Initialize

Outputs

Motor

Inputs

Move forward

Stop

IR sensor

Echo sensor

Registers

PWM

ECHO distance

IR distance

# Dynamic Gate

BEGIN LOOP

FOLLOW LINE

IF ECHO SENSOR =< 50 MM AND RED LIGHT DETECTED

STOP

WAIT 30 SECONDS //Allows enough time for gate to open

IF LIGHT IS GREEN AND ECHO SENSOR >100 //Gate is open

CONTINUE FOLLOWING LINE

ELSE

MOVE FORWARD 5MM //Creep forward

ELSE

FOLLOW LINE

END

# Garage

BEGIN LOOP

FOLLOW LINE

IF NO LINE DETECTED AND ECHO SENSOR <400MM

MOVE FORWARD UNTIL ECHO SENSOR <50MM //Drive straight in

STOP

ELSE

FOLLOW LINE

END

## Fork

BEGIN LOOP

IF FORK DETECTED //Implementation would need to be further discussed

RANDOMLY MOVE LEFT OR RIGHT //Assuming the line following algorithm is robust

FOLLOW LINE

IF FORK CONVERGENCE DETECTED

MOVE THE OPPOSITE WAY TO BEFORE //Helps the robot rejoin the track

ELSE

FOLLOW LINE

END LOOP