

# Practical List Java Programming - 2021

## PRACTICAL 1

- 1) Wap to print Hello World and your name in a new line
- 2) Wap to use primitive datatypes in Java
- 3) Wap to use arithmetic operators in Java
- 4) Write a program to use logical & bitwise operators in Java
- 5) Wap to use relational operators
- 6) Wap to use ternary operator & show the short circuit operators working

## PRACTICAL 2

- 1) WAP to display a following pattern.
- 2) Convert decimal number to binary number
- 3) To compute the sum of digits of an integer
- 4) WAP to reverse a string
- 5) WAP to count letters spaces number and other special characters
- 6) WAP to check palindrome of a string

## PRACTICAL 3

- 1) Program to create and display unique 3 digits number using 1,2,3,4. Also count how many 3 digits no.s are there
- 2) WAP to print ASCII value of given char and check using function whether it is no., alphabet, space or special chars
- 3) WAP to multi-dimensional array with second dimension of sizes 3,5,2,4 and iterate to point its value
- 4) WAP to sort an array using minimum value comparison
- 5) WAP to implement StringBuffer to increase its capacity and modify it until user insists.
- 6) WAP to search a value in m\*n matrix

## PRACTICAL 4

- 1) WAP to implement constructor, method overloading for class student for atleast 5 attributes and 3-5 methods
- 2) show recursion in java for Fibonacci sequence
- 3) create a class to take a statement as i/p and count (i) vowels of each type in it (ii) words that start with capital letter. Continue till user types "quit"
- 4) create an outer class employee and inner class (non-static). Call the method of inner class to access details within both.
- 5) WAP to implement Base Class (abstract) and child class Cat, Dog, Lion, Tiger to implement methods declared in base class. Also use constructors in base and derived classes
- 6) WAP to implement Anonymous Inner class of employee and print its details.

## PRACTICAL 5

1. Wap to implement Multilevel and hierarchical inheritance.
2. Write a program that illustrates interface inheritance. Interface P12 inherits from both P1 and P2. Each interface declares one constant and one method. The class Q implements P12. Instantiate Q and invoke each of its methods. Each method displays one of the constants.
3. Write a program in Java to demonstrate use of final class.
4. Wap to demonstrate DivideByZero Exception in Java.
5. Wap to show nesting of try blocks using ArithmeticException and ArrayIndexOutOfBoundsException.

6. Wap to show execution of throw and rethrow.

#### **Practical 6:**

1. Write a Java Program to create threads using Thread class and Runnable Interface.
2. Create 3 threads in java and call run to print to execute a loop. Start all 3 together.
3. Show thread life cycle in Java using program. Refer functions – start,run,sleep,notify,notifyAll,wait,stop
4. Wap to run a thread using Join method.
5. Wap to show use of synchronized method. Create a class with synchronized method. Call it in 3 other thread classes. Start them together.
6. Show the use of synchronized block.
7. Wap to show deadlock condition between 3 threads in Java. Then release resource / end one of them to get the normal state

#### **Practical 7:**

1. Write a Java Program to copy contents from one file into another using FileInputStream & FileOutputStream.
2. Write a Java Program to copy contents from one file into another using BufferedInputStream & BufferedOutputStream.
3. Wap to copy contents from a file and arrange the words in ascending order to store in another file using Reader and Writer classes
4. Wap in Java to use map and store username and password values in properties. Also, retrieve them in program when asked.
5. Wap in Java to implement HashMap and perform operations to insert if not present, replace & delete data. Also, iterate over each pair.
6. Wap in Java to implement HashTable to store details of books in a library & retrieve them.

#### **CHALLENGE PROGRAMS:**

1. Recursively print nos. from 0 to n such that only one parameter is passed to recursive function.
2. Wap to recursively remove repeating characters in a string given by user.
3. Starting with 1st Jan 2000, any other date when entered should give day.
4. Wap in Java to create custom exception, call the exception, rethrow it and handle the exception.