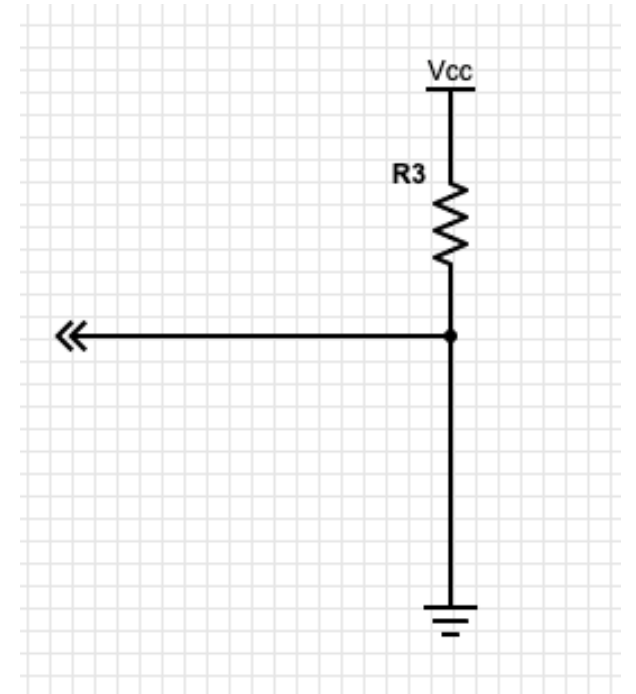
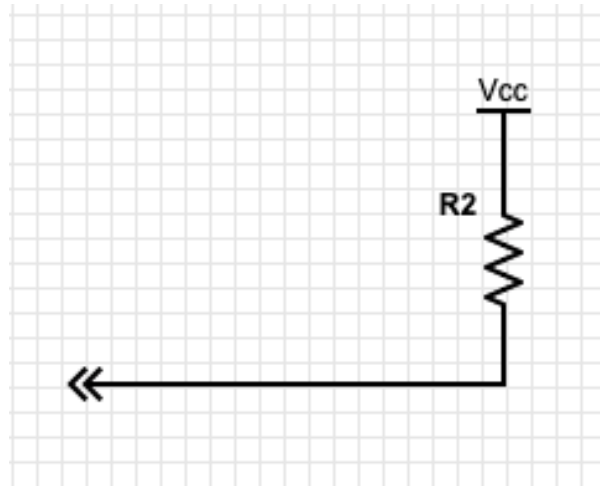
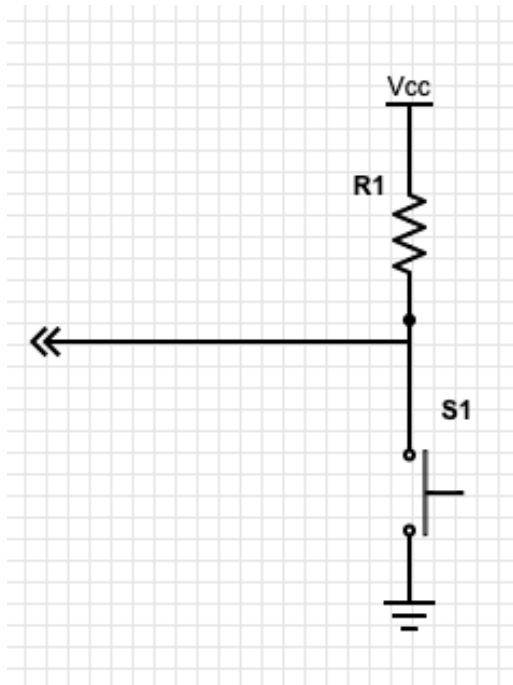


키입력 실험 (Digital Input)

“수업자료는 여기”

