EXPERIEMENT 1:

```
/* NAME:- Aniruddha Avhad.
   ROLL NO:-01. SE-IT */

#include <stdio.h>
#include <stdlib.h>
#include <p18f4550.h>

void main (void){
        int i,sum,n;
        sum = 0;
        sum = 0x0A + 0x04;
        TRISD = 0;
        PORTD = sum;
}
```

EXPERIEMENT 2:

```
/* NAME:- Aniruddha Avhad.
   ROLL NO:- 01. SE-IT. */


#include <stdio.h>
#include <stdlib.h>
#include <p18f4550.h>

void main(void){
        int i,sum,n;
        int number[] = {1,4,6};
        sum = 0;
        for(i=0; i<=14; i++){
```

```
            sum = sum+number[i];
        }

        TRISD = 0;
        PORTD = sum;
}
```

EXPERIMENT 3:

```
// NMAE:- Aniruddha Avhad.
// ROLL NO:- 01. SE-IT.



#include <stdio.h>
#include <stdlib.h>
#include <p18f4550.h>

void main (void){
        int mul,div;
        mul = 0;
        div = 0;
        mul = 0x04 * 0x02;
        div = 0x08 / 0x04;



        TRISD = 0;
        TRISC = 0;

        PORTD = mul;
        PORTC = div;

}
```

EXPERIEMENT: BUZZER

```
#include<p18f4520.h>
#pragma config OSC=HS
#pragma config PWRT=OFF
#pragma config WDT=OFF
#pragma config DEBUG=OFF, LVP=OFF

void msdelay(unsigned int itime);
void Right(void);
void Left(void);

#define SW2 PORTBbits.RB0
#define SW1 PORTBbits.RB1
#define relay PORTBbits.RB3
#define buzzer PORTBbits.RB2
#define D1 PORTBbits.RB4
#define D2 PORTBbits.RB5
#define D3 PORTBbits.RB6
#define D4 PORTBbits.RB7

void main(){
        ADCON1=0x0F;
        TRISBbits.TRISB0=1;
        TRISBbits.TRISB1=1;
        TRISBbits.TRISB2=0;
        TRISBbits.TRISB3=0;
        TRISBbits.TRISB4=0;
        TRISBbits.TRISB5=0;
        TRISBbits.TRISB6=0;
        TRISBbits.TRISB7=0;
```

```
	D1=D2=D3=D4=0;
	SW1=SW2=1;
	relay=0;

	while(1){
		if(SW2==0 & SW1==1){
			relay=1;
			buzzer=1;
			Right();
		}
		if(SW1==0 & SW2==1){
			relay=0;
			buzzer=0;
			Left();
		}
	}
}

void Right(void){
	D1=D2=D3=D4=0;
	while(SW1 != 0){
		relay=1;
		buzzer=1;
		D1=1;D2=0;D3=0;D4=0;
		msdelay(10);
		D1=0;D2=1;D3=0;D4=0;
		msdelay(10);
		D1=0;D2=0;D3=1;D4=0;
		msdelay(10);
		D1=0;D2=0;D3=0;D4=1;
		msdelay(10);
```

```
        }
}

void Left(void){
        D1=D2=D3=D4=0;
        while(SW2 != 0){
                relay=0;
                buzzer=0;
                D1=0;D2=0;D3=0;D4=1;
                msdelay(10);
                D1=0;D2=0;D3=1;D4=0;
                msdelay(10);
                D1=0;D2=1;D3=0;D4=0;
                msdelay(10);
                D1=1;D2=0;D3=0;D4=0;
                msdelay(10);
        }
}

void msdelay(unsigned int itime){
        int i,j;
        for(i=0; i<itime; i++)
                for(j=0; j<1275; j++);
}
```

EXPERIMENT LED BLINKING:

```
#include<P18F4550.h>

void Delay_ms(int ms);

void main()
```

```
{
	TRISB = 0x00;

	while(1)
	{
		PORTB = 0xFF;
		Delay_ms(100);
		PORTB = 0x00;
		Delay_ms(100);
	}
}

void Delay_ms(int ms)
{
	int i,count;

	for(i=0;i<ms;i++)
	{
		count = 98;
		while(count != 1)
		{
			count--;
		}
	}
}
```

EXPERIMENT LCD INTERFACING:

```
#include<p18f4550.h>

#pragma config FOSC = HS
#pragma config WDT = OFF
```

```
#pragma config LVP  = OFF
#pragma config PBADEN = OFF
#define LCD_DATA  PORTD
#define ctrl      PORTE
#define rs     PORTEbits.RE0
#define rw     PORTEbits.RE1
#define en     PORTEbits.RE2

void init_LCD(void);

void LCD_command(unsigned char cmd);
void LCD_data(unsigned char data);
void LCD_write_string(static char *str);
void msdelay(unsigned int time);

void main(void)
{
char var1[]="wel-come";
char var2[]="SE IT DEPARTMENT";

ADCON1=0X0F;
TRISD=0X00;
TRISE=0X00;

init_LCD();
msdelay(50);

LCD_command(0x0C0);
LCD_write_string(var1);
LCD_write_string(var2);
```

```
while(1);
}
 void msdelay(unsigned int time)
{
unsigned int i,j;
for(i=0;i<time;i++);
            for(j=0;j<710;j++);
}
void init_LCD(void)
{
LCD_command(0x38);
msdelay(15);
LCD_command(0x01);
msdelay(15);
LCD_command(0x0C);
msdelay(15);
LCD_command(0x80);
msdelay(15);
}
void LCD_command (unsigned char cmd)
{
LCD_DATA=cmd;

rs=0;
rw=0;
en=1;

msdelay(15);
en=0;
}
```

```
void LCD_data (unsigned char data)
{
LCD_DATA=data;

rs=1;
rw=0;
en=1;

msdelay(15);
en=0;
}
void LCD_write_string(static char*str)
{int i=0;
while(str[i]!=0)
{
 LCD_data(str[i]);

msdelay(15);
i++;
}
}
```