**Ex. No.: 10 Logical Operations in Embedded C**

**Date:**

**Aim:**

To write a program to perform Logical 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, p, q, r;

/\* Logical AND operation \*/

x = 0x01; /\* 0000 0001 \*/

y = 0x03; /\* 0000 0011 \*/

P0 = 0x00;

z = x && y; /\* Logical AND \*/

P0 = z; /\* P0 = 0x01 (true) \*/

/\* Logical OR operation \*/

a = 0x00; /\* 0000 0000 \*/

b = 0x02; /\* 0000 0010 \*/

P1 = 0x00;

c = a || b; /\* Logical OR \*/

P1 = c; /\* P1 = 0x01 (true) \*/

/\* Logical NOT operation \*/

p = 0x00; /\* 0000 0000 \*/

P2 = 0x00;

q = !p; /\* Logical NOT \*/

P2 = q; /\* P2 = 0x01 (true) \*/

/\* Logical AND operation with zero result \*/

p = 0x00; /\* 0000 0000 \*/

q = 0x00; /\* 0000 0000 \*/

P3 = 0x00;

r = p && q; /\* Logical AND \*/

P3 = r; /\* P3 = 0x00 (false) \*/

}

**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**



