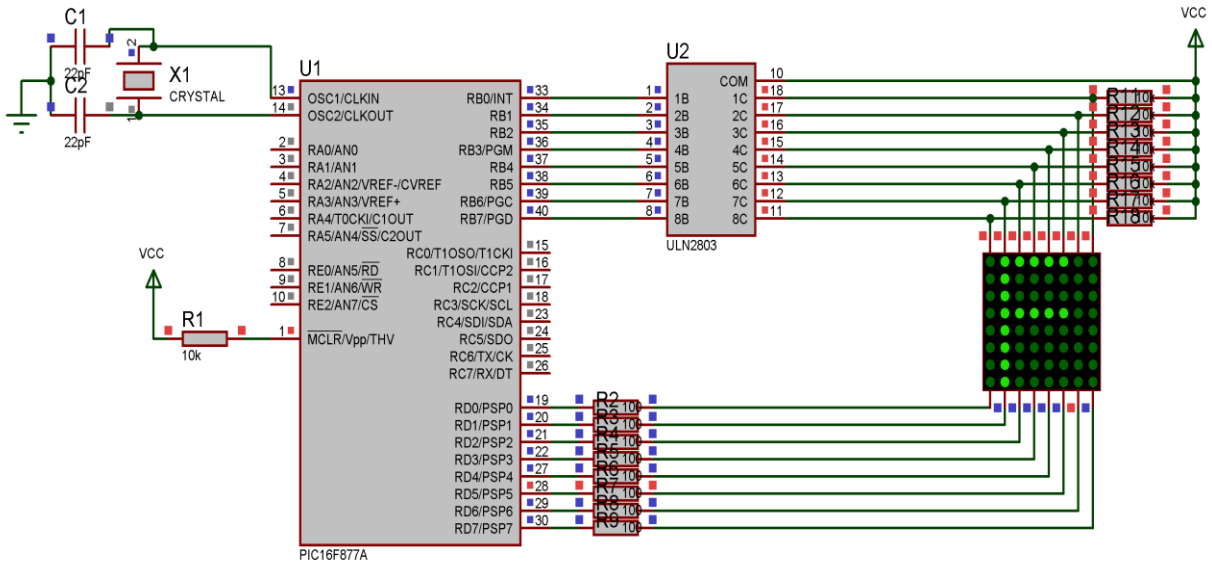
Code:

```
void main() {
  TRISB = 0x00;
  TRISD = 0x00;

  while(1)
  {
    PORTD = 1<<7;
    PORTB = 0x00;
    Delay_us(100);

    PORTD = 1<<6;
    PORTB = 0x00;
    Delay_us(100);

    PORTD = 1<<5;
    PORTB = 0x90;
    Delay_us(100);
   PORTD = 1<<4;
    PORTB = 0x90;
    Delay_us(100);

    PORTD = 1<<3;
    PORTB = 0x90;
    Delay_us(100);

    PORTD = 1<<2;
    PORTB = 0x90;
    Delay_us(100);

    PORTD = 1<<1;
    PORTB = 0xFF;
    Delay_us(100);

    PORTD = 1<<0;
    PORTB = 0x00;
    Delay_us(100);
  }
}
```