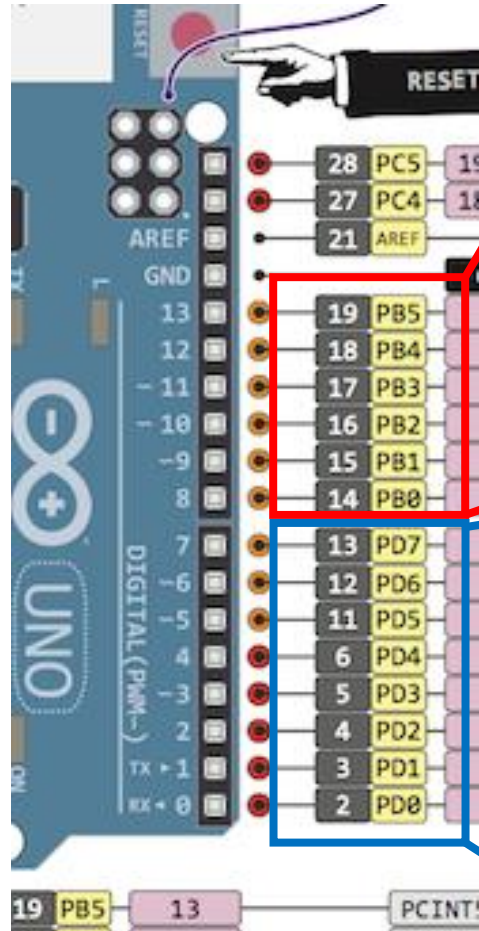


부저 + 버튼 테스트



10 포트 관련 레지스터를 다시 확인

- Port



13.4.2 PORTB – The Port B Data Register

Bit	7	6	5	4	3	2	1	0
0x05 (0x25)	PORTB7	PORTB6	PORTB5	PORTB4	PORTB3	PORTB2	PORTB1	PORTB0
Read/Write	R/W	R/W	R/W	R/W	R/W	R/W	R/W	R/W
Initial Value	0	0	0	0	0	0	0	0

13.4.3 DDRB – The Port B Data Direction Register

Bit	7	6	5	4	3	2	1	0
0x04 (0x24)	DDB7	DDB6	DDB5	DDB4	DDB3	DDB2	DDB1	DDB0
Read/Write	R/W	R/W	R/W	R/W	R/W	R/W	R/W	R/W
Initial Value	0	0	0	0	0	0	0	0

13.4.4 PINB – The Port B Input Pins Address

[illegible]

13.4.8 PORTD – The Port D Data Register

Bit	7	6	5	4	3	2	1	0
0x0B (0x2B)	PORTD7	PORTD6	PORTD5	PORTD4	PORTD3	PORTD2	PORTD1	PORTD0
Read/Write	R/W	R/W	R/W	R/W	R/W	R/W	R/W	R/W
Initial Value	0	0	0	0	0	0	0	0

