

K. J. Somaiya College of Engineering, Mumbai-77
(Autonomous College Affiliated to University of Mumbai)
Department of Computer Engineering

Subject: Object Oriented Programming Methodology (OOPM)

Term: ODD(2018-2019)

Class/Semester: SY/III

Course Outcome	After successful completion of the course students should be able to
CO1	Understand the basic object oriented concept.
CO2	Solve problems using Java basic constructs (like if else statement, control structures, and data types, array, string, vectors, packages, collection class).
CO3	Implement scenarios using object oriented concepts(Drawing class diagram, relationship between classes)
CO4	Demonstrate programs on exceptions, multithreading and applets.

List of Experiments

Sr. No.	Experiment Title	Co Mapping
1	Write a recursive function 'gcd' to find the gcd of the given two numbers. Use this in main to find the gcd and LCM two given numbers. (Scanner class).	2
2	Write a program which stores information about n players in a two dimensional array. The array should contain number of rows equal to number of players. Each row will have number of columns equal to number of matches played by that player which may vary from player to player. The program should display player number (index +1), runs scored in all matches and its batting average as output. (It is expected to assign columns to each row dynamically after getting value from user).	2
3	Draw class Diagram for the Airline Reservation system. Clearly show attributes multiplicities and aggregations/compositions/Association between classes in the class diagram. And show the implementation of aggregation, association and composition between the classes.	3
4	Write a program to check if two Strings are anagrams of each other (Make use of String Functions) (Example of Anagram String: Input String1 : "word" Input String 2: "orwd" Output: String "word" and String "orwd" are anagram Strings. (Assume the Strings case sensitive) Input String1 : "cc" Input String 2: "cccc" Output: String "cc" and String "cccc" are not anagram Strings.)	2
5	User Defined Exception Write a program which accepts marks of a student (between 0 to 100) and checks whether it is within the range or not. If it is within the range then it displays "marks entered successfully", if not then it throws the exception of user defined class "MarksOutOfRangeException". The class should contain appropriate toString method to describe object the class with the out of range marks entered by the user.	4

6	Vector Implement a menu driven program for the following: <ol style="list-style-type: none"> 1. Accepts a shopping list from the command line and stores them in a vector. 2. To delete an specific item (given by user) in the vector 3. Add item at the end of the vector 4. Add item at specific location 5. Print the contents of vector 	2
7	Multi-threaded Programming Write Java Program that implements a multithread application that has three threads. First thread generates random integer for every second and if the value is even, second thread computes the square of number and prints. If the value is odd, the third thread will print the value of cube of number.	4
8	In an array 1-100 many numbers are duplicates. Use hash Map. Given two arrays 1, 2,3,4,5 and 2, 3,1,0,5. Find which element is not present in the second array. Use hash Table.	2
9	Packages Create a package 'myPack' which contains a class Trigonometry. The class contains following static methods. i) sine() –accepts degree (0,30,60,90) ii) cos() - accepts degree (0,30,60,90) iii)tan()- accepts degree (0,30,60,90) iv)cot()-- accepts degree (0,30,60,90) v) cosec()-- accepts degree (0,30,60,90) vi)sec()-- accepts degree (0,30,60,90) (Do not make use of inbuilt functions. Use the functions of user defined class Trigonometry by importing mypack.)	4
10	Applet Develop an applet that receives an integer in one text field and computes its factorial value and returns it in another text field, when the button named "compute" is clicked	4
11	Mini project in Java with database connectivity.(GUI designing using AWT).	All COs

Subject In-charge:

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