clc;

lm = 'C';

rm = 'A';

while 3

brick.SetColorMode(3, 2);

bumpIntoWall = brick.TouchPressed(1);

distance = brick.UltrasonicDist(2);

color = brick.ColorCode(3);

brick.MoveMotor(rm, -49);

brick.MoveMotor(lm, -50);

if color == 5 %red

brick.StopAllMotors('Brake');

pause(2);

brick.MoveMotorAngleRel(rm, 48, -900, 'Brake');

brick.MoveMotorAngleRel(lm, 50, -900, 'Brake');

pause(2);

end

if distance < 5

brick.MoveMotorAngleRel(lm, 50, -50, 'Coast');

end

if (distance > 45)

brick.StopAllMotors('Brake');

pause(3);

brick.MoveMotorAngleRel(rm, 50, -450, 'Brake');

brick.MoveMotorAngleRel(lm, 50, -450, 'Brake');

pause(3);

brick.StopAllMotors('Brake');

brick.MoveMotorAngleRel(rm, 50, -450, 'Coast'); %530

pause(3);

brick.StopAllMotors('Brake');

pause(1);

brick.MoveMotorAngleRel(rm, 48, -200, 'Brake');

brick.MoveMotorAngleRel(lm, 51, -200, 'Brake');

pause(3);

brick.beep();

bumpIntoWall = false;

end

if color == 4 %yellow

brick.StopAllMotors('Brake');

for i = 1:4

brick.beep();

pause(1);

end

KeyBoardControls;

end

if color == 3 %green

brick.StopAllMotors('Brake');

for i = 1:3

brick.beep();

pause(1);

end

brick.MoveMotorAngleRel(rm, 48, -500, 'Brake');

brick.MoveMotorAngleRel(lm, 51, -500, 'Brake');

KeyBoardControls; %to stop the car from moving

end

if color == 2 %blue

brick.StopAllMotors('Brake');

for i = 1:2

brick.beep();

pause(1);

end

KeyBoardControls;

end

if (bumpIntoWall) && (distance < 41)

brick.StopAllMotors('Brake');

pause(3);

brick.MoveMotorAngleRel(rm, 48, 300, 'Brake');

brick.MoveMotorAngleRel(lm, 51, 300, 'Brake');

brick.beep();

pause(3);

brick.MoveMotorAngleRel(lm, 50, -500, 'Brake');

brick.beep();

pause(3);

brick.beep();

bumpIntoWall = false;

end

end