```
/* term-1
#include <reg51.h>
void delay(unsigned int x)
{
    unsigned int i, j;
    for(i = 0; i < x; i++)
        for(j = 0; j < 1275; j++);
}
void main()
{
    while(1)
    {
        P2 = 0x55;
        delay(250);

        P2 = 0xAA;
        delay(250);
    }
}
 Term -2
#include<reg51.h>
void delay(unsigned int c){
    unsigned int i,j;
    for(i = 0;i<c;i++){
        for(j = 0;j<1275;j++){
        }
    }
}
void main(){
    while(1){
    P2 = 0x00;
    delay(250);
    P2 = 0x10;
    delay(250);
    P2 = 0x20;
    delay(250);
    P2 = 0x30;
    delay(250);
}
    }

  //Term-3
 #include<reg51.h>
 void d(){
     TMOD = 0x01;
     TL0 = 0xFE;
     TH0 = 0x4B;
     TR0 = 1;
     while(TF0==0);
     TF0=0;
     TR0 = 0;
 }
 void main(){
     while(1){
     P2 = 0x00;
     d();d();d();d();
     P2 = 0x01;
     d();d();d();d();
     P2 = 0x02;
     d();d();d();d();
     P2 = 0x03;
     d();d();d();d();
 }
     }
     */
/*
//term -4
#include<reg51.h>
void main(){
T0 = 1;
TMOD = 0x05;
TH1 = 0x03;
```

```
TL1 = 0x05;
while(1){
do{
    TR1 = 1;
  P1=TL1;
    P2 =TH1;
}while(TF1 ==0);
TF1 = 0;
TR1 = 0;
}
}

//counter 1 mode 2
#include<reg51.h>
void main(){
T0 = 1;
TMOD = 0x60;
TH1 = 0x00;
TL1 = 0x05;
while(1){
do{
    TR1 = 1;
  P1=TL1;
    P2 =TH1;
}while(TF1 ==0);
TF1 = 0;
TR1 = 0;
}
}
/*

//Term - 5
#include<reg51.h>
void d(unsigned int a){
    unsigned int i,j;
    for(i = 0;i<a;i++){
        for(j = 0;j<1275;j++){
        }
    }
}
void main(){
    while(1){
    P1 = 0x00;
    d(250);
    P1 = 0xff;
    d(250);
    }
}

// Triangle
#include<reg51.h>
void main(){
    while(1){
        unsigned int i;
        for(i = 0;i<255;i++){
             P1 = i;
        }
        for(i = 255;i>0;i--){
             P1 = i;
        }
    }
}

// Ramp
#include<reg51.h>
void main(){
    while(1){
        unsigned int i;
        for(i = 0;i<200;i++){
             P1 = i;
        }
    }
```

```
}


//term - 6
//TRANSMISSION
#include<reg51.h>
void main(){
    TMOD = 0x20;
    TH1 = 0XFD;
    SCON = 0X50;
    TR1 = 1;
  while(1){
        SBUF = 'A';
    while(TI==0);
   TI = 0;
    }
}

//RECEIVER
#include <reg51.h>
void main(void) {
    unsigned char byte;
    TMOD = 0x20;
    TH1  = 0xFA;
    SCON = 0x50;
    TR1  = 1;
    while (1) {
        while (RI == 0);
        byte = SBUF;
        P2 = byte;
        RI = 0;
        SBUF = byte;
        while (TI == 0);
        TI = 0;
    }
}
*/
//term - 7
#include<reg51.h>
sbit sw = P1^7;
sbit led = P1^0;
sbit wave = P2^5;
void timer0() interrupt 1{
    wave = ~wave;
}
void main(){
    sw = 1;
    TMOD = 0x02;
    TH0 = 0XA4;
    IE = 0X82;
    while(1){
        led  = sw;
    }
}

//term - 8 sensor
int lightpin = 5;
void setup() {
  pinMode(lightpin, INPUT);
  Serial.begin(9600);
}
void loop() {
  int lightdata = digitalRead(lightpin);
  if(lightdata == 0){
    Serial.println("Light detected");
    delay(1000);
  }
  else {
    Serial.println("Light not detected");
    delay(1000);
  }
}
```

```
//term -9
void setup() {
  pinMode(A2, OUTPUT);
  Serial.begin(9600);
}
void loop() {
  digitalWrite(A2, HIGH);
  delay(100);
  Serial.println("LED is ON");
  digitalWrite(A2, LOW);
  delay(100);
  Serial.println("LED is OFF");
}

// term-10
int lightpin = 2;
int Buzzerpin = 8;
int lightdata;
void setup() {
  pinMode(lightpin, INPUT);
  pinMode(Buzzerpin, OUTPUT);
  Serial.begin(9600);
}
void loop() {
  lightdata = digitalRead(lightpin);
  if (lightdata == HIGH) {
    digitalWrite(Buzzerpin, HIGH);
    Serial.println("Buzzer is ON");
  }
  else {
    digitalWrite(Buzzerpin, LOW);
    Serial.println("Buzzer is OFF");
  }
  delay(1000);
}
```