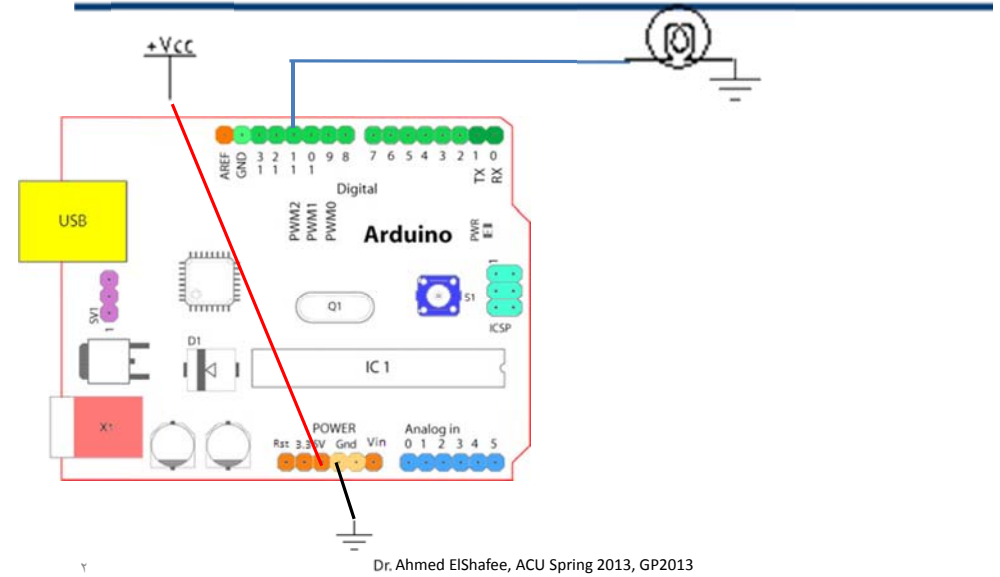# Lecture (03)
Practical Applications on Arduino Uno Board - III

Dr. Ahmed ElShafee

DimmerDCLamp

```
#define LED 11
int i;
void setup()
{
pinMode(LED,OUTPUT);
}

void loop()
{
  for(i=0;i<=255;i++)
  {
    analogWrite(LED,i);
    delay(10);
  }
```
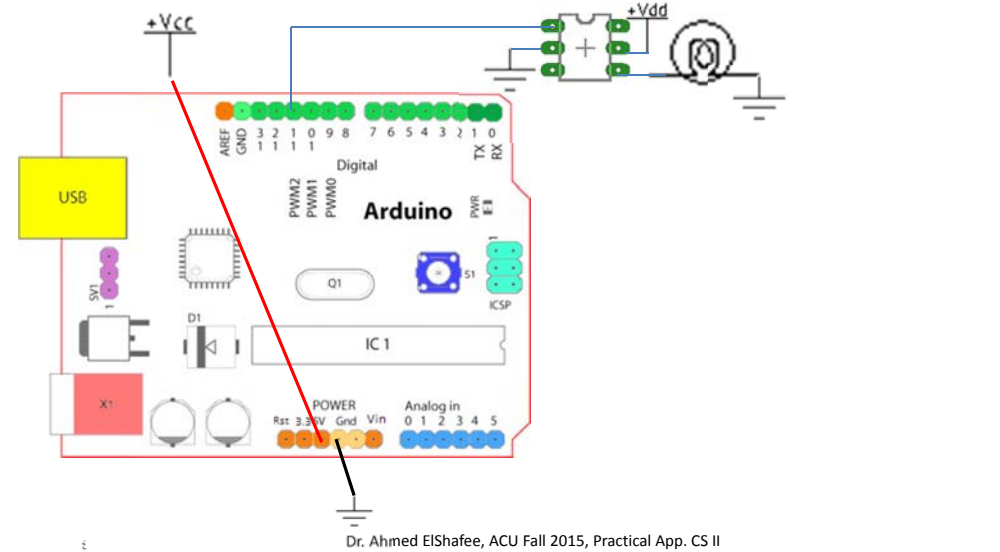
```
for(i=255;i>=0;i--)
  {
    analogWrite(LED,i);
    delay(10);
  }
}
```