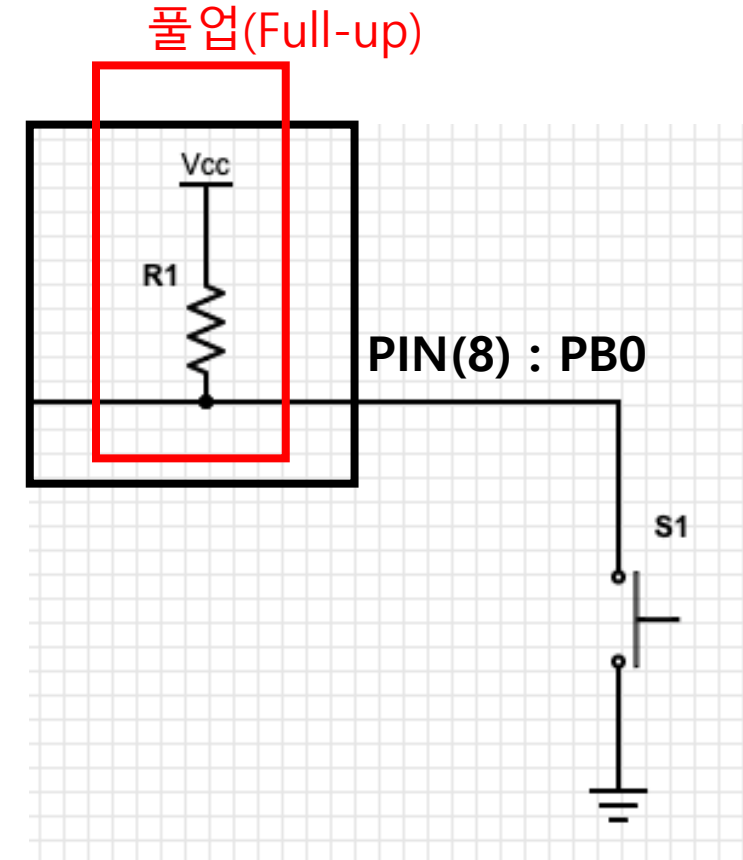
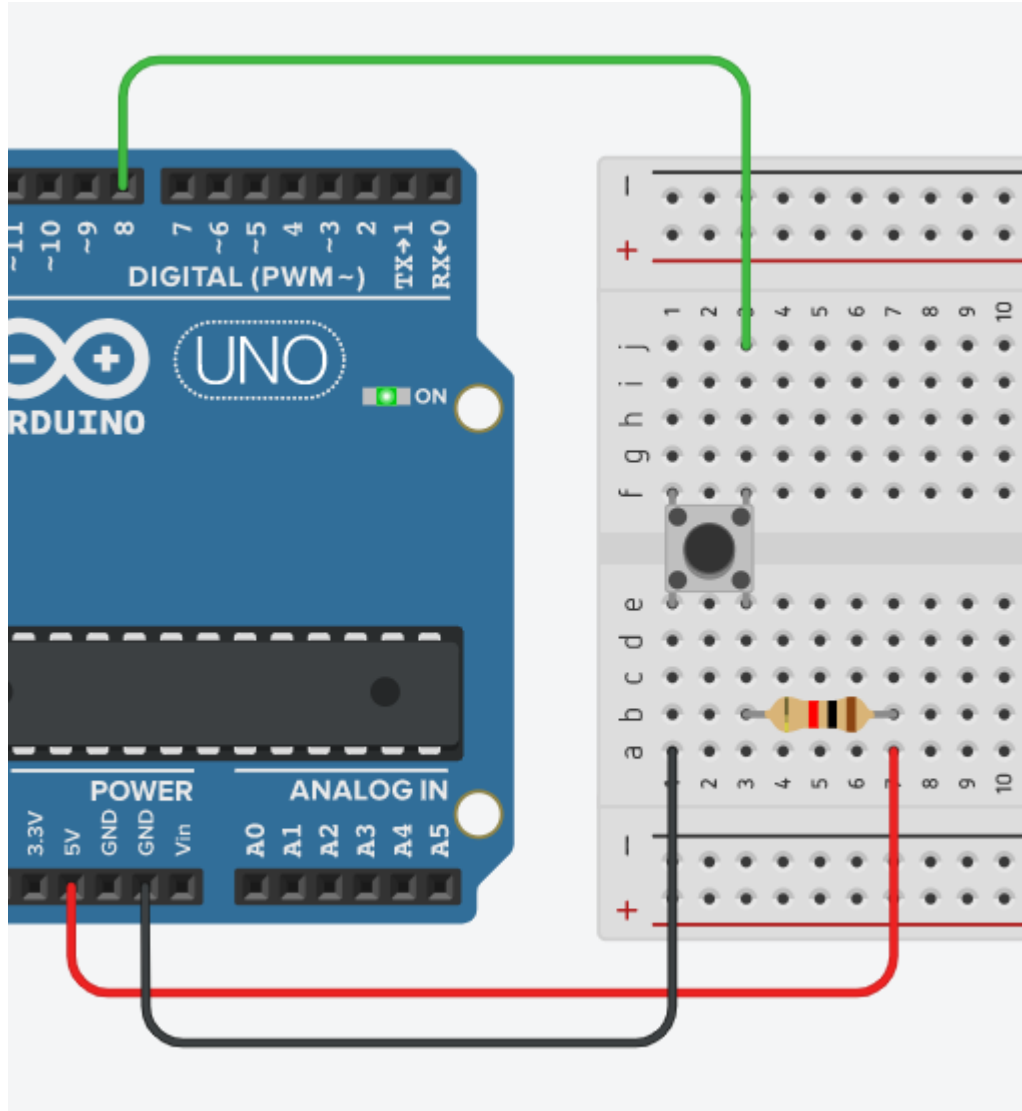
13.4.9 DDRD – The Port D Data Direction Register

Bit	7	6	5	4	3	2	1	0
0x0A (0x2A)	DDD7	DDD6	DDD5	DDD4	DDD3	DDD2	DDD1	DDD0
Read/Write	R/W	R/W	R/W	R/W	R/W	R/W	R/W	R/W
Initial Value	0	0	0	0	0	0	0	0

