OBJECT ORIENTED PROGRAMMING USING JAVA LAB

II B. TECH- II SEMESTER

Course Code	Category	Hours / Week			Credits	Maximum Marks		
		L	T	P	C	CIE	SEE	Total
A6IT03	ESC	-	-	3	1.5	40	60	100
Contact Classes-Nil	Tutorial Classes-Nil	Practical Classes-36			Total Classes-36			

COURSE OUTCOMES

At the end of the course, student will be able to:

1. Implement Object Oriented programming concept using basic syntaxes of control Structures, strings and function for developing skills of logic building activity.
2. Understand the use of different exception handling mechanisms and concept of multithreading for robust and efficient application development.
3. Understand and implement concepts on file streams and operations in java programming for a a given application programs.
4. Develop java application to interact with database by using relevant software component (JDBC Driver).

LIST OF EXPERIMENTS

WEEK - 1	JAVABASICS

a. Write a java program that prints all real solutions to the quadratic equation ax2+bx+c=0. Read in a, b, c and use the quadratic formula.

b. The Fibonacci sequence is defined by the following rule. The first two values in the sequence are 1 and 1. Every subsequent value is the sum of the two values preceding it. Write a java program that uses both recursive and non recursive functions.

WEEK - 2	ARRAYS

a. Write a java program to sort given list of integers in ascending order.

b. Write a java program to multiply two given matrices.	
WEEK - 3	**STRINGS**
a. Write a java program to check whether a given string is palindrome. b. Write a java program for sorting a given list of names in ascending order.	
WEEK - 4	**OVERLOADING & OVERRIDING**
a. Write a java program to implement method overloading and constructors overloading. b. Write a java program to implement method overriding.	

WEEK - 5	INHERITANCE

Write a java program to create an abstract class named Shape that contains two integers and an empty method named print Area (). Provide three classes named Rectangle, Triangle and Circle such that each one of the classes extends the class Shape. Each one of the classes contains only the method print Area() that prints the area of the given shape.

WEEK - 6	INTERFACES

a. Write a program to create interface A in this interface we have two method meth1 and meth2. Implements this interface in another class named MyClass.

b. Write a program to give example for multiple inheritance in Java.

WEEK - 7	EXCEPTION HANDLING

Write a program that reads two numbers Num1 and Num2. If Num1 and Num2 were not integers, the program would throw a Number Format Exception. If Num2 were zero, the program would throw an Arithmetic Exception Display the exception.

WEEK - 8	I/O STREAMS

a. Write a java program that reads a file name from the user, and then displays information about whether the file exists, whether the file is readable, whether the file is writable, the type of file and the

length of the file in bytes.

WEEK - 9	MULTI THREADING

Write a java program that implements a multi-thread application that has three threads. First thread generates random integer very 1 second and if the value is even, second thread computes the square of the number and prints. If the value is odd, the third thread will print the value of cube of the number

WEEK - 10	GENERICS

a. Write a Java program to swap two different types of data using Generics.

b. Write a Java program to find maximum and minimum of two different types of data using Generics.

WEEK - 11	COLLECTIONS

Create a linked list of elements.

a. Delete a given element from the above list.

b. Display the contents of the list after deletion

WEEK - 12	CONNECTING TO DATABASE

Write a java program that connects to a database using JDBC and does add, delete, modify and retrieve operations.

TEXT BOOKS

1. P.J.Dietel and H.M.Dietel , —Java How to programll, Prentice Hall, 6th Edition, 2005.
2. P.Radha Krishna , —Object Oriented programming through Javall, CRC Press, 1st Edition, 2007.
3. S.Malhotra and S. Choudhary, —Programming in Javall, Oxford University Press, 2nd Edition, 2014.