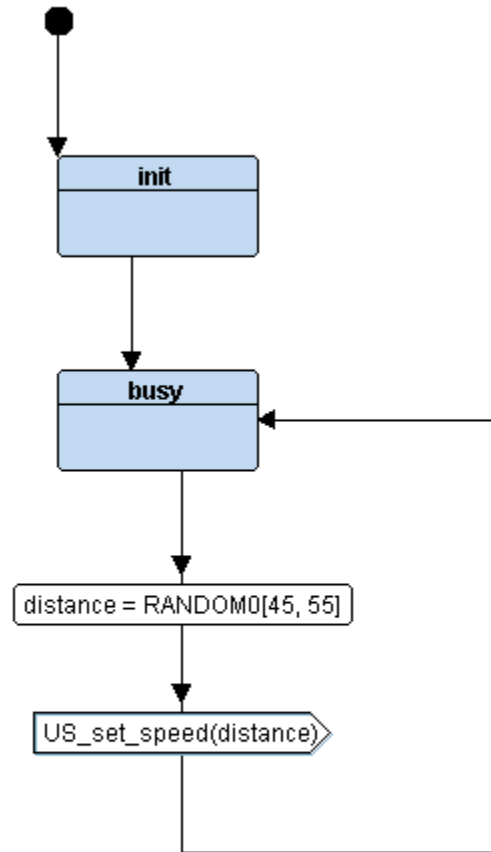
Block diagram



Main prog state machine



Ultrasonic sensor state machine



DC motor state machine

