MASTER OF COMPUTER APPLICATION

ACADEMIC YEAR:2025-2026(ODD) SEMESTER: 1

PAPER CODE : 101300119

PAPER TITLE : PRACTICAL BASED ON JAVA – BEGINNER TO PROFESSIONAL

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PRACTICAL LIST

NAME OF EXPERIMENT

Q.1) Study of class path and java runtime environment.
General Program to Learn Java Syntax

1) Write a program to print YOUR NAME(without using semicolon).
2) Write a program to find no. is odd or even.
3) Write a program that find greater among three number (Ladder if –else).
4) Write a program to generate Fibonacci series.
5) Write a program to find Factorial of a number (using recursion function).
6) Write a program to find the number is Armstrong or Not.
7) Write a program to find the reverse of n number.
8) Write a program to find the addition of n number.
9) Write a program swapping of two numbers without using third variable.
10) Find out greater number between three numbers using conditional operator.
11) Write a program to implement all the java operators.
12) Find out the area of the triangle.
13) Write a program to find calculate area of circle using it's radius.
14) Write a program to take personal data from User.
15) Write a program to find out the simple interest.
16) Write a program to generate series :

1 2 2 3 3 3 4 4 4 4 5 5 5 5 5	* * * * * ** ** * *	* *** ***** ******* ***** *** *	1 2 3 4 5 6 2 3 4 5 6 3 4 5 6 4 5 6 5 6 6

17) To write a program to print the marksheet of a student.

18)To find out the volume of the two different boxes having following values:

	Width	Height	Depth
Box	110	20	15
Box	23	6	9

Volume = width * height * depth

19)Create a java program to generate ten random numbers store and display them.

20)Write a program to take string as command line argument and check whether the string is Palindrom or not.

21)Write a Java application which takes several command line arguments, which are supposed to be names of students and prints output as given below:
(Suppose we enter 3 names then output should be as follows)

Number of arguments = 3
        1.: First Student Name is = Tom
        2.: Second Student Name is = Dick
        3.: Third Student Name is = Harry

22)Write a Java program that prompts the user for an integer and then prints out all the prime numbers up to that Integer?

23)Write a Java method to display the middle character of a string.
Note:
a) If the length of the string is even there will be two middle characters.
b) If the length of the string is odd there will be one middle character.

```
G:\niky_jain>java Pr18
Input a string: 3456
The middle character in the string: 45

G:\niky_jain>java Pr18
Input a string: 12345
The middle character in the string: 3
```

24)Write a program to add and to multiply two int matrices.
25)Write a program to implement all string operations.

Q.2) Programs for this,super,final and Static Keyword
1) Write a program to show the concept of this keyword.
2) Write a program to show the concept of super keyword.
3) Write a program to show the concept of static keyword.
4) Write a program to show the concept of final keyword.

Q.3) Programs for Package, Constructor, polymorphism and Inheritance

1) Write a program to show the concept of packages.

2) Create a class overload Demo and create method test () in it. Overload test () in four ways. First version takes no parameter, the second takes one integer parameter, and the third takes two integer parameters and fourth takes one double parameter.

3) Write a Java program which creates the Circle class and takes the two constructors of the Circle class. First constructor takes the default value for radius and second constructor takes radius as parameter. Create a method calcArea() and calculate the area of the Circle and print the area of the circle.

4) Create class 'Point3D'. There are three constructors for 'Point3D'. The first form accepts one double argument. The second form accepts two double arguments. The third form accepts three double arguments. These are used to initialize all of the instance variables. Also prints instance variables.

5) Write a program to show the concept of method overriding.

6) Write a program to show how to use interface in java.

7) Write a java program to create an abstract class named shape that contains an empty method named number of sides (). Provide three classes named trapezoid, triangle and Hexagon such that each one of the classes extends the class shape. Each one of the class contains only the method number of sides () that shows the number of sides in the given geometrical figures.

8) To write a program to implement multiple inheritance using interfaces.

9) Define a class called Product, each product has a name, a product code and manufacturer name. define variables, methods and constructors, for the Product class. Write a class called TestProduct, with the main method to test the methods and constructors of the Product class.
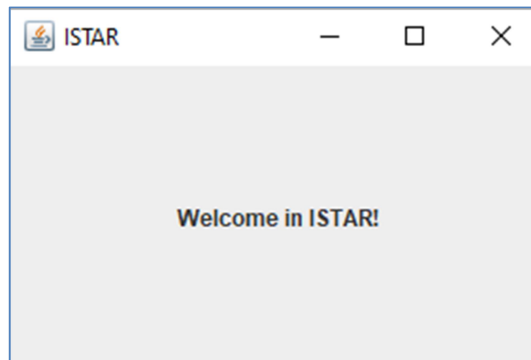
Q.4) Programs for Collection Framework, File Handling , Threading and Exception Handling

1) Write a java program that reads a file name from the user, and then displays information about whether the file exists, whether the file is readable, whether the file is writable, the type of file and the length of the file in bytes.
2) Write a program to read and write data in a file using java.
3) Write a Java program to implement the concept of exception handling.
4) Write a program to show the concept of threading using Thread Class
5) Write a program to show the concept of threading using runnable Interface
6) Write a program to implement thread priorities.

7) Write a program to show the concept of sleep method.
8) Write a program to show the concept of join method.
9) Write a program to increment the value of one variable by one and display it after one second using thread.
10) Write a program with 2 threads, in which one prints odd numbers and the other prints even numbers with delay of 500 milliseconds up to 10.
11) Write a program to demonstrate the use of the List Interface.
12) Write a program to demonstrate the use of the Queue Interface.
13) Write a program to demonstrate the use of the Set Interface.

