

**JAVA PROGRAMMING LAB**

**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  $ax^2+bx=0$ . 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 StringBuffer to 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 (Swings)**

- a). Write a JAVA program to build a Calculator in Swings
- b). Write a JAVA program to display the digital watch in swing tutorial.

**Exercise – 16 (Swings - Continued)**

- a). Write a JAVA program that to create a single ball bouncing inside a JPanel.
- b). Write a JAVA program JTree as displaying a real tree upside down