OOP244SCC Quiz 4:

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1- When classifying operators, they fall in three categories. Name the three categories.
2- There are two ways to overload an operator, Name them.
3- Explain what is a unary operator.
4- Explain what is a binary operator.
5- Explain what is a ternary operator.
6- Explain the difference between a member and a helper operator.
7- What are the four parts of the signature of a member operator.
8- What is the general signature of a binary member operator?
9- What is the general signature of a unary pre-fix member operator?
10- What is the general signature of a post-fix member operator?

Having the following class answer the upcoming questions:

```
class Container {
   int m_volume;
   int m_capacity;
public:
   Container();
   Container(int volume, int capacity);
// 11
   _______________ operator_____();
// 12
   _______________ operator_____(____);
// 13
   _______________ operator_____(________  ____________);
// 14
   _______________ _______() _______;
// 16
   _________ _______ operator_____

              (_________ _______________ left, _________ _______________ right);
};
```

Fill in the blank in the questions below and their declaration above:

11- Overload the pre-fix "++" operator to add one to the volume of the Container only if the volume is less than the capacity. This operator returns the reference of the current Container object.

```
_______________ ____________::operator___________(){

   if (_____________________________) {

      ____________________;

   }

   return _____________;
}
```

12- Overload the post-fix "++" operator to add one to the volume of the Container only if the volume is less than the capacity. This operator returns a copy of the current Container object before the addition.

```
_____________________ _________________::operator__________(_____________) {

   _____________________ temp = _____________;

   if (_______________________________) {

      ____________________________;

   }

   return temp;
}
```

13- Overload the "+=" operator to add an integer value to the volume of the Container only if the sum is not greater than the capacity and then return the volume

```
_____________ ___________________::operator__________(___________ _____________) {

   if (_____________________________________________) {

      ____________________________________;
   }
   return m_volume;
}
```

14- Overload the type conversion operator in a Container, to convert it to an integer by returning the volume.

```
_____________________::_________________ _____________()_________ {

   return _____________;
}
```

15- Overload the "+" helper operator by reusing the += member operator. This operator returns a Container that has the sum of the volume of the left Container reference and the right Container reference operands.

```
__________________ operator_____________

            (_____________ ___________________ left, _____________ _________________ right) {

   ___________________ temp = left;

   ____________________________;
   return temp;
}
```

16- Overload the ">" friend helper operator that returns true if the volume of the left Container operand is greater that the right Container operand.

```
   _________ _______ operator_____

           (_________ _____________ left, _________ _____________ right){

   return _____________________________ > ___________________________________;
}
```