1. Write a program for calculator –Addition, subtraction, multiplication and division.

2. WAP to swap two numbers using third variable.

3. WAP to swap two numbers without using third variable.

4. Check that given number is even or not.

5. Calculate the factorial of a given number.

6. Check that given number is Prime or not.

7. Display first 10 prime numbers.

8. Reverse the given number.

9. Check that given number is palindrome or not.

10. Check that given number is Armstrong or not.Eg-153=1^3+5^3+3^3=1+225+27=153

11. **WAP for constructor types.**

12. **WAP for method types**

13. **WAP to display information of 3 employees, take the data from user.**

14. **WAP to display the use of access specifiers.**

15. Java Program to Find Out the Number of Objects Created of a Class.

16. **Java Program to Check Whether a Character is a Vowel, Consonant or Digit**

17. **Java Program to Check Whether a Given Alphabets are Uppercase or Lowercase or Digits**

18. Display the sum of digits of a number.

19. Calculate the power of a number without power function and with power function.

20. Java program to check leap year.

21. Write a Java program to create and display unique three-digit number using 1, 2, 3, 4. Also count how many three-digit numbers are there. 123

22. Write a Java program to print the ASCII value of a given character.

23. Finding square root of a number. Program to print a given number's square root without employing the math.sqrt() function.

24. WAP to accept the array elements from user and display the elements.

25. Write a Java Program to find the highest number and lowest number in an array.

26. Program to add any two given matrices and print the result.

27. Program to multiply any two given matrices and print the result.

28. Transposing Matrix. Program to print the transpose of a given matrix. A transpose of a matrix has all its rows and columns interchanged.

29. Write a Java Program to find the second-highest number in an array.

30. Calculate and return the sum of all the even numbers present in the numbers array passed to the method calculateSumOfEvenNumbers. Implement the logic inside calculateSumOfE venNumbers() method.Test the functionalities using the main() method of the Tester class.

31. Program to identify and remove all repeated elements from an array.

32. Write a Java program that demonstrate the the use of method overloading, method overriding and method hiding.

33. Write a Java program to find the common elements between two arrays of string (Hint:equals())

34. **Write a Java program to find the common elements between two arrays of integers**

35. **Check the equality of two arrays.**

36. Write a Java program to create an array of its anti-diagonals from a given square matrix.

37. Write a Java program to segregate all 0s on left side and all 1s on right side of a given array of 0s and 1s.

38.Java Program to Count Number of Duplicate Words in String

39.Java Program to Reverse a String.

40.How to Check if the String Contains e in umbrella

41.Check word orange in "This is Orange juice".

42.Remove all whitespace. VIT Pune-VITPune

43.Java Program to Check if Input String is Palindrome

44.Write a Java program to count the number of words in a string?

45.Write a Java program to check whether two strings are anagram or not?

46.Write a java program that accept your full name as input and display initial of first and middle name and complete last name . Varsha Rahul Dange-V. R. Dange

47.WAP to demonstrate the use of throws and throw in exception handling.

48. Create a class Student with attributes roll no, name, age and course. Initialize values through parameterized constructor. If age of student is not in between 15 and 21 then generate user-defined exception "AgeNotWithinRangeException". If name contains numbers or special symbols raise exception "NameNotValidException". Define the two exception classes.

49.Write a Java program which creates only one object. If user attempts to create second object, he should not be able to create it. Display appropriate meassage (Using Exception Handling).

50.A Company manufactures Vehicles, which could be a Helicopter, a Car, or a Train depending on the customer's demand. Each Vehicle instance has a method called move, which prints on the console the nature of movement of the vehicle. For example,

 the Helicopter Flies in Air,

 the Car Drives on Road and

  the Train Runs on Track.

Write a program that accepts input from the user on the kind of vehicle the user wants to order, and the system should print out nature of movement. Implement all Java coding best practices to implement this program.

51.Create an abstract class 'Bank' with an abstract method 'getBalance'. $100, $150 and $200 are deposited in banks A, B and C respectively. 'BankA', 'BankB' and 'BankC' are subclasses of class 'Bank', each having a method named 'getBalance'. Call this method by creating an object of each of the three classes.

52.We have to calculate the percentage of marks obtained in three subjects (each out of 100) by student A and in four subjects (each out of 100) by student B. Create an abstract class 'Marks' with an

abstract method 'getPercentage'. It is inherited by two other classes 'A' and 'B' each having a method with the same name which returns the percentage of the students. The constructor of student A takes the marks in three subjects as its parameters and the marks in four subjects as its parameters for student B. Create an object for eac of the two classes and print the percentage of marks for both the students.

53.An abstract class has a construtor which prints "This is constructor of abstract class", an abstract method named 'a_method' and a non-abstract method which prints "This is a normal method of abstract class". A class 'SubClass' inherits the abstract class and has a method named 'a_method' which prints "This is abstract method". Now create an object of 'SubClass' and call the abstract method and the non-abstract method. (Analyse the result)