

Course Name: Object-Oriented Programming Using JAVA

Course Code: 22CSE136

Lab programs List for Lab internals

Module 1

1. Create a class EvenOdd with main method in it to find whether the number is even or odd. Note : All Inputs will be given as command line arguments.
2. Write a class NumberPalindrome with a public method isNumberPalindrome that takes one parameter number of type int. Write a code to check whether the given number is palindrome or not.
3. Create a class called BitwiseXOR with main method in it to perform BitwiseXOR operation by taking two input numbers.
4. Write a Java program to find minimum and maximum numbers in a given array.
5. Write a Java program to sort a list of names in ascending order.

Module 2

1. Write a Java program to achieve concept of Method Overriding
2. Write a Java program to implement a Constructor
3. Write a Java program Calculating resistance using two resistor objects.
4. Write the code to find area of a rectangle and triangle respectively.
5. Write a Java program to illustrate Preventing inheritance using final keyword

Module 3

1. Write a Java program that takes the string from the user. The program attempts to convert the user-given string to an integer, displays the twice of the integer and handles a NumberFormatException if the string is not a valid integer.
2. Write a Java program that takes the age as input from the user, creates an exception called InvalidAgeException, and throws it when the age is not within a valid range (i.e., between 0 and 150 years).
3. define an interface called Shape with two abstract methods: void getData() and void Display().
Implement a class called Rectangle that implements the Shape interface. This class should have to:
Implement the getData method to read the length and width of the rectangle from the user.
Implement the Display method to calculate and display the area of the rectangle.
Implement a class called Circle that also implements the Shape interface. This class should have to:
Implement the getData method to read the radius of the circle from the user.
Implement the Display method to calculate and display the area of the circle.
4. Write a Java program to find the area of the Rectangle and circle. Use Interface with the following instructions.
Create interface Shape and declare functions getData() and Display()
Implement Shape in Rectangle and Circle and override the function appropriately.
5. Write a Java Program to Create an interface Drawable with a method draw() that prints "Drawing a square."

Module 4

1. Create multiple threads to access the contents of a stack. Synchronize thread to prevent simultaneous access to push and pop operations.
2. Write a Java program on creating multiple threads.
3. Create a Java program that utilizes multi-threading to generate multiplication tables.
4. Define two threads such that one thread should print even numbers and another thread should print odd numbers.
5. Write a Java program that correctly implements the producer – consumer problem using the concept of inter thread communication.