**CODE (Bluetooth Car)**

#define m1 5

#define m2 6

#define m3 9 //declares pins

#define m4 10

#define led1f 11

#define led2f 12

#define led1b 7

#define led2b 8

#define horn 2

int Speed =204; // 0-255 range ha motor ki speed chang kar na ki PWM pins par

void setup()

{

pinMode(m1, OUTPUT);

pinMode(m2, OUTPUT);

pinMode(m3, OUTPUT);

pinMode(m4, OUTPUT);

pinMode(led1f, OUTPUT);

pinMode(led2f, OUTPUT);

pinMode(led1b, OUTPUT);

pinMode(led2b, OUTPUT);

pinMode(horn, OUTPUT);

Serial.begin(9600);

}

void loop()

{

if (Serial.available()> 0 )

{

String voice = Serial.readString();

Serial.println("MESSAGE FROM THE PHONE :" +voice);

if(voice == "forward"||voice=="F")

{ Serial.println("Going forward !");

analogWrite(m1, Speed);

analogWrite(m2, LOW);

analogWrite(m3, Speed);

analogWrite(m4, LOW);

}

if(voice == "backward"||voice=="B")

{ Serial.println("Going Backward !");

analogWrite(m1, LOW);

analogWrite(m2, Speed);

analogWrite(m3, LOW);

analogWrite(m4, Speed);

}

if(voice == "left"||voice=="L")

{ Serial.print("Going left !");

analogWrite(m1, LOW);

analogWrite(m2, Speed);

analogWrite(m3, Speed);

analogWrite(m4,LOW);

}

if(voice == "right"||voice=="R")

{ Serial.println("Going right !");

analogWrite(m1, Speed);

analogWrite(m2, LOW);

analogWrite(m3, LOW);

analogWrite(m4, Speed);

}

else if(voice == "stop"||voice=="S")

{ Serial.println("Car Stop !!");

digitalWrite(m1, LOW);

digitalWrite(m2, LOW);

digitalWrite(m3, LOW);

digitalWrite(m4, LOW);

}

else if(voice == "l"||voice == "G"||voice == "forward left")

{ // forward left

Serial.println("Forward Left !");

analogWrite(m1, LOW);

analogWrite(m2, LOW);

analogWrite(m3, Speed);

analogWrite(m4, LOW);

}

else if(voice == "r"||voice == "I"||voice =="forward right")

{ //forward right

Serial.println("Forward Right !");

analogWrite(m1, Speed);

analogWrite(m2, LOW);

analogWrite(m3, LOW);

analogWrite(m4, LOW);

}

else if(voice == "m"||voice == "H"||voice == "backward left")

{

//backward left

Serial.println("Backward Left !");

analogWrite(m1, LOW);

analogWrite(m2, LOW);

analogWrite(m3, LOW);

analogWrite(m4, Speed);

}

else if(voice == "n"||voice == "J"||voice == "backward right")

{

//backward right

Serial.println("Backward Right !");

analogWrite(m1, LOW);

analogWrite(m2, Speed);

analogWrite(m3, LOW);

analogWrite(m4, LOW);

}

else if(voice == "V"||voice == "on"){Serial.println("HORN ON"); digitalWrite(horn,HIGH);}

else if(voice == "v"||voice == "of"){Serial.println("HORN OFF"); digitalWrite(horn,LOW);}

else if(voice == "W"||voice == "front light on")

{ Serial.println("FRONT LIGHT ON ");

digitalWrite(led1f, HIGH);

digitalWrite(led2f, HIGH);

}

else if(voice == "w"||voice == "front light off")

{ Serial.println("FRONT LIGHT OFF ");

digitalWrite(led1f, LOW);

digitalWrite(led2f, LOW);

}

else if(voice == "U"||voice == "back light on")

{ Serial.println("BACK LIGHT ON ");

digitalWrite(led1b, HIGH);

digitalWrite(led2b, HIGH);

}

else if(voice == "u"||voice == "back light off")

{ Serial.println("BACK LIGHT OFF ");

digitalWrite(led1b, LOW);

digitalWrite(led2b, LOW);

}

else if(voice=="0"){Serial.println("Motor Speed = 100 range"); Speed = 100;}

else if(voice=="1"){Serial.println("Motor Speed = 140 range"); Speed = 140;}

else if(voice=="2"){Serial.println("Motor Speed = 153 range"); Speed = 153;}

else if(voice=="3"){Serial.println("Motor Speed = 165 range"); Speed = 165;}

else if(voice=="4"){Serial.println("Motor Speed = 178 range"); Speed = 178;}

else if(voice=="5"){Serial.println("Motor Speed = 191 range"); Speed = 191;}

else if(voice=="6"){Serial.println("Motor Speed = 204 range"); Speed = 204;}

else if(voice=="7"){Serial.println("Motor Speed = 216 range"); Speed = 216;}

else if(voice=="8"){Serial.println("Motor Speed = 228 range"); Speed = 228;}

else if(voice=="9"){Serial.println("Motor Speed = 240 range"); Speed = 240;}

else if(voice=="q"){Serial.println("Motor Speed = 255 range END !"); Speed = 255;}

else if(voice =="Y"||voice == "X"||voice =="front and back light on")

{ Serial.println("Motor Speed = 204 && ALL Light ON ");

Speed = 204;

digitalWrite(led1f, HIGH);

digitalWrite(led2f, HIGH);

digitalWrite(led1b, HIGH);

digitalWrite(led2b, HIGH);

}

else if(voice == "y"||voice == "x"||voice =="front and back light off")

{ Serial.println("Motor Speed = 204 && ALL Light oFF");

Speed = 204;

digitalWrite(led1f, LOW);

digitalWrite(led2f, LOW);

digitalWrite(led1b, LOW);

digitalWrite(led2b, LOW);

}

Serial.println("End");

} }