

C ProgrammingLecture 10

02 | 04 | 2020

OR (|) operator ; it is represented  
by a single ~~vertical~~ vertical bar sign (|).

Two integer expressions are written on each side of the (|) operator.

The result of the bitwise OR operation is 1 if at least one of the expression has the value as 1, otherwise the result always 0. like;

|   |   |   |   |
|---|---|---|---|
| 0 | 0 | = | 0 |
| 0 | 1 | = | 1 |
| 1 | 0 | = | 1 |
| 1 | 1 | = | 1 |

|    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|
| S  | M  | T  | W  | T  | F  | S  |
| 30 | 31 | 4  | 5  | 6  | 7  | 8  |
| 2  | 3  | 11 | 12 | 13 | 14 | 15 |
| 9  | 10 | 17 | 18 | 19 | 20 | 21 |
| 16 | 17 | 24 | 25 | 26 | 27 | 28 |
| 23 | 24 | 25 | 26 | 27 | 28 | 29 |

```

example :- #include <stdio.h>
            #include <conio.h>

            void main()
            {
                int a = 12, b = 25;

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

                getch();
            }
    
```

output = 29

because,

$$\begin{array}{r}
 00001100 \quad (12) \\
 00011001 \quad (25) \\
 \hline
 00011101 \quad (29) \quad \underline{\text{Ans}}
 \end{array}$$

9 XOR (Exclusive OR) :-

10 It is represented by a symbol ( $\wedge$ ).

11 Two integer expressions are written on  
12 each side of the ( $\wedge$ ) operator.

1 The result of the bitwise exclusive-or  
2 operation is 1 if only one of the  
3 expression has the value as 1, otherwise  
4 the result is always 0.

|   |   |   |   |
|---|---|---|---|
| 0 | 0 | = | 0 |
| 0 | 1 | = | 1 |
| 1 | 0 | = | 1 |
| 1 | 1 | = | 0 |

| S  | M  | T  | W  | T  | F  | S  |
|----|----|----|----|----|----|----|
| 30 | 31 | 4  | 5  | 6  | 7  | 8  |
| 2  | 10 | 11 | 12 | 13 | 14 | 15 |
| 9  | 17 | 18 | 19 | 20 | 21 | 22 |
| 16 | 24 | 25 | 26 | 27 | 28 | 29 |

AUGUST 2020

example :- `#include <stdio.h>`

`#include <conio.h>`

`void main()`

`{`

`int a = 12, b = 25;`

`printf("output is %d", a + b);`

`getch();`

`}`

output :-

output is = 21

because,

00001100 (12)

00011001 (25)

00010101 (21) Answer

9 Complement operator (~) :-

10

11 Bitwise complement operator is an

11

12 unary operator (works on only one

12

1 operand), it changes 1 to 0 and

1

0 to 1. ~~at~~ ~~+~~

2

3 example :-

3

$$35 = 00100011$$

4

4 complement of 35 is :-

5

$$\sim 00100011$$

6

$$11011100 = \underline{\underline{220}}_{ms}$$

Q, write a program for it yourself.