Operator Encyclopedia Article

Operator

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In the context of computer science the term operator has two different meanings. The first, and relatively trivial meaning, refers to the person whose responsibility it is to ensure that a computer or computer system is running properly. Tasks associated with the operator's position include preparing storage media and making backup copies of files.

The second meaning of operator is a symbol representative of a specific **action**. Many operators exist in the myriad of available programs and **programming** languages. For example, a plus sign is an operator, which represents addition. The other basic mathematical operators are the subtraction sign and the multiplication and division signs. For example, in the **expression** 5 + *x*, the + is the operator. The 5 and the *x*, the objects that are being manipulated, are called operands.

Mathematical operators are relatively simple in their actions. Other operators allow the manipulation of numbers and text in more complicated ways. A Boolean operator is one example. Boolean operators allow for a TRUE or FALSE determination of information. One type of Boolean operator is known as an OR operator. It can also be called an inclusive OR. This operator returns a **value** of TRUE if either or both of its operands is TRUE. Another type of operator, the exclusive OR, returns a TRUE value only when one of the operands is TRUE. If both operands have the same value, an exclusive OR does not return a TRUE value. Put another way, an inclusive OR can be "this, that, or both", while an exclusive OR means "this or that, but not both."

Another operator is called a relational operator. This type of operator allows one value to be compared to another. Hence, this operator is also known as a comparison operator. An example of a relational operator is the expression $x > 10$ (*x* is greater than 10). This expression will have a value of TRUE if the **variable** *x* is greater than 10. If *x* is less than 10, the expression will be FALSE.

Operators are essential for the construction of expressions, and so are a vital component of programs and programming languages.