Q.5) Program for Swing

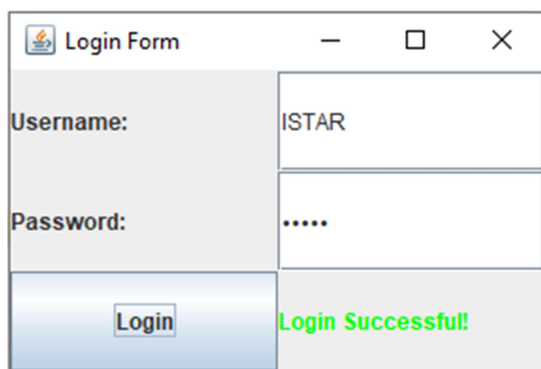1) Create a simple window with a label that displays "Your Full Name!".

2) Create a login form where the user inputs a username and password. Display a success message (Login Successfully) if the credentials are correct.
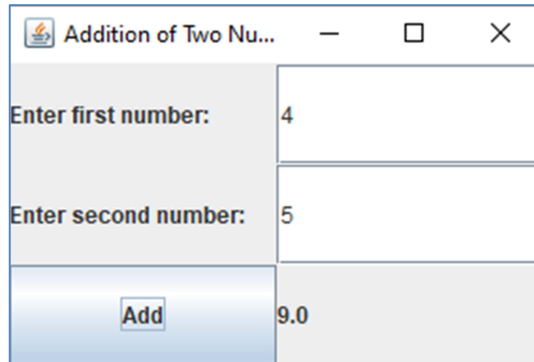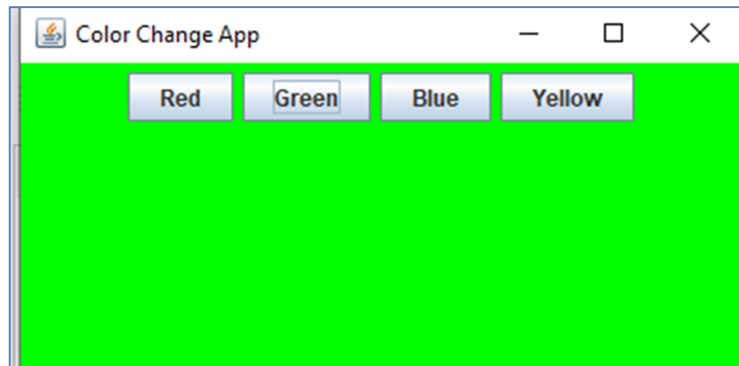   **Note:**
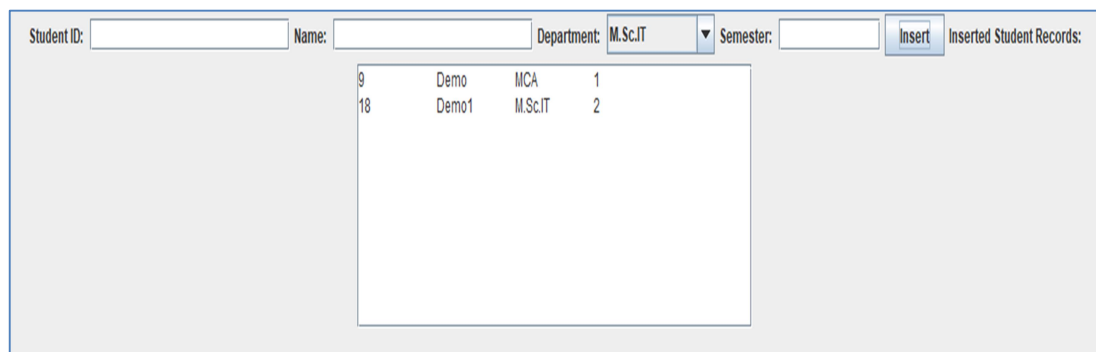   **Username : ISTAR**
   Password : ISTAR

3) Write a Java Program to create a Frame in swing that receives an integer in two text field, and computes its Addition value and returns it in Label, when the button named "Add" is clicked.
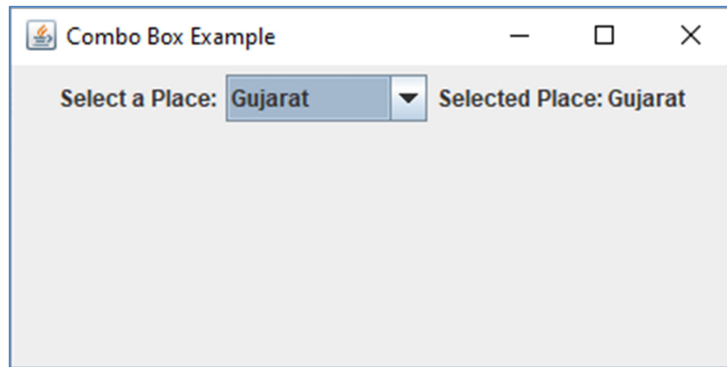

4) Write a Java program to create a Frame in swing that displays 4buttons each represents different colors.if a user click on particular button then that color is set as back ground to frame.

5) Create GUI entry form for student data. User will enter Student ID, Name, Department and Semester. Use combo box for Department. When user clicks on the *Insert* button all the values should be inserted in **the TextArea** in **a row** format for each record.

6) Write a java program to create a combo box with some name of some places. The user can select any one name from the list and the selected **state** name is displayed in the frame?

7) Create a Registration Form using following swing components. When user clicks on the **Submit** button all the values should be inserted in **the TextArea.**