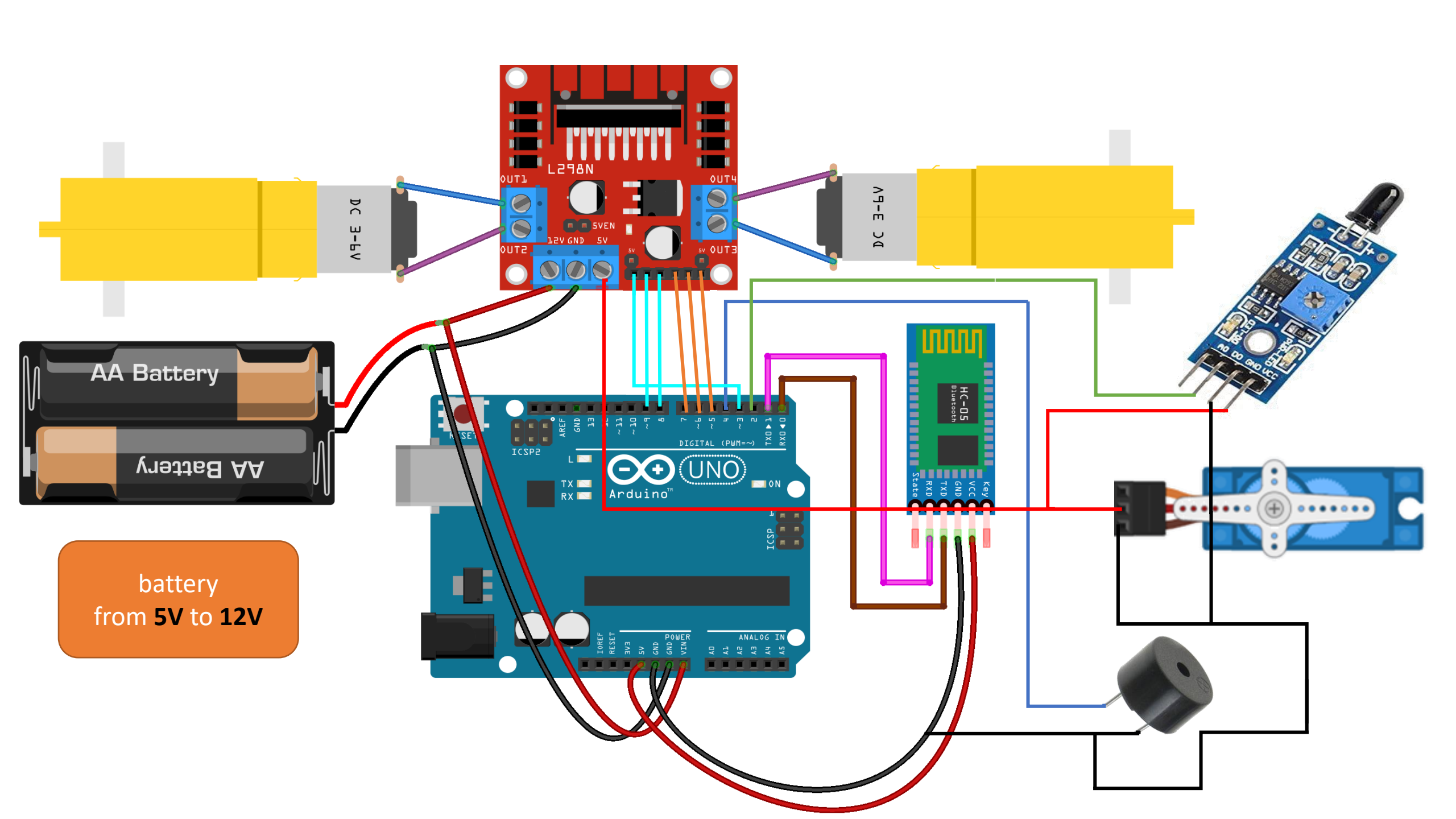
ST SMART

MAKE EVERYTHING SMART

SMART TECHNOLOGT

LECTURE
7
(Practical)


L298N
OUT1
OUT2
OUT3
OUT4
5VEN
12V GND 5V
DC 3-6V
DC 3-6V
AA Battery
AA Battery
ICSP2
DIGITAL (PWM=~)
UNO
Arduino
TX
RX
ON
ICSP
POWER
ANALOG IN
HC-05
Bluetooth
State
RXD
TXD
GND
VCC
Key
AO DO GND VCC
battery
from 5V to 12V

```
#include <Servo.h>
#define speedL 3
#define IN1 9
#define IN2 8
#define IN3 7
#define IN4 6
#define speedR 5
#define flame 2
#define buzzer 4
char Reading;
int pos , flame_detected=0 ;
Servo myservo;

void setup() {
  Serial.begin(9600);
  myservo.attach(11);
  myservo.write(90);
  for (int i = 3 ; i <= 9 ; i++)
  {
    pinMode(i, OUTPUT);
  }
    pinMode(flame, INPUT);
}
```

```
void forword()
{ digitalWrite(IN1, HIGH);
  digitalWrite(IN2, LOW);
  digitalWrite(IN3, HIGH);
  digitalWrite(IN4, LOW);
  analogWrite(speedL, 150);
  analogWrite(speedR, 150);
}
void backword()
{ digitalWrite(IN1, LOW);
  digitalWrite(IN2, HIGH);
  digitalWrite(IN3, LOW);
  digitalWrite(IN4, HIGH);
  analogWrite(speedL, 150);
  analogWrite(speedR, 150);
}
void left()
{ digitalWrite(IN1, LOW);
  digitalWrite(IN2, LOW);
  digitalWrite(IN3, HIGH);
  digitalWrite(IN4, LOW);
  analogWrite(speedL, 0);
  analogWrite(speedR, 150);
}
```

```
void right()
{
  digitalWrite(IN1, HIGH);
  digitalWrite(IN2, LOW);
  digitalWrite(IN3, LOW);
  digitalWrite(IN4, LOW);
  analogWrite(speedL, 150);
  analogWrite(speedR, 0);
}

void stopp() {
digitalWrite(speedL, LOW);
digitalWrite(speedR, LOW);
}
void loop() {
  if (Serial.available() > 0) {
  Reading = Serial.read();
  switch (Reading) {
   case 'F' : forword(); break;
   case 'B' : backword();break;
   case 'R' : right(); break;
   case 'L' : left(); break;
   case 'S' : stopp(); break;
```

```
case 'Q' : for (pos = 90; pos <= 180; pos += 1) {
                        if(digitalRead(flame)==0){flame_detected++;}
                        myservo.write(pos);
                        delay(15); }

                for (pos = 180; pos >= 0; pos -= 1) {
                        if(digitalRead(flame)==0){flame_detected++;}
                        myservo.write(pos);
                        delay(15);}

                        myservo.write(90);

                        if(flame_detected > 0){
                          for(int i=0 ; i<=10 ; i++){
                        digitalWrite(buzzer,1);
                        delay(100);
                        digitalWrite(buzzer,0);
                        delay(100);
                        }
                        flame_detected=0;
                        }

                        }}}
```

THANKS FOR COMING