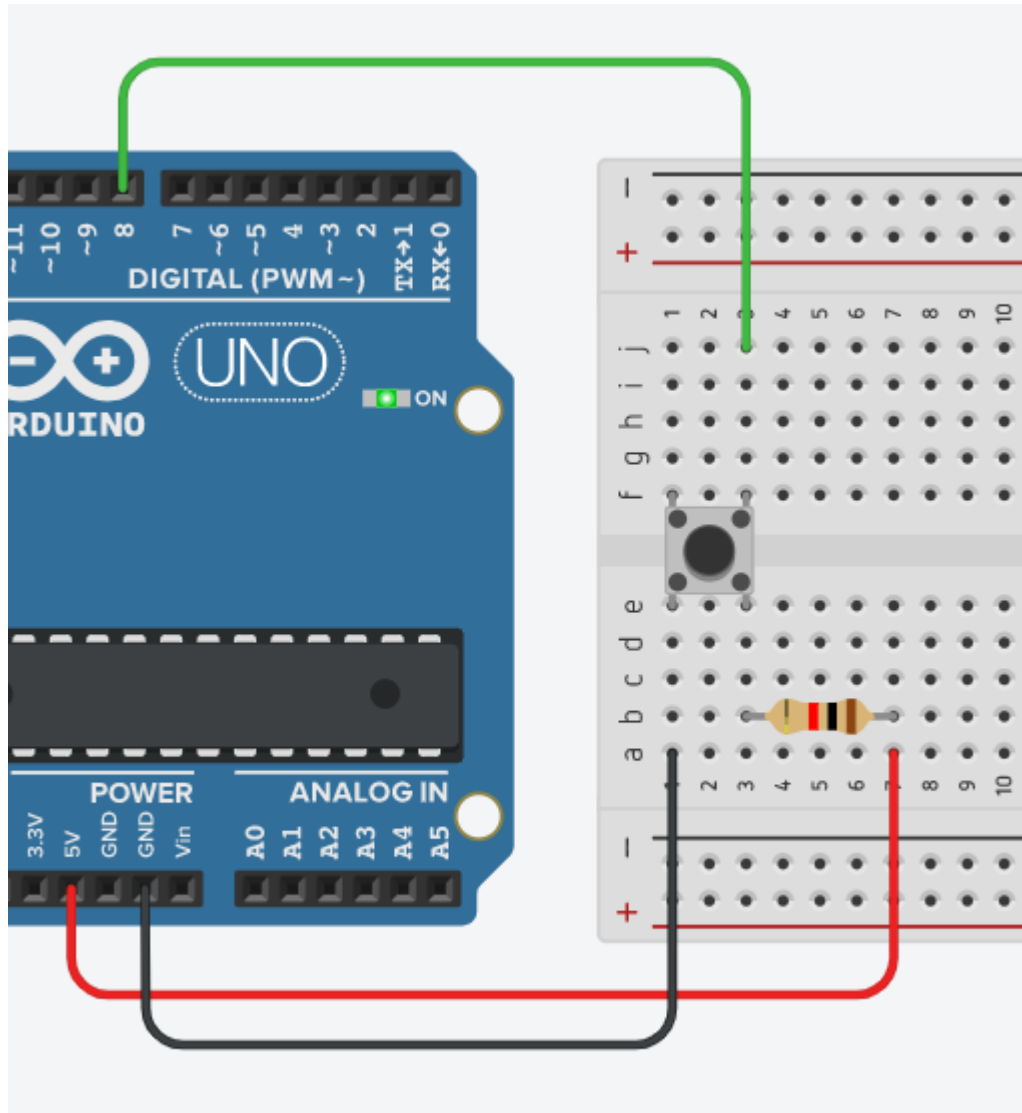
13.4.10 PIND – The Port D Input Pins Address

[illegible]

