1. Write a Java program to print the sum, divide, product of two numbers.

Code:

public class ArithmeticOperations1 {

    public static void main(String[] args) {

        int num1 = 10;

        int num2 = 5;

        int sum = num1 + num2;

        int divide = num1 / num2;

        int product = num1 \* num2;

        System.out.println("Sum: " + sum);

        System.out.println("Division: " + divide);

        System.out.println("Product: " + product);

    }

}

Output:

2. Write a Java program to print the area and perimeter of a circle.

Code:

public class Circle2 {

    public static void main(String[] args) {

        double radius = 5.0;

        double area = Math.PI \* radius \* radius;

        double perimeter = 2 \* Math.PI \* radius;

        System.out.println("Area of the circle: " + area);

        System.out.println("Perimeter of the circle: " + perimeter);

    }

}

Output:

3. Write a Java program to swap two variables without using third variable.

Code:

public class SwapVariables3{

    public static void main(String[] args) {

        int a = 10;

        int b = 20;

        a = a + b;

        b = a - b;

        a = a - b;

        System.out.println("After swapping, a = " + a + " and b = " + b);

    }

}

Output:

4. Write a Java program and compute the sum of the digits of an integer. (Such as: Input an integer: 45; Expected Output : The sum of the digits is: 9)

Code:

import java.util.Scanner;

public class Sum4 {

    public static void main(String[] args) {

        Scanner scanner = new Scanner(System.in);

        System.out.print("Input an integer: ");

        int number = scanner.nextInt();

        int sum = 0;

        int temp = number;

        while (temp != 0) {

            sum += temp % 10;

            temp /= 10;

        }

        System.out.println("The sum of the digits is: " + sum);

    }

}

Output:

5. Write a Java program to reverse a number.  
Code:

import java.util.Scanner;

public class ReversedNum5 {

    public static void main(String[] args) {

        Scanner scanner = new Scanner(System.in);

        System.out.print("Enter a number to reverse: ");

        int number = scanner.nextInt();

        int reversedNumber = 0;

        while (number != 0) {

            int digit = number % 10;

            reversedNumber = reversedNumber \* 10 + digit;

            number /= 10;

        }

        System.out.println("Reversed number: " + reversedNumber);

    }

}

Output:

6. Write a Java program to count the letters, spaces, numbers and other characters of an input string.

Code:   
import java.util.Scanner;

public class Lnso6 {

    public static void main(String[] args) {

        Scanner scanner = new Scanner(System.in);

        System.out.print("Enter a string: ");

        String input = scanner.nextLine();

        int letterCount = 0;

        int spaceCount = 0;

        int numberCount = 0;

        int otherCount = 0;

        for (char c : input.toCharArray()) {

            if (Character.isLetter(c)) {

                letterCount++;

            } else if (Character.isDigit(c)) {

                numberCount++;

            } else if (Character.isWhitespace(c)) {

                spaceCount++;

            } else {

                otherCount++;

            }

        }

        System.out.println("Letter count: " + letterCount);

        System.out.println("Space count: " + spaceCount);

        System.out.println("Number count: " + numberCount);

        System.out.println("Other character count: " + otherCount);

    }

}

Output:

7. Write a Java program to input and display your password.

Code:

import java.io.Console;

public class PasswordInput7 {

    public static void main(String[] args) {

        Console console = System.console();

        if (console == null) {

            System.out.println("Console is not available. Exiting...");

            System.exit(1);

        }

        char[] passwordArray = console.readPassword("Enter your password: ");

        String password = new String(passwordArray);

        System.out.println("Your password is: " + password);

    }

}

Output:

8. Write a Java program to display the current date time in specific format.

Code:

import java.time.LocalDateTime;

import java.time.format.DateTimeFormatter;

public class CurrentDateTime8 {

    public static void main(String[] args) {

        LocalDateTime currentDateTime = LocalDateTime.now();