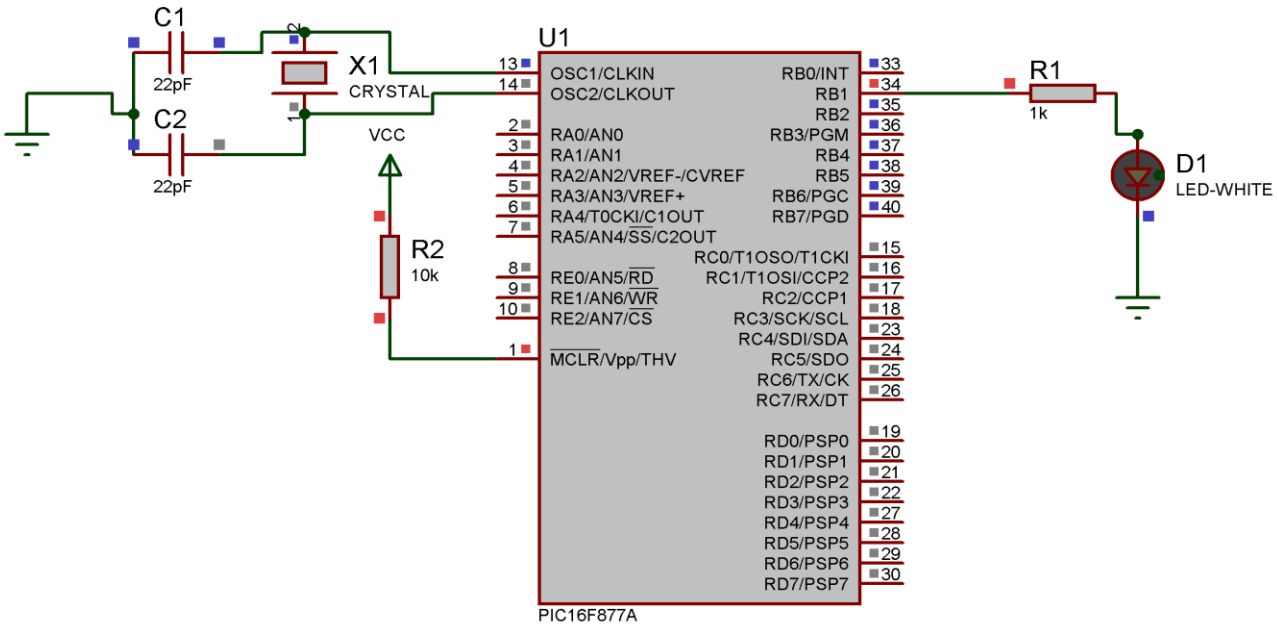
Circuit Diagram:



Code:

```
void main() {
  TRISB = 0;
  while(1)
  {
    PORTB = 0x02;
    Delay_ms(1000);
    PORTB = 0x00;
    Delay_ms(1000);
  }
}
```

Circuit Diagram:

