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

Use the below formula:

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

1. **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 is good for variable conditions that results into a Boolean.
* The switch statements selects the execution of the statement often based on a keyboard commands.
* Switch statements are good for fixed data values.

1. **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: Character , Byte , Short , and Integer .

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

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

These are binary operator:

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.

1. **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.

1. **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