

```

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)
  {
    A();
    delay(duration);
    N();
    delay(duration);
    A();
    delay(duration);
    N();
    delay(duration);
    T();
    delay(duration);
    H();
    delay(duration);
    A();
    delay(duration);
  }
}

```

```

}

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

```

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

```

```

// check if a number was received

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```

if (letter == 'H') {
  Serial.print("Letter received = ");
  Serial.println(letter);
  H();/*letter H*/
  delay(duration);
}

```

```

  if (letter == 'A') {
  Serial.print("Letter received = ");
  Serial.println(letter);
  A();/*letter H*/
  delay(duration);
}

```

```

  if (letter == 'T') {
  Serial.print("Letter received = ");
  Serial.println(letter);
  T();/*letter H*/
  delay(duration);
}
}
}

```

```

void A(){
  digitalWrite(ledPin1, HIGH);
  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 N(){
  digitalWrite(ledPin1, HIGH);
  digitalWrite(ledPin2, LOW);
}

```

```
digitalWrite(ledPin3, HIGH);
digitalWrite(ledPin4, HIGH);
digitalWrite(ledPin5, HIGH);
digitalWrite(ledPin6, HIGH);
digitalWrite(ledPin7, LOW);
digitalWrite(ledPin8, LOW);
digitalWrite(ledPin9, LOW);
}
void T(){
digitalWrite(ledPin1, LOW);
digitalWrite(ledPin2, HIGH);
digitalWrite(ledPin3, LOW);
digitalWrite(ledPin4, LOW);
digitalWrite(ledPin5, HIGH);
digitalWrite(ledPin6, LOW);
digitalWrite(ledPin7, HIGH);
digitalWrite(ledPin8, HIGH);
digitalWrite(ledPin9, HIGH);
}
void H(){
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 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);
}
```