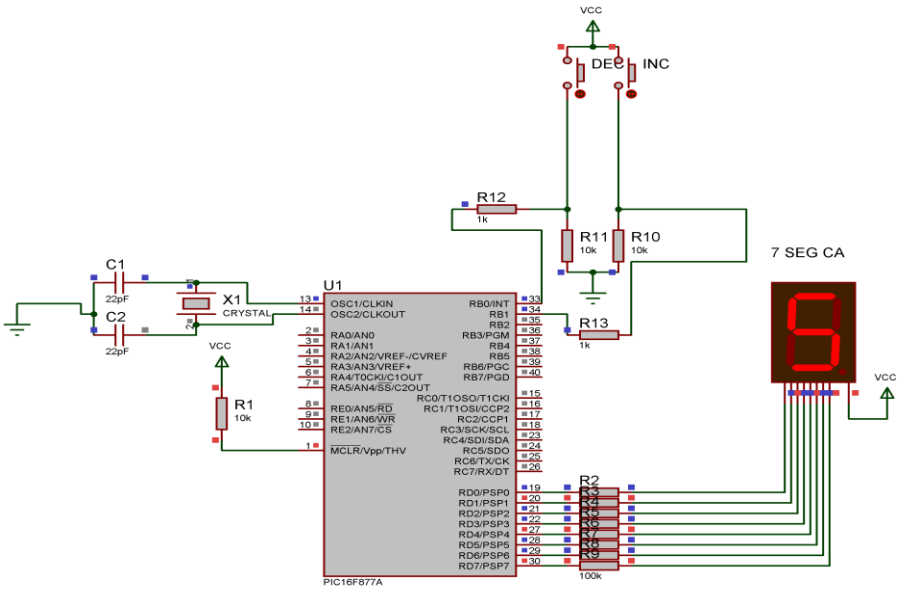


Code:

```
char ch[] = {0xC0, 0xF9, 0xA4, 0xB0, 0x99, 0x92,
0x82, 0xF8, 0x80, 0x90};
void main() {
    int i = 0;
    TRISD = 0x00;
    TRISB.F0 = 1;
    TRISB.F1 = 1;
    PORTD = 0xFF;
    while(1)
    {
     if(PORTB.F1 == 1) {
       Delay_ms(150);
       if(PORTB.F1 == 1) {
         if(i < 9) {
             i++;
         }
         PORTD = ch[i];
       }
     }
```

```
if(PORTB.F0 == 1)
      {
        Delay_ms(150);
        if(PORTB.F0 == 1) {
          if(i > 0)
          {
              i--;
          }
          PORTD = ch[i];
        }
      }
    }
}
```

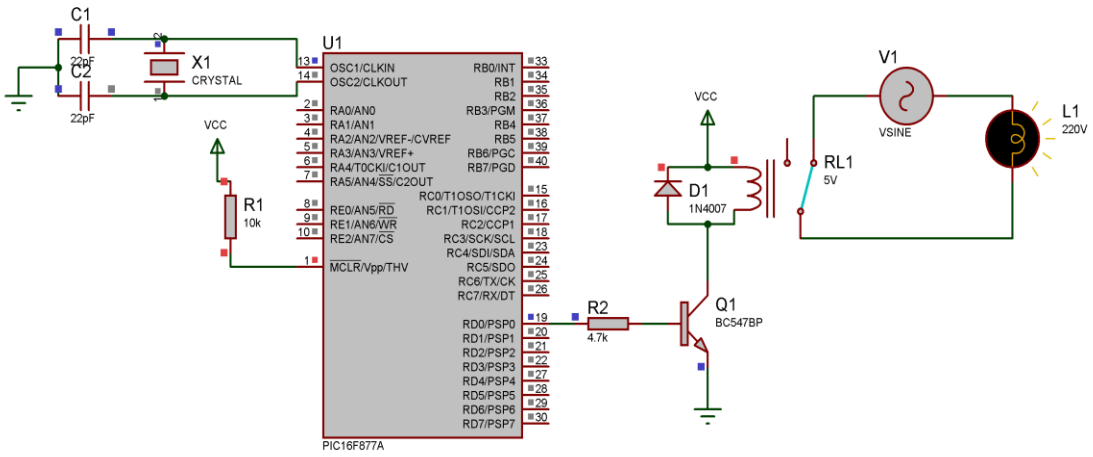
Circuit Diagram:



Code:

```
void main() {
    TRISD.F0 = 0;
    PORTD.F0 = 0;

    while(1)
    {
        PORTD.F0 = 1;
        Delay_ms(1000);
        PORTD.F0 = 0;
        Delay_ms(1000);
    }
}
```

