

Experiment – 4

Title: Simple programs: Arithmetic and Logical operations using PIC.

Aim: To understand Arithmetic and Logical operations using PIC.

Objectives:

- To study concept simple programming
- To understand Arithmetic and Logical operations.
- To study use of ADC to interface sensors.
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Software Used: MPLAB IDE

Program:

Arithmetic operation

1 . Addition of two hexadecimal number

```
#include <stdio.h>
#include <stdlib.h>
#include <p18f4550.h>
void main(void)
{
    unsigned int sum=0;

    sum = 0X02+0X03;
    TRISD =0;
    PORTD =sum;

}
```

2. Subtraction of two hexadecimal number

```
#include <stdio.h>
#include <stdlib.h>
#include <p18f4550.h>
void main(void)
{
    unsigned int sum=0;
```

```
sum = 0X02-0X03;
```

```
TRISD =0;
```

```
PORTD =sum;
```

3. Multiplication of two hexadecimal number

```
#include <stdio.h>
```

```
#include <stdlib.h>
```

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

```
void main(void)
```

```
{
```

```
unsigned int sum=0;
```

```
sum = 0X02*0X03;
```

```
TRISD =0;
```

```
PORTD =sum;
```

2. Division of two hexadecimal number

```
#include <stdio.h>
```

```
#include <stdlib.h>
```

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

```
void main(void)
```

```
{
```

```
unsigned int sum=0;
```

```
sum = 0X02/0X03;
```

```
TRISD =0;
```

```
PORTD =sum;
```

Logical operations

1 Logical AND of two hexadecimal number

```
#include <stdio.h>
```

```
#include <stdlib.h>
```

```
#include <p18f4550.h>

void main(void)
{
    unsigned int sum=0;

    sum = 0X02 & 0X03;
    TRISD =0;
    PORTD =sum;
```

2 Logical OR of two hexadecimal number

```
#include <stdio.h>
#include <stdlib.h>
#include <p18f4550.h>
void main(void)
{
    unsigned int sum=0;
    sum = 0X02 | 0X03;
    TRISD =0;
    PORTD =sum;
```

3 Logical NOT of two hexadecimal number

```
#include <stdio.h>
#include <stdlib.h>
#include <p18f4550.h>
void main(void)
{
    unsigned int sum=0;

    sum = ~ 0X02;
    TRISD =0;
    PORTD =sum;
```

Result : Simple programs: Arithmetic and Logical operations using PIC are studied.