



JAIN
DEEMED-TO-BE UNIVERSITY

SCHOOL OF
COMPUTER
SCIENCE AND IT

DEPARTMENT OF MASTER OF COMPUTER APPLICATION

ACTIVITY-1

MFCA

JUPG22MCA20162

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Q)Given two bit strings of length a, find the bitwise AND, bitwise OR, and bitwise XOR these strings.

Operator	Meaning of Operator OR A
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	Bitwise AND
--	-------------

	Bitwise OR
--	------------

	Bitwise XOR
--	-------------

Bitwise AND Operator (&):

The output of bitwise AND is 1 if the Corresponding bits two of operands is 1. Either bit of an operand and is 0 the result of corresponding bit is evaluated to 0.

In C programming, the bitwise AND operator is denoted by &. Suppose the bitwise AND operation of two string integers 12 and 25.

12-00001100 (In Binary)

25- 00011001 (In Binary)

Bit operation of 12 and 25

00001100

0001100 1

00001000= 8 (In Decimal)

EX-#include <stdio.h>

```
int main()
```

```
{
```

```
int a = 12, b = 25,
```

```
printf ("Output = ·/·d", a & b)",
```

```
return 0;
```

```
}
```

Bitwise OR Operator | :-

The output of bitwise OR is 1 if at least one corresponding bit of two operands is 1. In C programming, bitwise OR operation is denoted by |

12=00001100

25=00011001 (In Binary)

Bitwise OR operation of 12 and 25.

00001100

00011001 = 00011101 = 29 (in decimal)

Ex:-#include <stdio.h>

int main()

{

int a = 12, b = 25 ;

printf ("Output = %d", a|b);

return 0;

}

o/p- Output = 29

Bitwise XOR (exclusive OR) Operator :-

The result of bitwise XOR operator is 1 if the corresponding bits of two operands are opposite. It is denoted by ^

12 - 00001100

25 - 00011001 (in binary)

Bitwise XOR Operation of 12 and 25

00001100

00011001

00010101 = 21 (in decimal)

Ex:-#include <stdio.h>

int main()

{

int a = 12, b = 25;

```
print ("Output = %d", a ^b);  
return 0;  
}
```

0/p - Output = 21