

Week 4(b)

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Relational Operators

- The operators that are used to specify a relation between two expressions or values are known as relational operators.
- It is used to specify conditions in programs.
- Condition is an expression that is either false (represented by 0) or true (represented by 1) e.g. “temp>25” is a condition.
- Sometimes it is also called as comparison operators.
- Relational expression:
 - it is a type of expression that consists of constants, variables and relational operators. E.g. number>20;
 - Its result will either be true or false.
 - These expressions are used to compare values.

Relational Operator used in Condition

1. “<” stands for “less than”.
2. “>” stands for “greater than”.
3. “<=” stands for “less than or equal to”.
4. “>=” stands for “greater than or equal to”.
5. “==” stands for “equal to”.
6. “!=” stands for “not equal to”.

Increment and Decrement Operator

- Increment operator :
 - The operator that is used to add 1 to the value of a variable is called increment operator.
 - The increment operator is represented by ++ signs.
 - The operator can be used before or after the variable.
 - For example: `a=a+1;` can be written as `a++;`
 - If the increment operator is written before the variable ,it is known as prefixing.
 - If the increment operator is written after the variable ,it is known as postfixing.
 - Prefix and postfix have different effects when they are used in expressions.

Increment and Decrement Operator

- Decrement operator:
 - The operator that is used to subtract 1 from the value of variable is called decrement operator.
 - This operator is represented by – double minus signs.
 - The operator can be used before or after the variable.
 - For example: `a=a-1;` can be written as `a--;`
 - If the decrement operator is written before the variable, it is known as prefixing.
 - If the decrement operator is written after the variable, it is known as postfixing.
 - Prefix and postfix have different effects when they are used in expressions.

Logical Operators

- The logical operators are used to combine relational expression or relational conditions.
- It is also called compound condition or compound expression.
- The output of the logical expression is also in logical form. Its value is either true or false.
- Operators used:
 - && : AND Operator
 - || : OR Operator
 - ! : NOT Operator
- **The && operator**
 - This operator is used to combine two or more relational expression.
 - If all relational expression are true then the output returned by the compound expression
 - If anyone of relational expression in the compound expression is false, the output is false.

Logical Operators

- **The || (OR) Operator**

- In this operator if anyone of the given relational expression is true , the output will be true otherwise the output will be false.
- If all the relational expression in the compound condition are false the output will be false.
- **Order of precedence :**
- The && and || operators can be used in a single compound logical expression. They are evaluated from left to right in the following order: 1. “&&” 2. “||”

- **The ! (Not) Operator**

- This operator is also known as the unary operator . It inverts the value returned by the relational expression or the compound expression .

Assignment 03

- Write a program to declare three variables of integer type and initialize them all by some values. And use prefix increment operator on any one of the variable. Then display sum of all variables.

Assignment 03

- Write any program to use decrement operator (prefix or postfix) on any variable. Design your own program.

Assignment no. 04

- Write a program to find out the largest no. from three given numbers.
- Write a program to implement the “OR” operator.
- Write a program to find out the greater value from two given value.