```
int ledPin1 = 2;
int ledPin2 = 3;
int ledPin3 = 4;
int ledPin4 = 5;
int ledPin5 = 6;
int ledPin6 = 7;
int ledPin7 = 8;
int ledPin8 = 9;
int ledPin9 = 10;
int buttonApin = 11;
int buttonBpin = 12;
int duration=1000;

char letter = 0;
int n=5;

void setup()
{
   // initialize serial communication at 9600 bits per second:
  Serial.begin(9600);

  pinMode(ledPin1, OUTPUT);
  pinMode(ledPin2, OUTPUT);
  pinMode(ledPin3, OUTPUT);
  pinMode(ledPin4, OUTPUT);
  pinMode(ledPin5, OUTPUT);
  pinMode(ledPin6, OUTPUT);
  pinMode(ledPin7, OUTPUT);
  pinMode(ledPin8, OUTPUT);
  pinMode(ledPin9, OUTPUT);
  pinMode(buttonApin, INPUT_PULLUP);
  pinMode(buttonBpin, INPUT_PULLUP);
}


void loop() {

  if (digitalRead(buttonApin) == LOW)
  {
   P();
   delay(duration);
   A();
   delay(duration);
   U();
   delay(duration);
   L();
   delay(duration);
   I();
   delay(duration);
   N();
```

```
    delay(duration);
    E();

  }

  if (digitalRead(buttonBpin) == LOW)
  {
   for(int n= 0; n<5; n++)
   {
     ALLUP();
     delay(duration);
     ALLDOWN();
     delay(duration);
   }
  }


  if (Serial.available() > 0) {    // is a character available?
   letter = Serial.read();       // get the character

   // check if a number was received
   if (letter == 'P') {
     Serial.print("Letter received = ");
     Serial.println(letter);
     P();/*letter P*/
     delay(duration);
   }
     if (letter == 'A') {
     Serial.print("Letter received = ");
     Serial.println(letter);
     A();/*letter A*/
     delay(duration);
   }
     if (letter == 'U') {
     Serial.print("Letter received = ");
     Serial.println(letter);
     U();/*letter U*/
     delay(duration);
   }
     if (letter == 'L') {
     Serial.print("Letter received = ");
     Serial.println(letter);
     L();/*letter L*/
     delay(duration);
   }
  }



}
```

```cpp
void P(){
   digitalWrite(ledPin1, LOW);
   digitalWrite(ledPin2, LOW);
   digitalWrite(ledPin3, HIGH);
   digitalWrite(ledPin4, HIGH);
   digitalWrite(ledPin5, HIGH);
   digitalWrite(ledPin6, HIGH);
   digitalWrite(ledPin7, HIGH);
   digitalWrite(ledPin8, HIGH);
   digitalWrite(ledPin9, HIGH);
}
void A(){
   digitalWrite(ledPin1, HIGH);
   digitalWrite(ledPin2, LOW);
   digitalWrite(ledPin3, HIGH);
   digitalWrite(ledPin4, HIGH);
   digitalWrite(ledPin5, HIGH);
   digitalWrite(ledPin6, HIGH);
   digitalWrite(ledPin7, LOW);
   digitalWrite(ledPin8, HIGH);
   digitalWrite(ledPin9, LOW);
}
void U(){
   digitalWrite(ledPin1, HIGH);
   digitalWrite(ledPin2, HIGH);
   digitalWrite(ledPin3, HIGH);
   digitalWrite(ledPin4, HIGH);
   digitalWrite(ledPin5, LOW);
   digitalWrite(ledPin6, HIGH);
   digitalWrite(ledPin7, HIGH);
   digitalWrite(ledPin8, LOW);
   digitalWrite(ledPin9, HIGH);
}
void L(){
   digitalWrite(ledPin1, HIGH);
   digitalWrite(ledPin2, HIGH);
   digitalWrite(ledPin3, HIGH);
   digitalWrite(ledPin4, LOW);
   digitalWrite(ledPin5, LOW);
   digitalWrite(ledPin6, HIGH);
   digitalWrite(ledPin7, LOW);
   digitalWrite(ledPin8, LOW);
   digitalWrite(ledPin9, HIGH);
}
void I(){
   digitalWrite(ledPin1, HIGH);
   digitalWrite(ledPin2, HIGH);
   digitalWrite(ledPin3, HIGH);
   digitalWrite(ledPin4, LOW);
```

```arduino
  digitalWrite(ledPin5, HIGH);
  digitalWrite(ledPin6, LOW);
  digitalWrite(ledPin7, HIGH);
  digitalWrite(ledPin8, HIGH);
  digitalWrite(ledPin9, HIGH);
}
void N(){
  digitalWrite(ledPin1, HIGH);
  digitalWrite(ledPin2, LOW);
  digitalWrite(ledPin3, HIGH);
  digitalWrite(ledPin4, HIGH);
  digitalWrite(ledPin5, HIGH);
  digitalWrite(ledPin6, HIGH);
  digitalWrite(ledPin7, HIGH);
  digitalWrite(ledPin8, LOW);
  digitalWrite(ledPin9, HIGH);
}
void E(){
  digitalWrite(ledPin1, HIGH);
  digitalWrite(ledPin2, HIGH);
  digitalWrite(ledPin3, HIGH);
  digitalWrite(ledPin4, LOW);
  digitalWrite(ledPin5, HIGH);
  digitalWrite(ledPin6, HIGH);
  digitalWrite(ledPin7, HIGH);
  digitalWrite(ledPin8, HIGH);
  digitalWrite(ledPin9, HIGH);
}
void ALLUP(){
  digitalWrite(ledPin1, HIGH);
  digitalWrite(ledPin2, HIGH);
  digitalWrite(ledPin3, HIGH);
  digitalWrite(ledPin4, HIGH);
  digitalWrite(ledPin5, HIGH);
  digitalWrite(ledPin6, HIGH);
  digitalWrite(ledPin7, HIGH);
  digitalWrite(ledPin8, HIGH);
  digitalWrite(ledPin9, HIGH);
}

void ALLDOWN(){
  digitalWrite(ledPin1, LOW);
  digitalWrite(ledPin2, LOW);
  digitalWrite(ledPin3, LOW);
  digitalWrite(ledPin4, LOW);
  digitalWrite(ledPin5, LOW);
  digitalWrite(ledPin6, LOW);
  digitalWrite(ledPin7, LOW);
  digitalWrite(ledPin8, LOW);
  digitalWrite(ledPin9, LOW);
```

}