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Experiment No. : 06  
Statement : Design a 4-bit counter.  
Date of Exp. : xx/xx/xxxx  
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### **Code Snippet**

```
int led[]={3,4,5,6};
int loopLed=4;
int switchPin = 2;
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);
    }
}
```



