Using Binary Variables to Represent Logical Conditions in Optimization Models

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Operators
- Operator is symbol, which represents, a particular operation that can be performed on some data.
- Operators are use to programs manipulate mathematical or logical expressions.

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Logical Operators
- Logical operators are used when we want to test more than one condition.
- In expression, which combines more than one condition, is known as logical expression.
- The logical expression return either true or false based on the conditions used.

Operators
- The variables and constants on which the operators act are known as operands.
- Ex : a+b ; where a and b are operands and '+' is a operator.
- Operators are always associated with operands.

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Types of Operators
(1) Arithmetic Operators
(2) Relational Operators
(3) Logical Operators
(4) Assignment Operators
(5) Increment / Decrement
(6) Conditional Operators
(7) Bit wise Operators
(8) Special Operators

Arithmetic Operators
- It is used to perform arithmetic operation like addition, subtraction, division, multiplication and modulus.

Increment-Decrement Operators
- Increment and decrement operators are unary operators because they have only one operand.
- Two special operator (++ and --) called increment and decrement operators.

Relational Operators
- These operators are used to find the relationship between two operands.
- The answers of these operators are always either true or false.
- Relational operators are use for comparison.

Assignment Operators
- Assignment operator is used to assign the value to variable.
- To assign the value to variable following syntax is used.
- Syntax:
  Variable_name = constant/expression

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Operators
- Depending upon number of operands, there are basically three types of operators.
- Binary operator
- Unary Operator
- Ternary Operator

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Conditional operators
- These operators are called for testing some condition because, because it has three operands.
- The conditional operator is used to check condition and execute value by the statement.
- Syntax:
  (condition ? <Statement 1> : <statement 2>)

Bitwise Operators
- These operators are used for testing bits or shifting them left or right.
- These operators are used for testing bits or shifting them left or right.
- Syntax: and (&)
- Syntax: or (|)
- Syntax: Xor exclusive or (^)

Special Operators
- Two types of Operators are in the Special Operators.
- 1. Comma operator (,)
- 2. Sizeof operator

Operators

- *Operator is symbol, which represents, a particular operation that can be performed on some data.*

- *Operators are use in programs calculate mathematical or logical expressions.*

Operators

- *The variables and constants on which the operators act are known as operands.*

- *Ex : a+b ; where a and b are operands and '+' is a operator.*

- *Operators are always associated with operands.*

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Operators

- *Depending upon number of operands there are basically three types of operators.*

- *Binary Operator*
- *Unary Operator*
- *Ternary Operator*

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(1) Binary Operator : The operator, which has two operands ,is known as Binary operator.
Ex : a + b

(2) Unary Operator : The operator, which has one operand, is known as unary operator.
Ex : -a

(3) Ternary Operator : The operator, which has three operands, is known as ternary operator.
Ex : (a>b)5 a :b