버튼을 이용한 Digital Input 실험



버튼을 이용한 Digital Input 실험

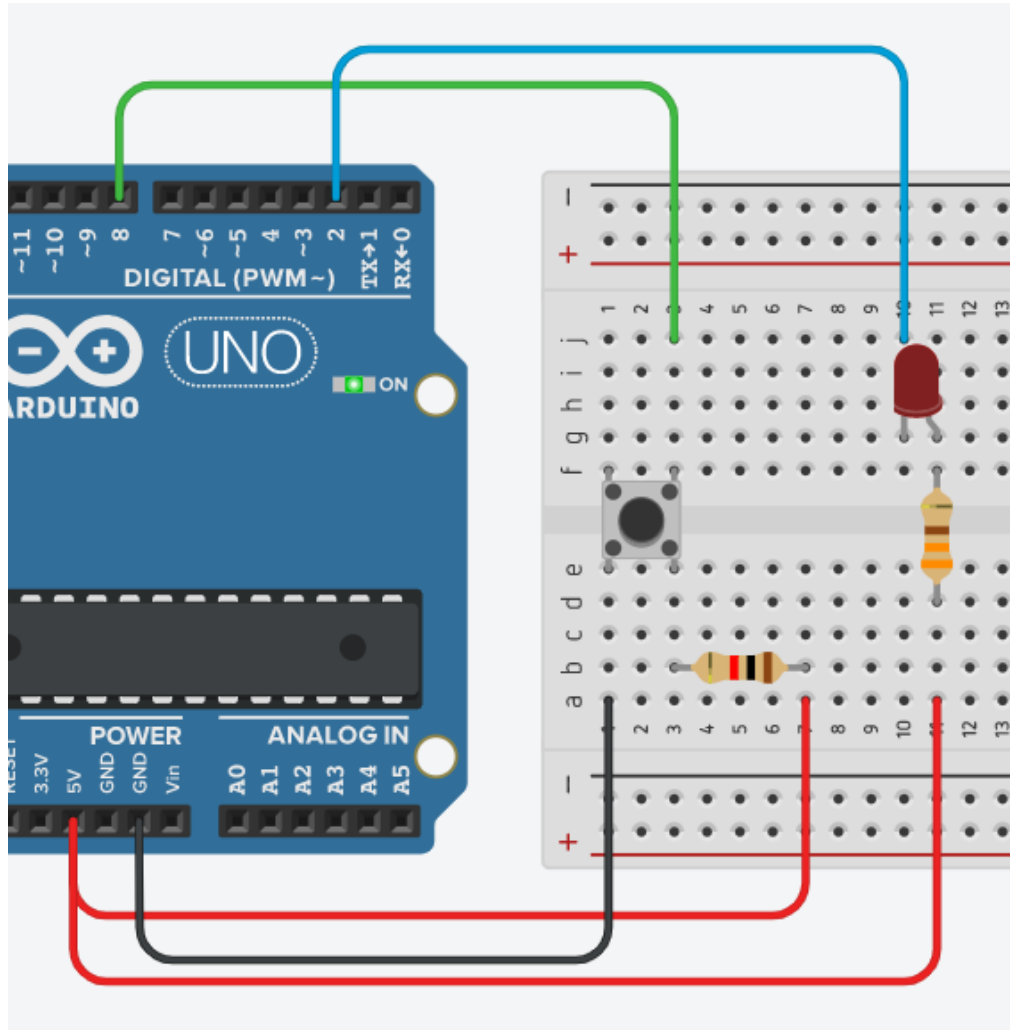


```
void setup()
{
    DDRB = B00000000 ;

    Serial.begin(9600) ;
}

void loop()
{
    Serial.println(PINB) ;
}
```