DimmerDCLamp2
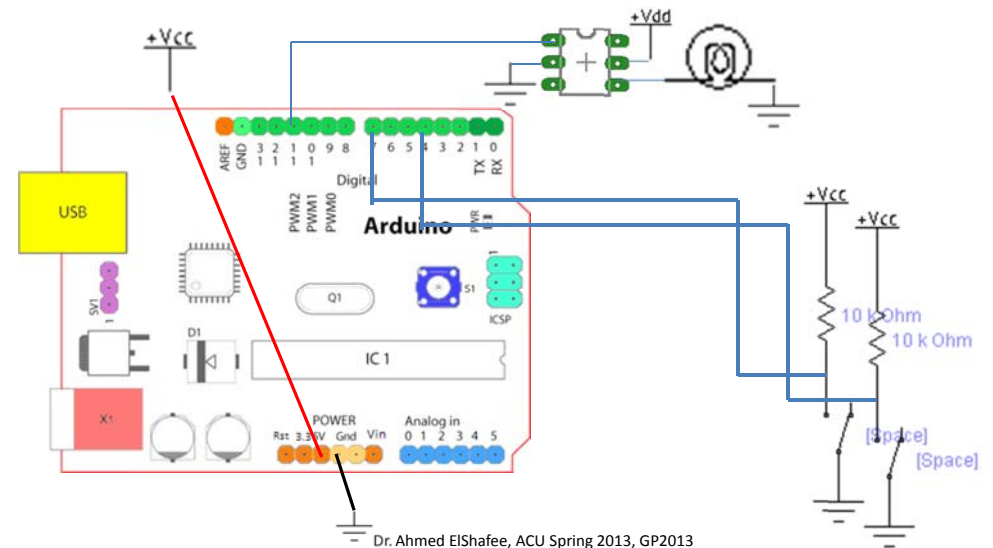
```
#define LED 11
int i;
void setup()
{
pinMode(LED,OUTPUT);
}
void loop()
{
  for(i=0;i<=77;i++)
  {
    analogWrite(LED,i);
    delay(10);
  }
  for(i=77;i>=0;i--)
  {
    analogWrite(LED,i);
    delay(10);
  }
}
```
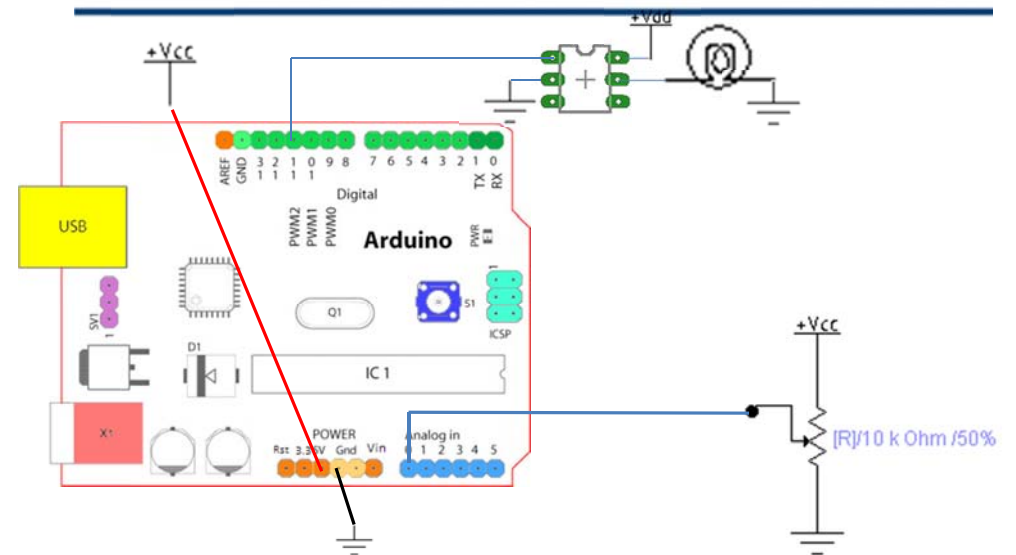
PressControlledDimmerDCLamp

```
#define Lamp 11
#define up 7
#define down 4
int up_status;
int down_status;
int i=0;
void setup()
{
pinMode(Lamp,OUTPUT);
pinMode(up,INPUT);
pinMode(down,INPUT);
}
void loop()
{
  up_status=digitalRead(up);
  down_status=digitalRead(down);
```

```
if(up_status==LOW)
  {
    if(i<128)
      i++;
  }
  else if(down_status==LOW)
  {
    if(i>0)
      i--;
  }
  analogWrite(Lamp,i);
Delay(10);
}
```

