

UCCC & SPBCBA & SDHG COLLEGE OF BCA AND IT

CLASS: S.Y.B.C.A.(SEM-III)

SUBJECT: Practical-(304) OOPs and Data Structures

A.Y. 2025-26

Journal

Sr. No.	Particular	Page No.	Sign.
1	Write a program to create class rectangle with length, width and, height data member of class and find the area and volume of rectangle using constructor and destructor. (use default, parametrized and copy constructor)		
2	Write a program to create class Customer that contains Customer Id, Name, Address as data member and add customer and display_customer as member function. A derived class Order is created from the class Customer with publicly inherited. The derived class contains Price1, Price2, Price3 as Prices of three Products and input_prices and display_result as member functions. Create an array of object of the Order class and display the result of 5 customers.		
3	Write a program to Create a class employee having data members emp_id, ename and the member functions to perform the following task (a) Input the employee details (b) Display the employee details Create the class calculate which contain the information of HRA, DA, PF, Basic Salary. Member functions are getsalary() which return salary and display() which display the employees name, emp_id and basic salary. Create another class salary which calculate the net salary and the member functions are getsalary()which return salary and display() which display the emp_name, emp_id, basic and net salary. (Use the concept of Multilevel inheritance)		
4	Write a program to create three class; Vehicle, Twowheeler and Fourwheeler. In Vehicle class data members are company name, and methods are input and display. Twowheeler inherit the properties of Vehical class and data members are name, type(gear,non gear) ; and methods are input and display. FourWheeler class inherit the properties of Vehical and it's data members are name, model no, fuel type; and methods are input and display. Use overriding techniques for input and display methods.		
5	Write a program to create a class "word" which stores a string value. Overload +, == for concatenation and comparison operation respectively.		
6	Write a program to create an event class, create dynamic objects of event class, and release the memory of the created object before program terminates.		

7	Write a C++ program to demonstrate runtime polymorphism using inheritance and virtual functions. • Create a base class Shape with a virtual function calculateArea(). • Derive two classes from Shape: Circle and Square. • Override the calculateArea() function in both derived classes to compute and display the area of the respective shape. • In the main() function, use a base class pointer to call the calculateArea() function for both a Circle and a Square object. • Show how dynamic binding works using this approach.		
8	Write a program to implement stack with its operations.		
9	Write a program to implement infix to prefix conversion.		
10	Write a program to implement simple queue with its operations.		

INSTRUCTIONS:

- 1) Use appropriate object-oriented concepts to implement programs.
- 2) Journal submission date will announce soon.

Handwritten signature and date:
 9/7/25