        DateTimeFormatter formatter = DateTimeFormatter.ofPattern("yyyy-MM-dd HH:mm:ss");

        String formattedDateTime = currentDateTime.format(formatter);

        System.out.println("Current Date and Time: " + formattedDateTime);

    }

}

Output:

9. Write a Java program to print the odd numbers from 1 to 99. Prints one number per line.

Code:

public class OddNumbers9 {

    public static void main(String[] args) {

        for (int i = 1; i <= 99; i++) {

            if (i % 2 != 0) {

                System.out.println(i);

            }

        }

    }

}

Output:

10. Write a Java program to accept a number and check the number is even or not. Prints 1 if the number is even or 0 if the number is odd.

Code:

import java.util.Scanner;

public class EvenOdd10 {

    public static void main(String[] args) {

        Scanner scanner = new Scanner(System.in);

        System.out.print("Enter a number: ");

        int number = scanner.nextInt();

        int result = (number % 2 == 0) ? 1 : 0;

        System.out.println("Result: " + result);

    }

}  
Output:

11. Write a Java program to reverse a word.

Code:

import java.util.Scanner;

public class ReversedWord11 {

    public static void main(String[] args) {

        Scanner scanner = new Scanner(System.in);

        System.out.print("Enter a word to reverse: ");

        String word = scanner.nextLine();

        String reversedWord = "";

        for (int i = word.length() - 1; i >= 0; i--) {

            reversedWord += word.charAt(i);

        }

        System.out.println("Reversed word: " + reversedWord);

    }

}

Output:

12. Write a Java program to compute the sum of the first 100 prime numbers.

Code:

public class PrimeNumbers12 {

    public static void main(String[] args) {

        int count = 0;

        int number = 2;

        long sum = 0;

        while (count < 100) {

            if (isPrime(number)) {

                sum += number;

                count++;

            }

            number++;

        }

        System.out.println("Sum of the first 100 prime numbers: " + sum);

    }

    public static boolean isPrime(int num) {

        if (num <= 1) {

            return false;

        }

        for (int i = 2; i <= Math.sqrt(num); i++) {

            if (num % i == 0) {

                return false;

            }

        }

        return true;

    }

}

Outputs:

13. Write a Java program to check if a positive number is a palindrome or not.

Code:

import java.util.Scanner;

public class PositiveNumber13 {

    public static void main(String[] args) {

        Scanner scanner = new Scanner(System.in);

        System.out.print("Enter a positive number: ");

        int number = scanner.nextInt();

        if (isPalindrome(number)) {

            System.out.println(number + " is a palindrome.");

        } else {

            System.out.println(number + " is not a palindrome.");

        }

    }

    public static boolean isPalindrome(int num) {

        int originalNum = num;

        int reversedNum = 0;

        while (num > 0) {

            int digit = num % 10;

            reversedNum = reversedNum \* 10 + digit;

            num /= 10;

        }

        return originalNum == reversedNum;

    }

}

Output:

14. Write a Java Program to find the largest of three numbers using if-else.

Code:

import java.util.Scanner;

public class ThreeNumbers14 {

    public static void main(String[] args) {

        Scanner scanner = new Scanner(System.in);

        System.out.print("Enter the first number: ");

        int num1 = scanner.nextInt();

        System.out.print("Enter the second number: ");

        int num2 = scanner.nextInt();

        System.out.print("Enter the third number: ");

        int num3 = scanner.nextInt();

        int largest = num1;

        if (num2 > largest) {

            largest = num2;

        }

        if (num3 > largest) {

            largest = num3;

        }

        System.out.println("The largest number is: " + largest);

    }

}

Output:

15. Write a Java Program to check if number is positive or negative.

Code:

import java.util.Scanner;

public class PositiveNegative15 {

    public static void main(String[] args) {

        Scanner scanner = new Scanner(System.in);

        System.out.print("Enter a number: ");

        int number = scanner.nextInt();

        if (number > 0) {

            System.out.println("The number is positive.");