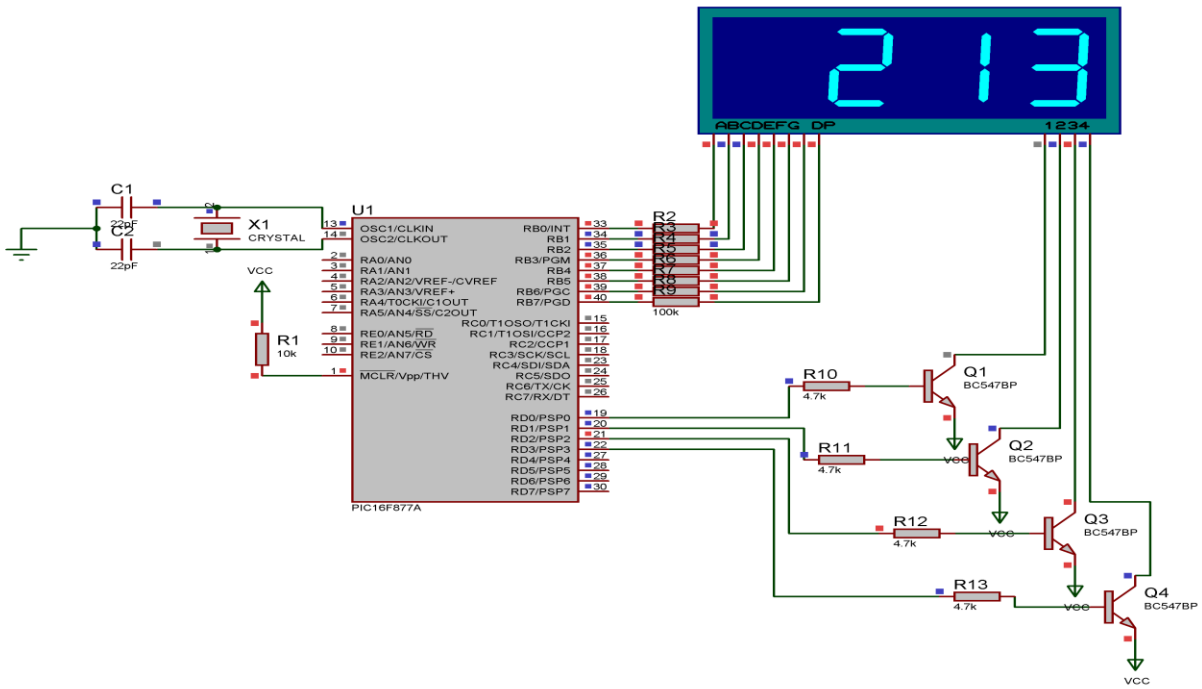
Circuit Diagram:



Code:

```
char ch[] = {0xC0, 0xF9, 0xA4, 0xB0, 0x99, 0x92,
0x82, 0xF8, 0x80, 0x90};
void main() {
  int i, j, firstDigit, secondDigit, thirdDigit,
fourthDigit;
  TRISB = 0x00;
  PORTB = 0x00;
  TRISD = 0x00;
  PORTD = 0x00;
  while(1){
    for(i = 0; i < 10000; i++) {
      firstDigit = i / 1000;
      secondDigit = (i / 100) % 10;
      thirdDigit = (i / 10) % 10;
      fourthDigit = i % 10;
      for(j = 0; j < 12; j++) {
        if(i >= 1000) {
          PORTD.F0 = 1;
          PORTB = ch[firstDigit];
          Delay_ms(5);
          PORTD.F0 = 0;
        }
        if(i >= 100){
          PORTD.F1 = 1;
          PORTB = ch[secondDigit];
          Delay_ms(5);
          PORTD.F1 = 0;
        }
  if(i >= 10){
          PORTD.F2 = 1;
          PORTB = ch[thirdDigit];
          Delay_ms(5);
          PORTD.F2 = 0;
    }
        PORTD.F3 = 1;
        PORTB = ch[fourthDigit];
        Delay_ms(5);
        PORTD.F3 = 0;
      }
    }
  }
}
```

Circuit Diagram:

