

Loop of Actions for the Arduino Roadster

```
void loop() {  
  
    //setup motors  
    analogWrite(E1, 250); // Motor 1 get ready - 250 high speed  
    analogWrite(E2, 250); // Motor 2 get ready - 250 high speed  
  
    // Clears the trigPin on Ultrasonic Sensor  
    digitalWrite(trigPin, LOW);  
    delayMicroseconds(2);  
  
    // Sets the trigPin on HIGH state for 10 micro seconds  
    digitalWrite(trigPin, HIGH);  
    delayMicroseconds(10);  
    digitalWrite(trigPin, LOW);  
  
    // Reads the echoPin, returns the sound wave travel time in  
    microseconds  
    duration = pulseIn(echoPin, HIGH);  
  
    // Calculating the distance  
    distance= duration*0.034/2;  
  
    safetyDistance = distance;  
  
    if (safetyDistance <= 15){  
  
        digitalWrite(buzzer, HIGH);  
        digitalWrite(ledPin, HIGH);  
  
        // Turn off one motor- backup with the other  
        digitalWrite(I1, LOW); //Motor 1 - polarity -
```

```
digitalWrite(I2, LOW); //Motor 1 - polarity +

digitalWrite(I3, LOW); //Motor 2 - polarity -
digitalWrite(I4, HIGH); //Motor 2 - polarity +

}
else{

digitalWrite(buzzer, LOW);
digitalWrite(ledPin, LOW);

// go forward - both wheels rotate same direction
digitalWrite(I1, HIGH); //Motor 1 - polarity +
digitalWrite(I2, LOW); //Motor 1 - polarity -

digitalWrite(I3, HIGH); //Motor 2 - polarity +
digitalWrite(I4, LOW); //Motor 2 - polarity -

}

// Prints the distance on the Serial Monitor
Serial.print("Distance: ");
Serial.println(distance);

}
```