

REPUBLIC OF CAMEROON

Peace- Work-Fatherland

THE UNIVERSITY OF BAMENDA

THE COLLEGE OF TECHNOLOGY (COLTECH)

**MICROPROCESSORS/MICROCONTROLLERS
ASSIGNMENT: BLINKING LED's**

**NAME: MBAH LESKY TAGWANG
MATRICULE: UBA21PB015 (Level 300)**

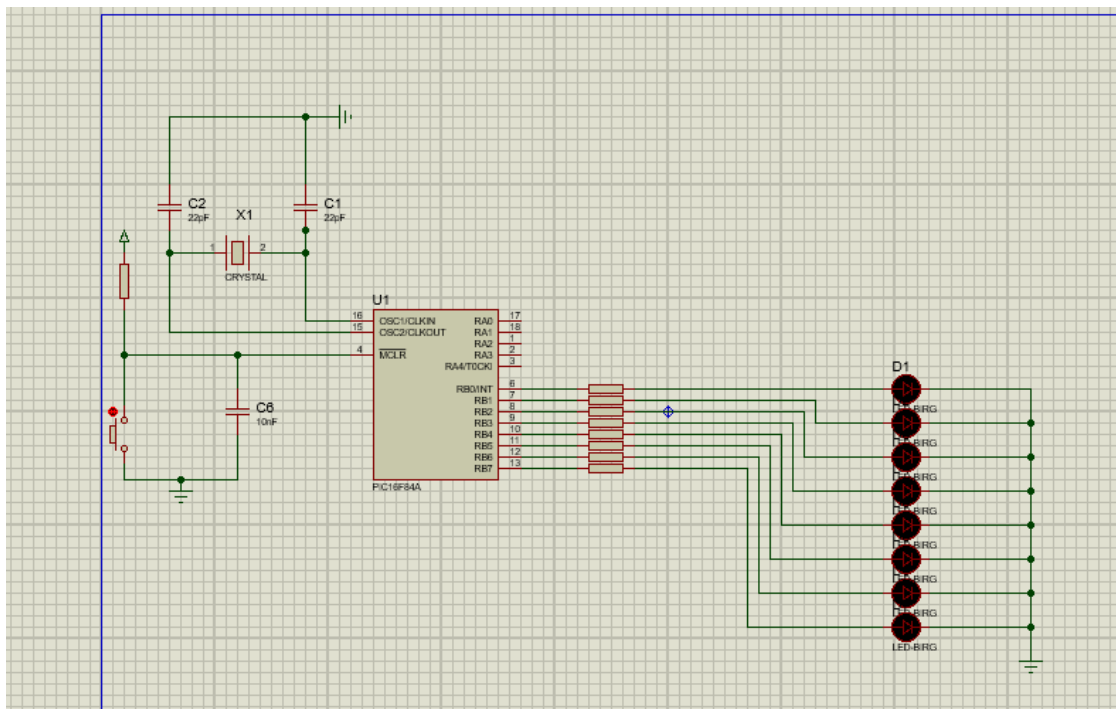
2022/2023

Blinking A Led

CODE:

```
void main() {  
    TRISA = 0x1f;  
    TRISB = 0x00;  
  
    while(1) {  
        PORTB = 0b11111111;  
        Delay_ms(500);  
        PORTB = 0b00000000;  
        Delay_ms(500);  
    }  
}
```

Diagram:



ASSIGNMENT 1:

Edit the above code such that when the leds of PORTA are ON, those of PORTB are OFF and vice versa. Delay is 500ms

CODE:

