

ASSIGNMENT NO 5

Interfacing push buttons, Led's, Relay and Buzzer to PIC microcontroller

Malhar Kulkarni

32243

Code for LED ,RELAY,S/W,Buzzer Interfacing with PIC18F4550 :

```
#include <p18f4550.h>
```

```
#include "vector_relocate.h"
```

```
#define SW0    PORTBbits.RB1
```

```
#define SW1    PORTBbits.RB0
```

```
#define relay  PORTCbits.RC1
```

```
#define buzzer PORTCbits.RC2
```

```
void delay(unsigned int time);
```

```
void main() {
```

```
    unsigned int i;
```

```
    ADCON1 = 0x0F;
```

```
    INTCON2bits.RBPU = 0;
```

```
    TRISBbits.RB0 = 1;
```

```
    TRISBbits.RB1 = 1;
```

```
    TRISCbits.RC1 = 0;
```

```
    TRISCbits.RC2 = 0;
```

```
    TRISD = 0x00;
```

```
    while (1) {
```

```

if (SW0 == 0) {
    PORTD = 0xFF;
    relay = 1;
    buzzer = 1;
}
if (SW1 == 0) {
    PORTD = 0x00;
    relay = 0;
    buzzer = 0;
}
}
}

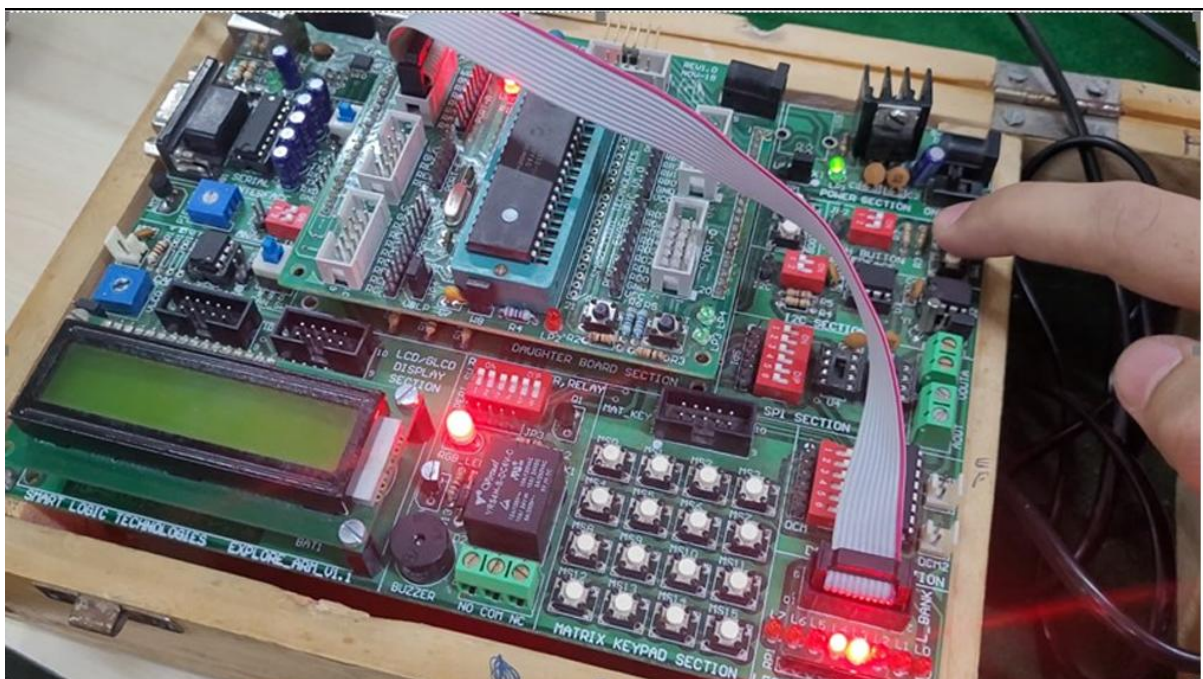
```

```

void delay(unsigned int time) {
    unsigned int i, j;
    for (i = 0; i < time; i++) {
        for (j = 0; j < 165; j++) {}
    }
}

```

OUTPUT :



LED Chasing (Left to Right and Right to Left) :

```
#include <p18f4550.h>
```

```
#include "vector_relocate.h"
```

```
#define SW0    PORTBbits.RB1
```

```
#define SW1    PORTBbits.RB0
```

```
#define relay  PORTCbits.RC1
```

```
#define buzzer PORTCbits.RC2
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```
void delay(unsigned int time);
```

```
void main() {
```

```
    unsigned int i;
```

```
    ADCON1 = 0x0F;
```

```
    INTCON2bits.RBPU = 0;
```

```
    TRISBbits.RB0 = 1;
```

```
    TRISBbits.RB1 = 1;
```

```
    TRISCbits.RC1 = 0;
```

```
    TRISCbits.RC2 = 0;
```

```
    TRISD = 0x00;
```

```
    while (1) {
```

```
        if (SW0 == 0) {
```

```
            PORTD = 0x01;
```

```
            delay(1000);
```

```
    for (i = 0; i < 8; i++) {  
        PORTD = PORTD << 1;  
        delay(1000);  
    }  
    relay = 1;  
    buzzer = 1;  
}
```

```
if (SW1 == 0) {  
    PORTD = 0x80;  
    delay(1000);  
    for (i = 0; i < 8; i++) {  
        PORTD = PORTD >> 1;  
        delay(1000);  
    }  
    relay = 0;  
    buzzer = 0;  
}  
}  
}
```

```
void delay(unsigned int time) {  
    unsigned int i, j;  
    for (i = 0; i < time; i++) {  
        for (j = 0; j < 165; j++) {}  
    }  
}
```