II B.Tech - II Semester
(17CS411) JAVA PROGRAMMING LAB

Int. Marks	Ext. Marks	Total Marks	L	T	P	C
60	40	100	-	-	3	2

Pre-Requisites: Fundamentals of computing and programming and OOP using C++

Exercise - 1 (Basics)
a). Write a JAVA program to display default value of all primitive data type of JAVA
b). Write a java program that display the roots of a quadratic equation ax2+bx=0. Calculate the discriminate D and basing on value of D, describe the nature of root.
c). Five Bikers Compete in a race such that they drive at a constant speed which may or may not be the same as the other. To qualify the race, the speed of a racer must be more than the average speed of all 5 racers. Take as input the speed of each racer and print back the speed of qualifying racers.
d) Write a case study on public static void main(250 words)

Exercise - 2 (Operations, Expressions, Control-flow, Strings)
a). Write a JAVA program to search for an element in a given list of elements using binary search mechanism.
b). Write a JAVA program to sort for an element in a given list of elements using bubble sort
(c). Write a JAVA program to sort for an element in a given list of elements using merge sort.
(d) Write a JAVA program using StringBufferto delete, remove character.

Exercise – 3
(Class, Objects) a). Write a JAVA program to implement class mechanism. – Create a class, methods and invoke them inside main method. b). Write a JAVA program to implement constructor.

Exercise - 4 (Methods)
a). Write a JAVA program to implement constructor overloading.
b). Write a JAVA program implement method overloading.

Exercise - 5 (Inheritance)
a). Write a JAVA program to implement Single Inheritance
b). Write a JAVA program to implement multi level Inheritance
c). Write a java program for abstract class to find areas of different shapes

Exercise - 6 (Inheritance - Continued)
a). Write a JAVA program give example for “super” keyword.
b). Write a JAVA program to implement Interface. What kind of Inheritance can be achieved
Exercise - 7 (Exception)
a).Write a JAVA program that describes exception handling mechanism
b).Write a JAVA program Illustrating Multiple catch clauses

Exercise – 8 (Runtime Polymorphism)
a). Write a JAVA program that implements Runtime polymorphism
b). Write a Case study on run time polymorphism, inheritance that implements in above problem

Exercise – 9 (User defined Exception)
a). Write a JAVA program for creation of Illustrating throw
b). Write a JAVA program for creation of Illustrating finally
c). Write a JAVA program for creation of Java Built-in Exceptions
d).Write a JAVA program for creation of User Defined Exception

Exercise – 10 (Threads)
a). Write a JAVA program that creates threads by extending Thread class .First thread display "Good Morning "every 1 sec, the second thread displays "Hello "every 2 seconds and the third display "Welcome" every 3 seconds ,(Repeat the same by implementing Runnable)
b). Write a program illustrating isAlive and join () c). Write a Program illustrating Daemon Threads.

Exercise - 11 (Threads continuity)
a).Write a JAVA program Producer Consumer Problem
b).Write a case study on thread Synchronization after solving the above producer consumer problem

Exercise – 12 (Packages)
a). Write a JAVA program illustrate class path
b). Write a case study on including in class path in your os environment of your package.
c). Write a JAVA program that import and use the defined your package in the previous Problem

Exercise - 13 (Applet)
a).Write a JAVA program to paint like paint brush in applet.
b) Write a JAVA program to display analog clock using Applet.
c). Write a JAVA program to create different shapes and fill colors using Applet.

Exercise - 14 (Event Handling)
a).Write a JAVA program that display the x and y position of the cursor movement using Mouse. b).Write a JAVA program that identifies key-up key-down event user entering text in a Applet.

Exercise - 15 (AWT)
a).Write a JAVA programto build a Calculator in AWT
b). Write a JAVA program to display the digital watch in AWT.

MINI PROJECT LIST
1. Quiz Maker
2. Build a graphically interactive Calculator
3. Producer Consumer Problem Simulator
4. Build a Slam book application using files as database
5. Build a student information management application using files as database
6. Build an Email administration application using files as database
7. Paint like application using mouse handling
8. Text Editor
9. Simple banking application using files as database
10. REC Aggregate Calculator
11. REC Semester grade point Calculator

Course Outcomes:

CO-1	Implement java programs using basic concepts, classes and objects.	L3
CO-2	Apply the concepts of Inheritance, Threads and Exceptions in java programs.	L3
CO-3	Develop java programs using applets and AWT.	L3

CO-PO/PSO Mapping Matrix:

	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11	PO-12	PSO-1	PSO-2	PSO-3
CO-1	-	2	3	3	1	-	-	-	1	-	-	-	-	1	-
CO-2	-	2	3	3	1	-	-	-	1	-	-	-	-	1	-
CO-3	-	2	3	3	1	-	-	-	1	-	-	-	-	1	-