



II Year-I Semester		T	P	C
		0	3	2
OBJECT ORIENTED PROGRAMMING LAB (RT21054)				

PrerequisiteCourse:

Computer Programming in C

Course Description and Objectives:

- To be familiar with basic techniques of object oriented principles and exception handling using C++
- To be familiar with the concepts like Inheritance, Polymorphism

Course Outcomes:

Upon completion of the course,the student will be able to achieve the following outcomes.

Cos	Course Outcomes	POs
1	Develop C++ programs using OOPs concepts.	6
2	Develop C++ programs using new, delete and ternary operators	6
3	Apply inline, friend and virtual functions in C++ programs for various problems.	7
4	Discuss and develop C++ programs using function and constructor overloading.	8
5	Demonstrate various types of inheritance using C++ programs.	9
6	Develop C++ programs using abstract, virtual class and class template.	6

Syllabus:

1. Write a C++ program illustrating Variable Scope.
2. Write a C++ program illustrating Swap integer values by reference.
3. Write a C++ program illustrating Checking whether the number is even or odd using Ternary operator.
4. Write a C++ program illustrating a program to find the roots of a quadratic equation .Use switch statements to handle different values of the discriminant ($b^2-4*a*c$).
5. Write a C++ program illustrating interactive program to multiply 2 variables after checking the compatibility.
6. Write a C++ program illustrating interactive program for computing the roots of a quadratic equation by handling all possible cases.Use streams to perform I/O operations.
7. Write a C++ program illustrating to sort integer numbers.
8. Write a C++ program illustrating factorial using recursion.
9. Write a C++ program illustrating pass by value, pass by reference, pass by address.
10. Write a C++ program illustrating Function overloading.
11. Write a C++ program illustrating an interactive program for swapping integer, real, and character type variables without using function overloading .Write the same program by using function overloading features and compare the same with its C counterpart.
12. Write a C++ program illustrating inline functions.
13. Write a C++ program illustrating Friend function.
14. Write a C++ program illustrating Exception handling.
15. Write a C++ program illustrating Function template.
16. Write a C++ program illustrating Overloading increment,decrement, binary+&<< operator.
17. Write a C++ program illustrating Virtual function.

18. Write a C++ program illustrating an interactive program to process complex numbers .It has to Perform addition,subtraction, multiplication, and division of complex numbers.print results in x+iy form. Create a class for the complex number representation.

19. Write a C++ program illustrating user defined string processing functions using pointers (string length, string copy,string concatenation)

20. Write a C++ program illustrating Constructor overloading (Both parameterised and default).

21. Write a C++ program illustrating Copy constructor.

22. Write a C++ program illustrating access data members & member functions using 'THIS' pointer.

23. Write a C++ program illustrating for overloading ++ operator to increment data.

24. Write a C++ program illustrating overloading of new and delete operator.

25. Write a C++ program illustrating Abstract classes.

26. Write a C++ program illustrating Inheritance (Multiple, Multilevel, Hybrid).

27. Write a C++ program illustrating Virtual classes & virtual functions.

28. Write a C++ program illustrating overloading function template.

29. Write a C++ program illustrating Class template.