**Lab Assignment-2 Submission date: 25/02/2019**

1. WAP to check if a number is prime or not, by taking the number as input from the keyboard
2. WAP to find the sum of any number of integers interactively, i.e., entering every number from the keyboard, whereas the total number of integers is given as a command line argument
3. Write a program to demonstrate the concept of boxing and unboxing.
4. Write a program to show the use of super keyword.
5. WAP to show use of Interfaces: Figure Interface. Classes Circle and Triangle. Method to implement: calcArea().
6. Create an abstract base class called Shape. It should contain 2 methods getcoord() and showCoord () to accept X and Y coordinates and to display the same respectively. Create a sub class called Rect. It should also contain a method to display the length and breadth of the rectangle called showCoord(). In main method, execute the showCoord() method of the Rect class by applying the dynamic method dispatch concept.
7. Create a multi-file program where in one file a string message is taken as input from the user and the function to display the message on the screen is given in another file (make use of Scanner package in this program).
8. Write a program to create a multilevel package and also creates a reusable class to generate Fibonacci series, where the function to generate Fibonacii series is given in a different file belonging to the same package.
9. Write a program that creates and illustrates different levels of protection in classes/subclasses belonging to same package or different packages
10. Declare a class called Book having book title & author name as members. Create a sub-class of it, called BookDetails having price & current stock of book as members. Create an array for storing details of n books. Define methods to achieve following: - Initialization of members - To query availability of a book by author name / book title - To update stock of a book on purchase and sell Define method main to show usage of above methods.
11. The abstract vegetable class has three subclasses named Potato, Brinjal and Tomato. Write a java prog. That demonstrates how to establish this class hierarchy. Declare one instance variable of type String that indicates the color of a vegetable. Create and display instances of these objects. Override the toString() method of object to return a string with the name of vegetable and its color.
12. Write a program “DivideByZero” that takes two numbers a and b as input, computes a/b, and invokes Arithmetic Exception to generate a message when the denominator is zero.
13. Write a program to show the use of nested try statements that emphasizes the sequence of checking for catch handler statements.
14. Write a program to create your own exception types to handle situation specific to your application (Hint: Define a subclass of Exception which itself is a subclass of Throwable).