

**FAST School of Computing**

**Object Oriented Programming – Spring 2023**

**Cyber Security Department**

**LAB 10**

**Operator Overloading in C++**

## **Learning Outcomes**

In this lab you are expected to learn the following:

- Operator Overloading in Classes (C++)

**Note:** Plagiarism(from some else or internet) in any 1 question will lead to zero marks in the whole lab task.

## **Problem 1:**

Create a class **Money** that represents a money values (**combination of dollars and cents**).

The class has the following member functions.

### **1. Money()** // Default Constructor

Initializes dollars and cents to zero

### **2. Money(int dollar, int cents)** // Parameterized Constructor

Update dollar and cents accordingly

## **Overload the following operators**

### **3. Money operator+(const Money &obj)**

Define an operator + that overloads the standard + math operator and allows one

Money object to be added to another.

### **4. Money operator-(const Money &obj)**

Define an operator - that overloads the standard - math operator and allows one

Money object to be added to another.

### **5. const Money operator=(const Money &obj)**

Define an operator = that overloads the standard = operator and assigns one

Money object to be added to another.

### **6. Void operator++ ()**

Overload pre increment operator.

### **7. Void operator++ (int x=0)**

Overload post increment operator.

### **7. Void operator-- ()**

Overload pre decrement operator.

**8. Void operator-- (const Money& right)**

Overload post decrement operator.

**9. Void operator\*= (const Money& right)**

Overload multiply operator that multiply right object with current object

**10. bool operator!= (const Money& right)**

Overload not equal operator that check whether right object is equal to current object or not.

**11. bool operator > (const Money& right)**

Overload greater than operator that check whether left object is greater than the current object or not.

**12. ostream operator<< (ostream &os,Money& right)**

Overload << operator to display dollar and cents in any money object.

**13. Istream operator>> (istream &in,Money& right)**

Overload >> operator to take input in data members of money object.

**14. ~Money()**

**Submission Details:**

1. Save single .cpp file with your roll no and lab number e.g. i22-XXXX\_Lab10.cpp
2. Take screen shot of running test cases of tasks.
3. Zip the .cpp file and screen shots (Do not create .rar file) with roll no and lab no.  
e.g. i22-XXXX\_Lab10.zip.
4. Submit the zip file on google class room.