**Ex. No.: 8 Basic Arithmetic Operations in Embedded C**

**Date:**

**Aim:**

To write a program to bitwise operations in Embedded C using MCU IDE.

**Software Requirement**

1. MCU 8051 IDE
2. SDCC

**Procedure**

//Write the procedure here

**Code**

#include <8052.h> /\* Use the appropriate header file for your hardware \*/

void main(void)

{

unsigned char x, y, z, a, b, c, d, e, f, p, q, r;

/\* Bitwise AND operation \*/

x = 0x12;

y = 0x34;

P0 = 0x00;

z = x & y;

P0 = z;

/\* Bitwise OR operation \*/

a = 0x12;

b = 0x34;

P1 = 0x00;

c = a | b;

P1 = c;

/\* Bitwise XOR operation \*/

d = 0x12;

e = 0x34;

P2 = 0x00;

f = d ^ e;

P2 = f;

/\* Bitwise NOT operation \*/

p = 0x12;

P3 = 0x00;

r = ~p;

P3 = r;

}

**Explanation**:

Bitwise AND (&): Combines bits of x and y where both bits are 1.

Bitwise OR (|): Combines bits of a and b where at least one bit is 1.

Bitwise XOR (^): Combines bits of d and e where bits are different.

Bitwise NOT (~): Inverts the bits of p.

**Execution Steps**

1. Open Tools 🡪 Compile
2. Start Simulator
3. Animate Program
4. Check the C Variables
5. Check the List of SFR’s

**Output**



