

Rules for Overloading Operators

Rules for Overloading Operators:

- Only Existing operators can be overloaded.
- The overloaded operator must have at least one operand is of user defined type.
- We cannot change the basic meaning of an operator. That is to say, we cannot redefine the plus (+) operator to subtract one value from the other.
- Overloaded operators follow the syntax rules of the original operators. They cannot be overridden.

Rules for Overloading Operators:

➤ There are some operators that cannot be overloaded. These are given below:

- | | |
|---------------------------------|---------------|
| ❑ Class member access operators | . |
| ❑ Class member access operators | .* |
| ❑ Scope resolution operator | :: |
| ❑ Size Operator | sizeof |
| ❑ Conditional Operator | ?: |

Rules for Overloading Operators:

➤ We cannot use friend functions to overload certain operators. The list is given below:

❑ Assignment Operator	=
❑ Function call Operator	()
❑ Subscription Operator	[]
❑ Class member access operator	->

➤ However member function can be used to overload the above operators.

Rules for Overloading Operators:

- Unary operators, overloaded by means of a member function, take no explicit arguments and return no explicit values, but, those overloaded by means of a friend function, take one reference argument (the object of the relevant class).
- Binary operator overloaded through a member function take one explicit argument and those which are overloaded through a friend function take two explicit argument.
- When using binary operators overloaded through a member function, the left hand operand must be an object of relevant class.

Rules for Overloading Operators:

- Binary arithmetic operators such as `+`, `-`, `*` and `/` must explicitly return a value. They must not attempt to change their own arguments.