Enterprise Java Lab Assignment

Unit-1

Note: 1. Inputs must be dynamic in nature for all the programs

2. Use any editor or tool for executing the following programs

1. Create a class named **Lamp** with an instance variable **isOn** and two methods **turnOn()** and **turnoff()**. Inside the main class, create two objects **led** and **halogen** of the **Lamp** class. Write the suitable code to turnOn and turnoff the lamps and display True if the Lamp is turned on and False if the lamp is turned off.
2. Execute the above program by creating the **Lamp** objects inside the **Lamp** class itself
3. Write a program to demonstrate the method of creating and using anonymous object.
4. Create a class **Dog** with instance variables **name, breed, age** and **color**. Define a parameterized constructor to initialize the instance variables. Names of Parameters of the constructor must be same as the names of instance variables. Maintain separate methods to return the breed, age, name and color of a Dog.
5. Write a java program to demonstrate Widening Casting and Narrowing Casting.
6. Write a Java program to add two distances using class. Read distances in **feet** and **inches**. Use the concept of passing objects as parameters and returning object for the method which calculates sum.
7. Write a program to demonstrate IS-A relationship between (**Mango, Orange, Papaya**) and **Fruits**.
8. Create a base class **Bicycle** with public instance variables **gear** and **speed**. Initialize the instance variables using a parameterized constructor. Maintain a method **applyBreak()** to slowdown the bicycle speed by the argument passed as a parameter. A method **speedUp()** must increase the speed of a bicycle by the argument passed as a parameter. Whenever the bicycle gains its speed gear should increase automatically and when the bicycle slows down, gear should decrement automatically.
9. Write a program to demonstrate constructor chaining.
10. Perform method overloading by creating **shape** class for calculating area of any four shapes.
11. Write a program to Show the multilevel and hierarchical inheritance for a student class.
12. Write a program to demonstrate the uses of **this** reference.
13. Create the following class to perform banking operations.
    Class Name: bank
    Data Members: cust_name,acc_no
    Methods:Deposit(),withdraw(double,double),display(float), Creat_acc()
    Initialize the data members of the given class with default and parameterized constructors.
14. Write method overriding program for calculating the salary of different types of employee in a bank class.