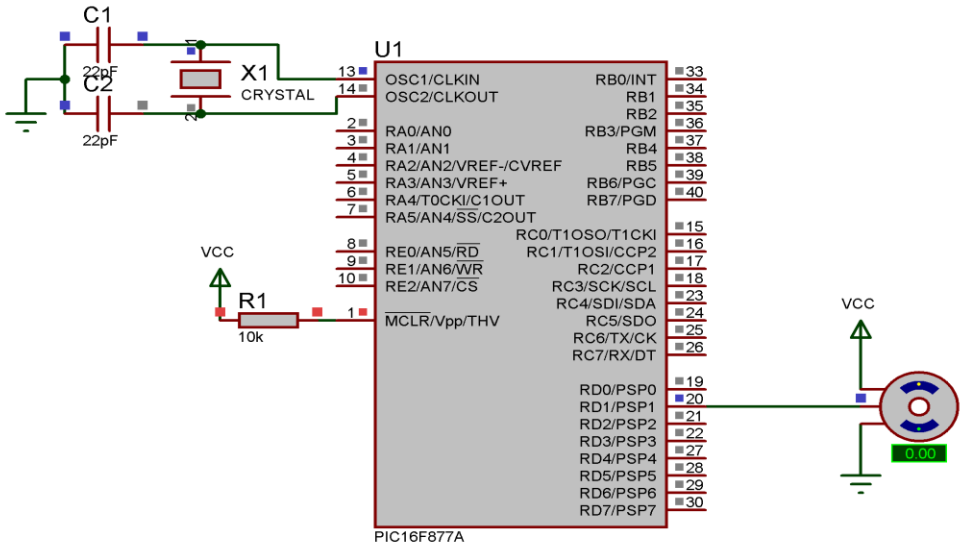


Code:

```
void rotate0()
{
   int i = 0;
   for(i = 0; i < 50; i++)
   {
      PORTD.F1 = 1;
      Delay_us(800);
      PORTD.F1 = 0;
      Delay_us(19200);
   }
}

void rotate90()
{
   int i = 0;
   for(i = 0; i < 50; i++)
   {
      PORTD.F1 = 1;
      Delay_us(1500);
      PORTD.F1 = 0;
      Delay_us(18500);
   }
}
```

```
 void rotate180()
{
   int i = 0;
   for(i = 0; i < 50; i++)
   {
      PORTD.F1 = 1;
      Delay_us(2200);
      PORTD.F1 = 0;
      Delay_us(17800);
   }
}
```

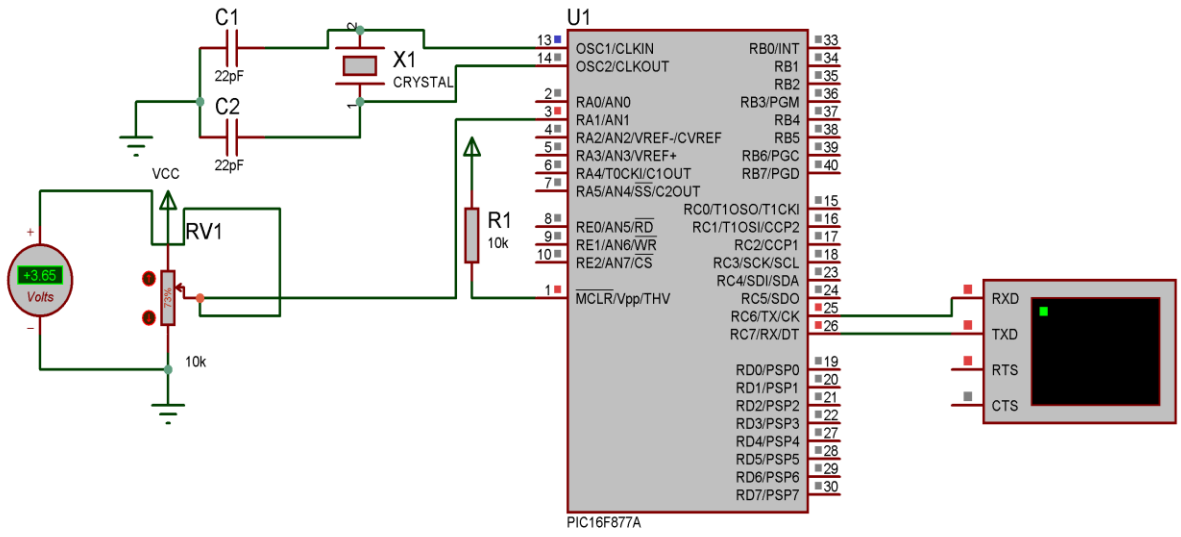
Circuit Diagram:



Code:

```
int ADCValue;
char ch[4];
void main() {
  UART1_Init(9600);
  ADC_Init();
  while(1)
  {
     ADCValue = ADC_Read(1);
     IntToStr(ADCValue, ch);
     UART1_Write_Text("Analog Value- ");
     UART1_Write_Text(ch);
     strcpy(ch, "");
     UART1_Write(13);
     Delay_ms(1000);
  }
}
```

Circuit Diagram:



LIST OF EXPERIMENTS