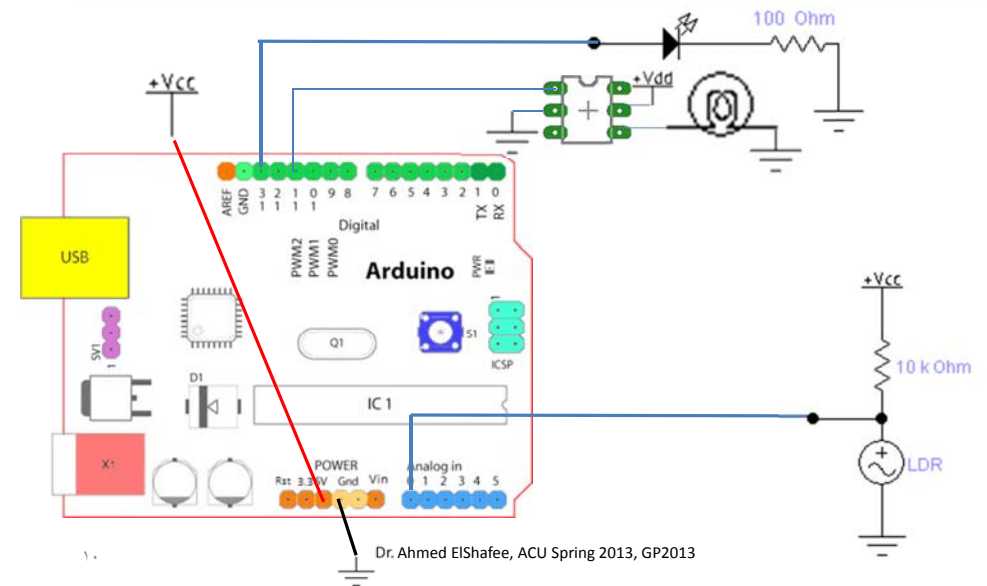# PotentiometerControlledDimmerDCLamp

```
#define Lamp 11
#define Potentiometer A0
int pot,lmp;
void setup()
{
  pinMode(Lamp,OUTPUT);
  pinMode(Potentiometer,INPUT);
}
void loop()
{
  pot=analogRead(Potentiometer);
 lmp=int(pot*1.5/5/4);
  analogWrite(Lamp,lmp);
}
```

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```
#define LAMP 11
#define LED 13
#define LDR A0
int pot,lmp;
void setup()
{
  pinMode(LED,OUTPUT);
  pinMode(LAMP,OUTPUT);
  pinMode(LDR,INPUT);
}
void loop()
{
  pot=analogRead(LDR);
  lmp=abs(byte(pot*1.5/5/4));
  if(lmp>50)
  {
    analogWrite(LAMP,lmp);
    digitalWrite(LED,HIGH);
  }
```

```
else
  {
    analogWrite(LAMP,0);
    digitalWrite(LED,LOW);
  }
}
```

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Thanks,
See you next Week, isA

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