II Year I Semester   **L   T   P   C**
Code: 17CS314   **0   0   3   2**

JAVA PROGRAMMING LAB

Exercise - 1 (Basics)
1. Write a JAVA program to display default value of all primitive data type of JAVA
2. 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.
3. 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.
4. Write a case study on public static void main(250 words)

Exercise - 2 (Operations, Expressions, Control-flow, Strings)
1. Write a JAVA program to search for an element in a given list of elements using binary search mechanism.
2. Write a JAVA program to sort for an element in a given list of elements using bubble sort
3. Write a JAVA program to sort for an element in a given list of elements using merge sort.
4. Write a JAVA program using String Bufferto delete, remove character.

Exercise - 3 (Class, Objects)
1. 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)
1. Write a JAVA program to implement constructor overloading.
2. Write a JAVA program implement method overloading.

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

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

Exercise – 8 (Runtime Polymorphism)
1. Write a JAVA program that implements Runtime polymorphism

2. Write a Case study on run time polymorphism, inheritance that is implemented in above problem.

Exercise – 9 (User defined Exception)
1. Write a JAVA program for creation of Illustrating throw
2. Write a JAVA program for creation of Illustrating finally
3. Write a JAVA program for creation of Java Built-in Exceptions
4. Write a JAVA program for creation of User Defined Exception

Exercise – 10 (Threads)
1. 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)
2. Write a program illustrating is Alive and join () c). Write a Program illustrating Daemon Threads.

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

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

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

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

Exercise - 15 (Swings)
1. Write a JAVA program to build a Calculator in Swings
2. Write a JAVA program to display the digital watch in swing tutorial.

Exercise – 16 (Swings - Continued)
1. Write a JAVA program that to create a single ball bouncing inside a JPanel.
2. Write a JAVA program JTree as displaying a real tree upside down