버튼을 이용한 Digital Input 실험



```
void setup()
{
  DDRB = B00000000 ;
  DDRD = B00000100 ;

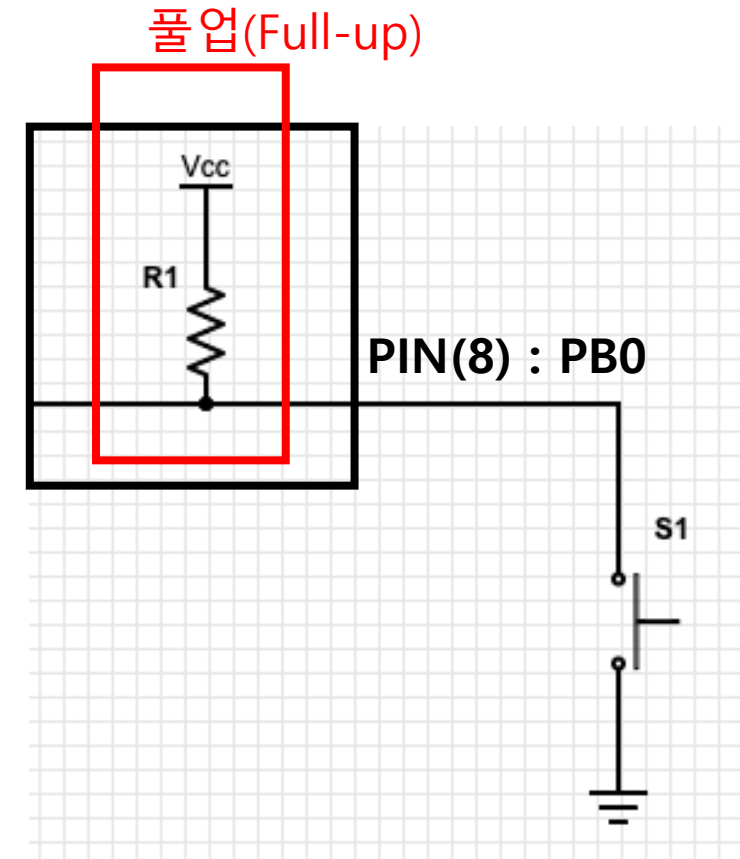
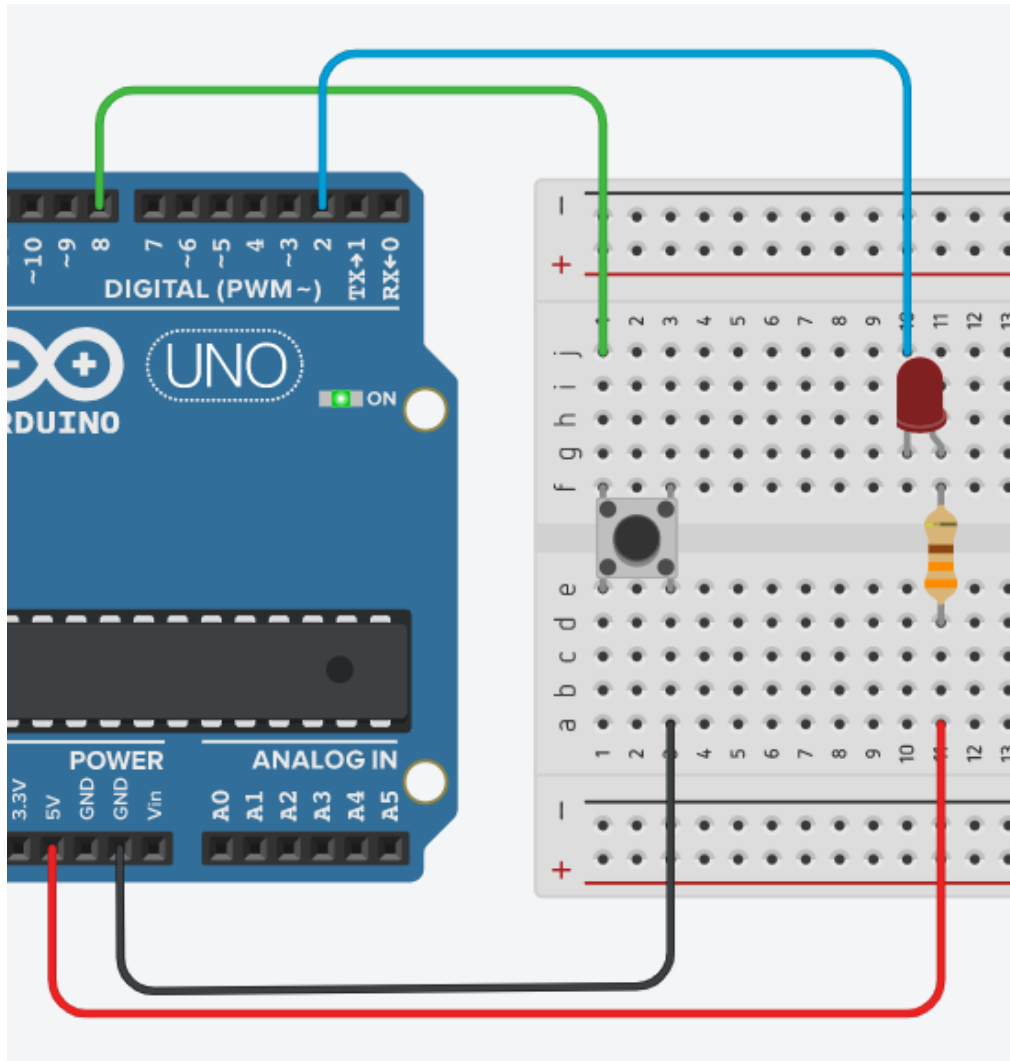
  PORTD = B00000100 ;

  Serial.begin(9600) ;
}

