



# BABU MADHAV INSTITUTE OF INFORMATION TECHNOLOGY, UTU

## Integrated M.Sc.(IT)

### Semester-II

**060010210 | CC5 Object Oriented Programming**

Practical List: 03		Enrollment No.:	Name:
Sr. No.	Practical Problems		
1.	Write a C++ program to concatenate two string objects using operator overloading.		
2.	Write a C++ program to overload the binary operators +, -, * and /.		
3.	Using operator overloading, write a C++ program to find area of two circles, which have different radius. Also find which area of circle is greater. [To overload use > operator]		
4.	Write a program to create a TIMES class that stores the hours, minutes and seconds. Overload the + operator, so that the user can add two times.		
5.	Write a C++ program by creating a class called COUNTER which can increment and decrement counter variable ++ and - - operator, by returning the objects.		
6.	Write a C++ program to find SUM = 1+2+3+.....+100 using operator.		
7.	Write a C++ perform to create a class WH that stores the weight and height. Overload the + operator using friend function and add the two values.		
8.	Write a C++ program by creating a class called MARKS which has three subjects' marks. Overload the subscript operator [] to display the marks of particular subject.		
9.	Write a C++ program by creating a class named STUDENT which has data members as enro and name. Create appropriate method using << and >> operator function to get and display the details of three students.		
10.	Write a menu driven program that can perform the following functions on strings. (Use overloaded operators where possible). (Do not use predefined string class) <ol style="list-style-type: none"> <li>1. Compare two strings for equality (== operator)</li> <li>2. Check whether first string is smaller than the second (&lt;= operator)</li> <li>3. Copy the string to another</li> <li>4. Extract a character from the string (Overload [])</li> <li>5. Reverse the string</li> <li>6. Concatenate two strings (+ operator)</li> </ol>		
11.	Design classes such that they support the following statements: <pre>Rupee r1, r2; Dollar d1, d2; d1 = r1; // converts rupee (Indian currency) to dollar (US currency) r2 = d2; // converts dollar (US currency) to rupee (Indian currency)</pre>		
12.	Create an application by creating a class for inventory of products stock which maintains item code, price and quantity. Use two classes and convert data of one class to another class using casting operator.		
<b>Objective(s)</b>		To vibrant the concept of class and object, friend function, constructor, operator overloading and type conversion.	
<b>Pre-requisites</b>		Usage of class, object, member and non-member function, friend function and constructors.	
<b>Duration for Completion</b>		8 Hours	



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<b>PEO(s) to be achieved</b>	To provide quality practical skill of tools and technologies to solve industry problems.
<b>PO(s) to be achieved</b>	Ability to use the techniques, skills and modern tools as necessary for software development.
<b>CO(s) to be achieved</b>	Recognize the concept of polymorphism and implement static (compile time) polymorphism in programs by overloading methods and operators.
<b>Solution must contain</b>	Program and output
<b>Nature of submission</b>	Handwritten
<b>References for solving the problem</b>	--
<b>Post Laboratory questions</b>	<ol style="list-style-type: none"><li>1. What is operator overloading?</li><li>2. Why it is required to overload operators?</li><li>3. What is the difference if friend function is used in the place of member functions for overloading binary operator?</li><li>4. How to convert basic data type to class type? Give example.</li><li>5. Which are the operators that can be overloaded?</li><li>6. Which are the operators that cannot be overloaded?</li><li>7. Which are the operators that cannot be overloaded using friend function?</li></ol>
<b>Assessment</b>	
<b>Faculty Signature</b>	
<b>Date</b>	