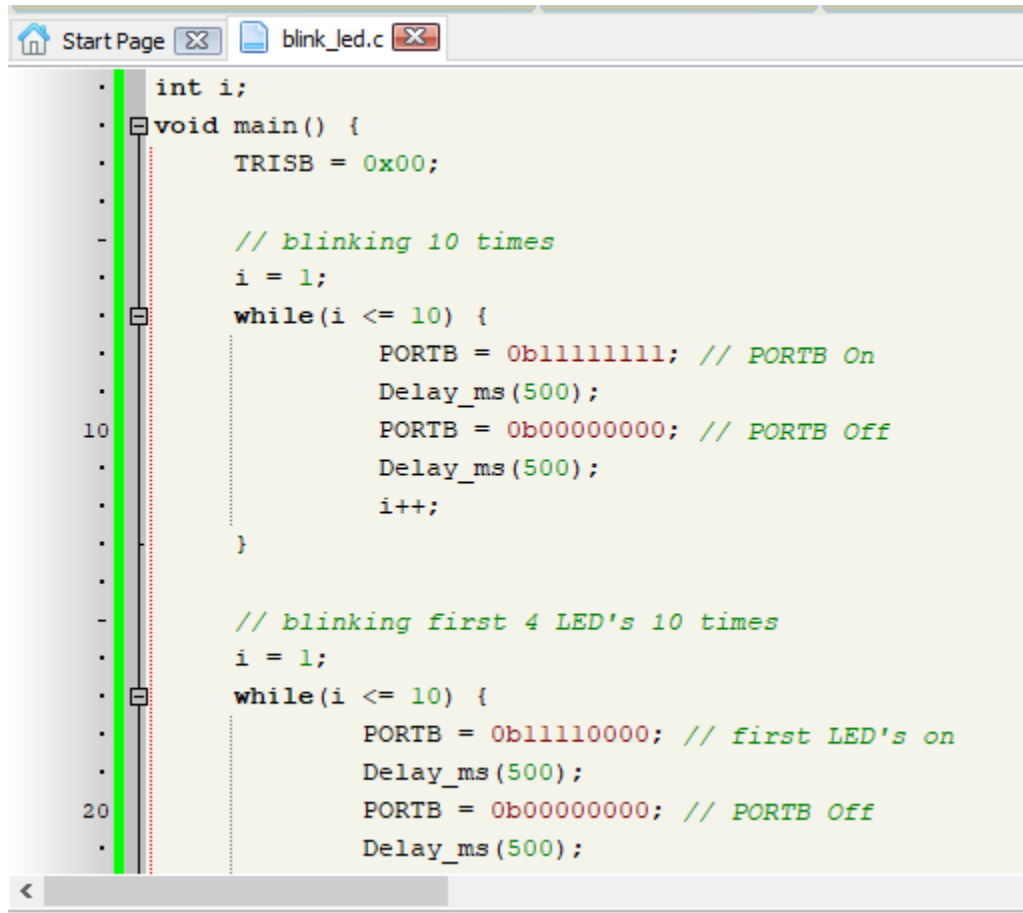
```
void main() {  
    TRISA = 0x00;  
    TRISB = 0x00;  
  
    while(1) {  
        PORTA = 0b11111111; // PORTA ON  
        PORTB = 0b00000000; // PORTB OFF  
        Delay_ms(500);  
        PORTA = 0b00000000; // PORTA OFF  
        PORTB = 0b11111111; // PORTB ON  
        Delay_ms(500);  
    }  
}
```

ASSIGNMENT 2:

2022/2023

Blink all LED's on PORTB 10 times,
After that blink 4 LED's each for 10 times
Then blink 10101010, 01010101 10 times

CODE:

A screenshot of a code editor window titled 'blink_led.c'. The code is written in C and is designed to control the LEDs on PORTB. It starts with a declaration of an integer 'i'. The 'main' function begins by setting 'TRISB' to '0x00'. The first loop, labeled with a green vertical bar and a red dotted line, is titled '// blinking 10 times' and contains a 'while' loop where 'i' ranges from 1 to 10. Inside this loop, 'PORTB' is set to '0b11111111' (all LEDs on), followed by a 500ms delay, then 'PORTB' is set to '0b00000000' (all LEDs off), followed by another 500ms delay, and 'i' is incremented. The second loop, also marked with a green vertical bar and a red dotted line, is titled '// blinking first 4 LED's 10 times' and contains a 'while' loop where 'i' ranges from 1 to 10. Inside this loop, 'PORTB' is set to '0b11110000' (first 4 LEDs on), followed by a 500ms delay, then 'PORTB' is set to '0b00000000' (all LEDs off), followed by another 500ms delay. The code editor has a light yellow background and a sidebar on the left with a green vertical bar and a red dotted line. The window title bar shows 'Start Page' and 'blink_led.c'.

```
int i;

void main() {
    TRISB = 0x00;

    // blinking 10 times
    i = 1;
    while(i <= 10) {
        PORTB = 0b11111111; // PORTB On
        Delay_ms(500);
        PORTB = 0b00000000; // PORTB Off
        Delay_ms(500);
        i++;
    }

    // blinking first 4 LED's 10 times
    i = 1;
    while(i <= 10) {
        PORTB = 0b11110000; // first LED's on
        Delay_ms(500);
        PORTB = 0b00000000; // PORTB Off
        Delay_ms(500);
    }
}
```

```

}

// blinking first 4 LED's 10 times
i = 1;
while(i <= 10) {
    PORTB = 0b11110000; // first LED's on
    Delay_ms(500);
    PORTB = 0b00000000; // PORTB Off
    Delay_ms(500);
    i++;
}

// blinking last 4 LED's 10 times
i = 1;
while(i <= 10) {
    PORTB = 0b00001111; // last LED's on
    Delay_ms(500);
    PORTB = 0b00000000; // PORTB Off
    Delay_ms(500);
    i++;
}

```

```
// blinking 10101010 10 times
i = 1;
while(i <= 10) {
    PORTB = 0b10101010; // last LED's on
    Delay_ms(500);
    PORTB = 0b00000000; // PORTB Off
    Delay_ms(500);
    i++;
}

// blinking 01010101 10 times
i = 1;
while(i <= 10) {
    PORTB = 0b01010101; // last LED's on
    Delay_ms(500);
    PORTB = 0b00000000; // PORTB Off
    Delay_ms(500);
    i++;
}
```