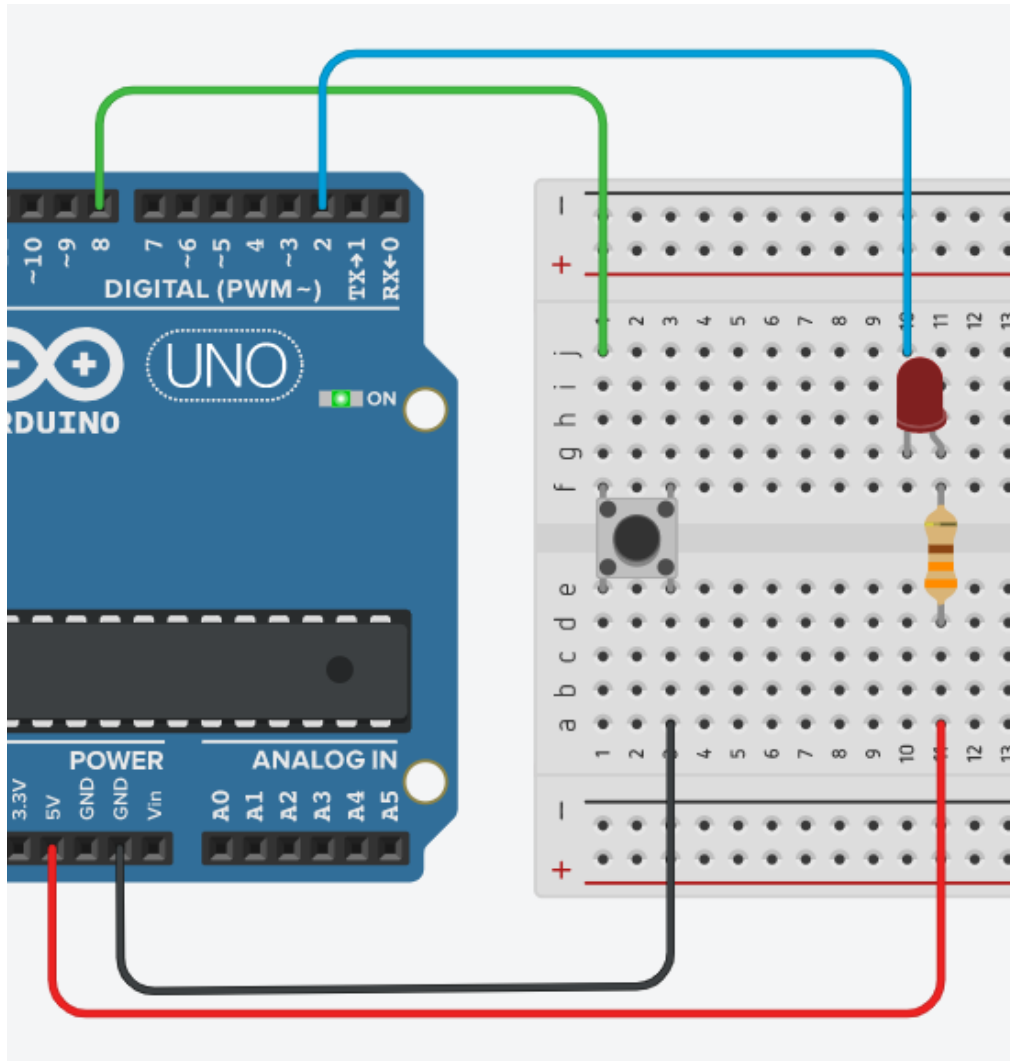
void loop()
{
  Serial.println(PINB) ;

  if( PINB == B00000001 )
  {
    PORTD = B00000100 ;           //LED OFF
  }
  else
  {
    PORTD = B00000000 ;           //LED ON
  }
}
```

