

## JAVA PROGRAMMING LAB MANUAL

### WEEK:1

1. Write a Java program that prints all real solutions to the quadratic equation  $ax^2 + bx + c = 0$ . Read in a, b, c and use the quadratic formula. If the discriminant  $b^2 - 4ac$  is negative, display a message stating that there are no real solutions.
2. The Fibonacci sequence is defined by the following rule. The first two values in the sequence are 1 and 1. Every subsequent value is the sum of the two values preceding it. Write a java program that uses both recursive and non recursive functions to print the nth value in the fibonacci sequence.
3. Write a Java program that prompts the user for an integer and then prints out all prime numbers up to that integer.
4. Write a Java program that prints the following pattern
  1. \*\*\*\*\*
  2. \*\*\*\*\*
  3. \*\*\*\*\*
  4. \*\*\*\*\*
  5. \*\*\*\*\*
  6. \*\*\*\*\*
5. Write a Java program that calculate mathematical constant 'e' using the formula  $e = 1 + 1/2! + 1/3! + \dots$  up to 5 .

### WEEK:2

1. Write a java program to calculate gross salary & net salary taking the following data.  
Input:empno,empname,basic  
Process:  
DA=50%of basic  
HRA=25%of basic  
CCA=Rs240/-  
PF=10%of basic  
PT=Rs100/-
2. Write a Java program to sort the elements using bubble sort.
3. Write a Java program to search an element using binary search.
4. Write a Java program multiplication of two 3X3 matrices.

### WEEK:3

1. Write a Java program that displays area of different Figures(Rectangle,Square,Triangle) using the method overloading.
2. Write a Java program that displays that displays the time in different formats in the form of HH,MM,SS using constructor Overloading. .
3. Write a Java program that counts the number of objects created by using static variable.

## WEEK: 4

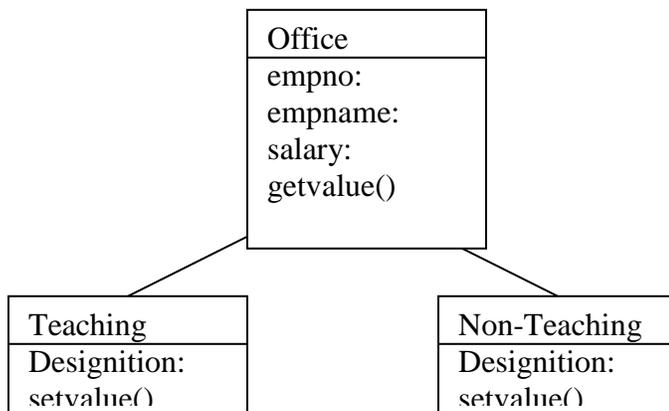
1. Write a Java program that reverses a given String.
2. Write a Java program that checks whether a given string is a palindrome or not.
3. Write a Java program to count the frequency of words, characters in the given line of text.
4. Write a Java program for sorting a given list of names in ascending order.
5. Write a Java program that reads a line of integers separated by commas and then displays each integer and find the sum of the integers (using String Tokenizer)

## WEEK:5

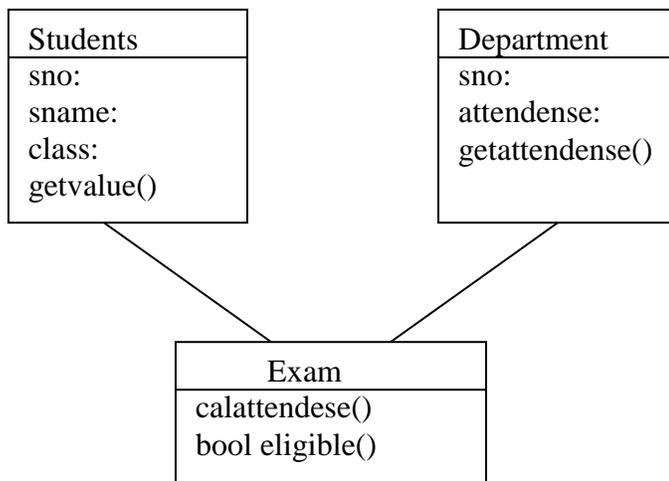
1. Write a Java program that reads a file name from the user then displays information about whether that file exists, file is writable, the type of file and length of the file in bytes.
2. Write a Java program that reads a file and displays the file on the screen with a line number before each line.
3. Write a Java program that reads a file and displays the no of lines and words in that file.
4. Write a Java program that reads to copy source text. File and display on the console

## WEEK:6

1. Write a java program that implements educational hierarchy using inheritance.



2. Write a program to identify the accessibility of a variable by means of different access specifiers within and outside package.
3. Write a java program to find the details of the students eligible to enroll for the examination ( Students, Department combinedly give the eligibility criteria for the enrollment class) using interfaces



### **WEEK:7**

1. Write a java program that implements Array Index out of bound Exception using built-in-Exception.
2. Write a java program that implements bank transactions using user defined exception .
3. Write a java program to identify the significance of finally block in handling exceptions.
4. Write a java program to generate multiple threads of creating clock pulses.(using runnable interface)
5. Write a java program to identify the use of synchronized blocks to synchronized methods.

### **WEEK:8**

1. Write an applet to display a simple message on a colored background.
2. Write an applet to display a moving banner showing the status of it.
3. Write an applet to draw a simple and beautiful landscape.

### **WEEK:9**

1. Write a java program to demonstrate key events by using Delegation event model.
2. Write a java program to implement mouse events like mouse pressed, mouse released and mouse moved by means of adapter classes.
3. Write a java program to demonstrate window events on frame.

### **WEEK:10**

1. Write an applet that computes the payment of a loan based on the amount of the loan, interest rate and the number of months.
2. Write an applet to perform the 4 basic arithmetic operations as buttons in a form accepting two integers in textboxes and display their result.
3. Write a java program to design a registration form for creating a new eMail account.

### **WEEK:11**

1. Write a java program to design the page authenticating user name and password by using SWING.
2. Write a java program to design a calculator by using Grid Layout.

### **WEEK:12**

1. Write a java program that implements a simple client server application. The client sends data to server. The server receives the data uses it to produce a result and then sends the result back to the client then the client displays the result on the console.