```
/*
Statement      :Design a 4-bit counter.


int led[]={4,5,6,7};
int loopLed=4;
int switchPin = 8;
int counter=0;

void setup(){
  pinMode(switchPin,INPUT_PULLUP);
  for(int i=0;i<=loopLed;i++){
    pinMode(led[i],OUTPUT);
    }
  }

void loop(){
  if(digitalRead(switchPin)==LOW){
    delay(100);
    while(digitalRead(switchPin)==LOW){}
    incrementCounter();
    updateLeds();
    }
  }
```

```
void incrementCounter(){
  counter++;
  if(counter==16){
    counter=0;
    }
  }
void updateLeds(){
  for(int i=0;i<loopLed;i++){
  int bitValue=bitRead(counter,i);
  digitalWrite(led[i],bitValue);

    }
  }
```