버튼을 이용한 Digital Input 실험2



버튼을 이용한 Digital Input 실험2

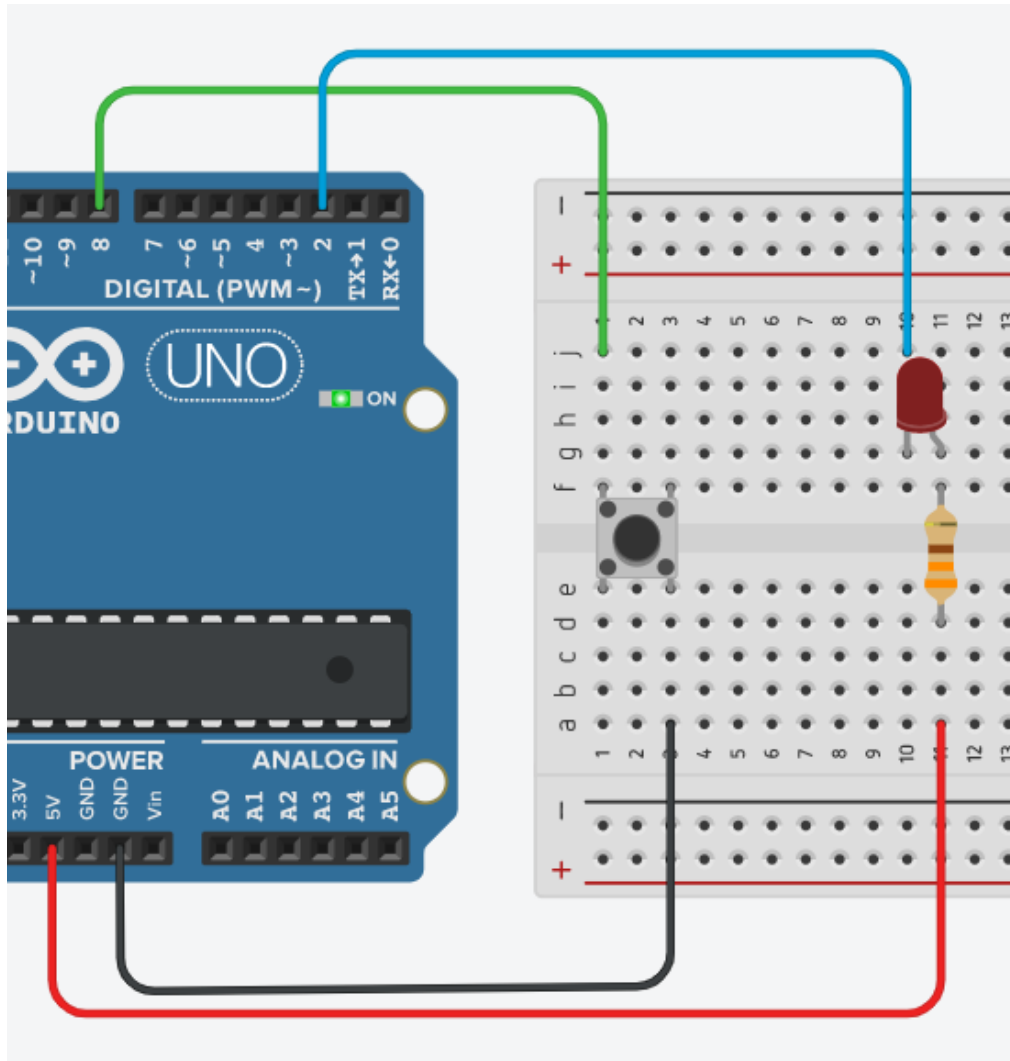


```
// C++ code
//
void setup()
{
    pinMode(8, INPUT_PULLUP);

    DDRD = B00000100 ;
    PORTD = B00000100 ;
}

void loop()
{
    if( digitalRead (8) == LOW )
    {
        PORTD = B00000000 ;           //LED ON
    }
    else
    {
        PORTD = B00000100 ;           //LED OFF
    }
}
```


버튼을 이용한 Digital Input 실험2



```
// C++ code
//
void setup()
{
    pinMode(8, INPUT_PULLUP);
    pinMode(2, OUTPUT);
}

void loop()
{
    if( digitalRead (8) == LOW )
    {
        digitalWrite(2, LOW);
    }
    else
    {
        digitalWrite(2, HIGH);
    }
}
```