Parshvanath Charitable Trust's

A. P. SHAH INSTITUTE OF TECHNOLOGY

(Approved by AICTE New Delhi & Govt. of Maharashtra, Affiliated to University of Mumbai)
(Religious Jain Minority)

Department of Humanities and Applied Science

Academic Year: 2023-24 **Name of Student: Vedant Nagesh Terse**

Semester: II **Student ID:23104195**

Class / Branch: F.E ALL **Date of Performance: 24/01/2024**

Subject: C Programming **Date of Submission: 24/01/2024**

Name of Instructor: Prof. Vandana Virbhadre

Experiment No.4

Aim: Write programs that demonstrate working of Logical and Bitwise operators.

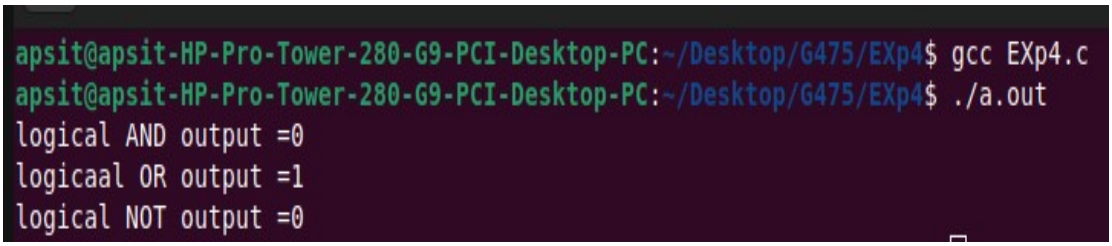
Program: A:-

```c
#include<stdio.h>
int main ()
{
int a=10, b=5 , logical_AND , logical_OR , logical_NOT ;
logical_AND =(a>=10) && (b>5);
printf("logical AND output =%d\n", logical_AND);
logical_OR =(a==10) || (b>a);
printf("logicaal OR output =%d\n", logical_OR);
logical_NOT= !((a>=10) || (b==a));
printf("logical NOT output =%d\n",logical_NOT);

return 0;
}
```

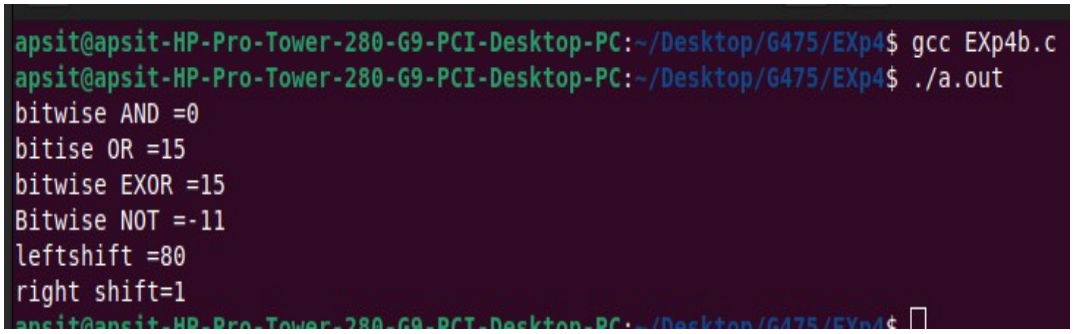
B:-

```c
#include<stdio.h>
int main ()
{
int a=10 ,b=5, var1 , var2 , var3 ,var4 ,var5 , var6;
var1= a&b;
printf("bitwise AND =%d\n",var1);
var2 = a|b;
printf("bitise OR =%d\n",var2);
var3= a^b;
printf("bitwise EXOR =%d\n",var3);
var4 = ~a;
printf("Bitwise NOT =%d\n",var4);
var5= a<<3;
printf("leftshift =%d\n",var5);
var6=a>>3;
printf("right shift=%d\n", var6);

return 0;
}
```

Output: A:-


apsit@apsit-HP-Pro-Tower-280-G9-PCI-Desktop-PC:~/Desktop/G475/EXp4$ gcc EXp4.c
apsit@apsit-HP-Pro-Tower-280-G9-PCI-Desktop-PC:~/Desktop/G475/EXp4$ ./a.out
logical AND output =0
logicaal OR output =1
logical NOT output =0

B:-


apsit@apsit-HP-Pro-Tower-280-G9-PCI-Desktop-PC:~/Desktop/G475/EXp4$ gcc EXp4b.c
apsit@apsit-HP-Pro-Tower-280-G9-PCI-Desktop-PC:~/Desktop/G475/EXp4$ ./a.out
bitwise AND =0
bitise OR =15
bitwise EXOR =15
Bitwise NOT =-11
leftshift =80
right shift=1