OBJECT ORIENTED PROGRAMMING LAB

(20MCA132)

LAB RECORD

Submitted in partial fulfilment of the requirements for the award of the degree of Master of Computer Applications of A P J Abdul Kalam Technological University, Kerala.

Submitted by:

SREYAS SATHEESH (SJC23MCA-2053)

MASTER OF COMPUTER APPLICATIONS

ST.JOSEPH'S COLLEGE OF ENGINEERING AND TECHNOLOGY, PALAI

CHOONDACHERRY P.O, KOTTAYAM

KERALA

May 2024

ST. JOSEPH' S COLLEGE OF ENGINEERING AND TECHNOLOGY, PALAI

(An ISO 9001: 2015 Certified College)

CHOONDACHERRY P.O, KOTTAYAM, KERALA

CERTIFICATE

This is to certify that the 20MCA132-Object Oriented Programming Lab record submitted by **Sreyas Satheesh**, student of **Second** semester **MCA** at **ST. JOSEPH'S COLLEGE OF ENGINEERING AND TECHNOLOGY, PALAI** in partial fulfilment for the award of Master of Computer Applications is a bonafide record of the lab work carried out by him under our guidance and supervision. This record in any form has not been submitted to any other University or Institute for any purpose.

Dr. Rahul Shajan
Associate Professor
(Head, Department of
Computer Application**)**

Mr. Akhil Sekharan
Assistant Professor,
Dept. of Computer Application
(Faculty In-Charge)

Submitted for the End Semester Examination held on ⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯

Examiner 1   **Examiner 2**

DECLARATION

I Sreyas Satheesh , do hereby declare that the 20MCA132- Object Oriented Programming Lab is a record of work carried out under the guidance of Mr. Akhil Sekharan, Department of Computer Applications, SJCET, Palai as per the requirement of the curriculum of Master of Computer Applications Programme of A P J Abdul Kalam Technology University, Thiruvananthapuram. Further, I also declare that this record has not been submitted, full or part thereof, in any University / Institution for the award of any Degree / Diploma.

Place: Choondacherry   SREYAS SATHEESH

Date: (SJC23MCA-2053)

DEPARTMENT OF COMPUTER APPLICATIONS

VISION

To emerge as a center of excellence in the field of computer education with distinct identity and quality in all areas of its activities and develop a new generation of computer professionals with proper leadership, commitment and moral values.

MISSION

● Provide quality education in Computer Applications and bridge the gap between the academia and industry.
● Promoting innovation research and leadership in areas relevant to the socio-economic progress of the country.
● Develop intellectual curiosity and a commitment to lifelong learning in students, with societal and environmental concerns.

COURSE OUTCOMES

After the completion of the course 20MCA132- Object Oriented Programming Lab the student will be able to :

CO 1	Understand object-oriented concepts and design classes and objects to solve problems.
CO 2	Implement arrays and strings.
CO 3	Implement object-oriented concepts like inheritance, overloading and interfaces.
CO 4	Implement packages, exception handling, multithreading, and generic programming. Use java.util package and Collection framework.
CO 5	Develop applications to handle events using applets.
CO 6	Develop applications using files and networking concepts.

CONTENT

11	Create a class 'Employee' with data members and constructors to initialize the data members. Create another class 'Teacher' that inherit the properties of class employee and contain its own data members and constructors to initialize these data members and include display function to display all the data members. Use array of objects to display details of N teachers.	22	06/04/2024	
12	Create a class 'Person' with data members Age and a constructor to initialize the data members and another class 'Employee' that inherits the properties of class Person and contains its own data members Create another class 'Teacher' that inherits the properties of class Employee and contains its own data members and contain constructors and methods to display the data members. Use array of objects to display details of N teachers.	25	06/04/2024	
13	Write a program has class Publisher, Book, Literature and Fiction. Read the information and print the details of books from either the category, using inheritance.	29	06/04/2024	
14	Create classes Student and Sports. Create another class Result inherited from Student and Sports. Display the academic and sports score of a student.	34	08/04/2024	

15	Create an interface having prototypes of functions area() and perimeter(). Create two classes Circle and Rectangle which implements the above interface. Create a menu driven program to find area and perimeter of objects.	36	08/04/2024	
16	Prepare bill with the given format using calculate method from interface.	39	08/04/2024	
17	Create a Graphics package that has classes and interfaces for figures Rectangle, Triangle, Square and Circle. Test the package by finding the area of these figures.	43	15/04/2024	
18	Create an Arithmetic package that has classes and interfaces for the 4 basic arithmetic operations. Test the package by implementing all operations on two given numbers	46	15/04/2024	
19	Write a user defined exception class to authenticate the user name and password.	49	15/04/2024	
20	Find the average of N positive integers, raising a user defined exception for each negative input.	51	15/04/2024	
21	Program to remove all the elements from a linked list	53	15/04/2024	
22	Program to remove an object from the Stack when the position is passed as parameter	56	15/04/2024	
23	Write a Java program to compare two hash set	59	15/04/2024	
24	Program to draw Circle, Rectangle, Line in Applet.	61	08/05/2024	

25	Implement a simple calculator using AWT components.	62	08/05/2024	
26	Program to list the sub directories and files in a given directory and also search for a file name.	65	08/05/2024	
27	Write a program to write to a file, then read from the file and display the contents on the console.	68	08/05/2024	
28	Write a program to copy one file to another.	70	08/05/2024	