1. **How to find largest of two numbers without using relation operators.**

To find largest of two numbers without using relation operators:

a\*(bool)(a/b)+b\*(bool)(b/a)

The expression a / b will give 1 if a > b and 0 if a < b. Hence, the answer will be of the form either a + 0 or 0 + b depending upon which one is greater.

2. **Difference between switch and if-else .**

* If statement selects the execution of the statements based upon the evaluation of the expression in if statements.
* if-else statement uses multiple statement for multiple choices.
* The switch statements selects the execution of the statement often based on a keyboard commands.
* Switch statement uses single expression for multiple choices.
* Switch statements are good for fixed data values.

3. **What are the datatypes supported by switch in java. Whether it support Boolean, float and double.**

Switch supports byte, short, char, int primitive data types, enumerated types , the String class, and a few special classes that wrap certain primitive types such as Character, Byte, Short and Integer .

Java does not support Boolean, float and double due to imprecise calculation.

**4. What will be the output a&b, a|b, a!b, a^b**

a&b : If both bits are 1, then it gives 1, otherwise 0.

a|b : If either of the bits is 1, it gives 1, else it gives 0.

a^b : If corresponding bits are different, it gives 1, else it gives 0.

a!b :

**5. What are signed integers and unsigned integers?**

* Unsigned can hold a larger positive value, and no negative value.
* Unsigned uses the leading bit as a part of the value, while the signed version uses the left-most-bit to identify if the number is positive or negative.
* Signed integers can hold both positive and negative numbers.

**6. What are shift operators and its uses?**

A shift operator performs bit manipulation on data by shifting the bits of its first operand right or left.

<< - (operator1<<operator2) - Shift bits of operator1 left by distance operato2; fills with zero bits on the right-hand side.

>> - (operator1<<operator2) - Shift bits of operator1 right by distance operator2; fills with highest (sign) bit on the left-hand.

>>> - (operator1>>>operator2) - Shift bits of operator1 right by distance operator2; fills with zero bits on the left-hand side.

**7. Program to find the largest number using ternary operator ?**

class Ternary

{

public static void main(String[] args)

{

int a=14, b=38, c=1, result, temp;

temp = a>b ? a:b;

result = c>temp ? c:temp;

System.out.println("Largest Number is:"+result);

}

}

Output:

Largest Number is: 38

## 8. Check whether an alphabet is vowel or not?

## class Vowel

## {

## public static void main(String[] args)

## {

## char ch = 'A';

## switch (ch)

## {

## case 'a':

## case 'e':

## case 'i':

## case 'o':

## case 'u':

## case 'A':

## case 'E':

## case 'I':

## case 'O':

## case 'U':

## System.out.println(ch + " is vowel");

## break;

## default:

## System.out.println(ch + " is consonant");

## }

## }

## }

## Output:

## A is vowel