

APPENDIX-B
Arduino UNO Codes

CODE	EXPLANATION
<pre>1 char t; 2 3 void setup() { 4 pinMode(9,OUTPUT); //left motors forward 5 pinMode(10,OUTPUT); //left motors reverse 6 pinMode(11,OUTPUT); //right motors forward 7 pinMode(12,OUTPUT); //right motors reverse 8 9 Serial.begin(9600); 10 11 }</pre>	<p>In this part of code, the global variable named t is created and in setup function, it has been determined that the output will be given from the pins 9,10,11,12. Modulation rate(Symbol rate) declared 9600 Baud.</p>

```

void loop() {
  if(Serial.available()){
    t = Serial.read();
    Serial.println(t);
  }

  if(t == '1'){
    digitalWrite(9,HIGH);
    digitalWrite(10,LOW);
    digitalWrite(11,HIGH);
    digitalWrite(12,LOW);
  }

  else if(t == '2'){      /
    digitalWrite(9,LOW);
    digitalWrite(10,HIGH);
    digitalWrite(11,LOW);
    digitalWrite(12,HIGH);
  }

  else if(t == '3'){      /
    digitalWrite(9,LOW);
    digitalWrite(10,LOW);
    digitalWrite(11,HIGH);
    digitalWrite(12,LOW);
  }

  else if(t == '4'){      /
    digitalWrite(9,HIGH);
    digitalWrite(10,LOW);
    digitalWrite(11,LOW);
    digitalWrite(12,LOW);
  }

  else if(t == '5'){      /
    digitalWrite(9,LOW);
    digitalWrite(10,LOW);
    digitalWrite(11,LOW);
    digitalWrite(12,LOW);
  }
  delay(100);
}

```

In this part of code, while the Arduino has power , this function again and again will work, in the previous stage of code the global variable named t was created.

The signals coming from the TX of the Bluetooth to the RX pin of the arduino are assigned to the t value.

According to the content of this value, the volt values given from pins 9,10,11 and 12 vary. These pins determine the wheel's situation by the L298N Motor Driver.

- If t is equal to 1, then all wheels turn forward
- If t is equal to 2, then all wheels turn back
- If t is equal to 3, then right wheels turn so the car turns left.
- If t is equal to 4, then left wheels turn then the car turns right.
- If t is equal to 5, then all wheels stop.