        } else if (number < 0) {

            System.out.println("The number is negative.");

        } else {

            System.out.println("The number is zero.");

        }

    }

}

Output:

16. Write a Java Program to check whether a char is vowel or Consonant using Switch Case.

Code:

import java.util.Scanner;

public class Factorial18 {

    public static void main(String[] args) {

        Scanner scanner = new Scanner(System.in);

        System.out.print("Enter a number: ");

        int number = scanner.nextInt();

        long factorial = 1;

        for (int i = 1; i <= number; i++) {

            factorial \*= i;

        }

        System.out.println("Factorial of " + number + " is: " + factorial);

    }

}

Output:

17. Write a Java Program to make a Simple Calculator using Switch Case.

Code:

import java.util.Scanner;

public class Calculator17  {

    public static void main(String[] args) {

        Scanner scanner = new Scanner(System.in);

        System.out.println("Simple Calculator");

        System.out.println("1. Addition");

        System.out.println("2. Subtraction");

        System.out.println("3. Multiplication");

        System.out.println("4. Division");

        System.out.print("Enter your choice (1-4): ");

        int choice = scanner.nextInt();

        System.out.print("Enter the first number: ");

        double num1 = scanner.nextDouble();

        System.out.print("Enter the second number: ");

        double num2 = scanner.nextDouble();

        double result = 0;

        switch (choice) {

            case 1:

                result = num1 + num2;

                System.out.println("Result: " + result);

                break;

            case 2:

                result = num1 - num2;

                System.out.println("Result: " + result);

                break;

            case 3:

                result = num1 \* num2;

                System.out.println("Result: " + result);

                break;

            case 4:

                if (num2 != 0) {

                    result = num1 / num2;

                    System.out.println("Result: " + result);

                } else {

                    System.out.println("Error: Division by zero is not allowed.");

                }

                break;

            default:

                System.out.println("Invalid choice. Please enter a number between 1 and 4.");

        }

    }

}

Output:

18. Write a Java Program to find factorial of a number using loops.

Code:

import java.util.Scanner;

public class Factorial18 {

    public static void main(String[] args) {

        Scanner scanner = new Scanner(System.in);

        System.out.print("Enter a number: ");

        int number = scanner.nextInt();

        long factorial = 1;

        for (int i = 1; i <= number; i++) {

            factorial \*= i;

        }

        System.out.println("Factorial of " + number + " is: " + factorial);

    }

}

Output:

19. Write a Java Program to print Fibonacci Series using loop.

Code:

public class FibonacciSeries19 {

    public static void main(String[] args) {

        int n = 10; // Specify the number of terms in the Fibonacci series

        int a = 0, b = 1;

        System.out.print("Fibonacci Series: ");

        for (int i = 0; i < n; i++) {

            System.out.print(a + " ");

            int sum = a + b;

            a = b;

            b = sum;

        }

    }

}

Output:

20. Write a Java program to Find Second largest element in an array.

Code:

public class SecondLargestElement20 {

    public static void main(String[] args) {

        int[] arr = {10, 20, 5, 15, 30}; // Input array

        int firstLargest = Integer.MIN\_VALUE;

        int secondLargest = Integer.MIN\_VALUE;

        for (int i = 0; i < arr.length; i++) {

            if (arr[i] > firstLargest) {

                secondLargest = firstLargest;

                firstLargest = arr[i];

            } else if (arr[i] > secondLargest && arr[i] != firstLargest) {

                secondLargest = arr[i];

            }

        }

        System.out.println("Second Largest Element: " + secondLargest);

    }

}

Output:

21. Write a Java program to Reverse words in a given string.

Code:   
public class ReverseWords21 {

   public static String reverseWords(String str) {

        String[] words = str.split(" ");

        StringBuilder reversedString = new StringBuilder();

        for (int i = words.length - 1; i >= 0; i--) {

            reversedString.append(words[i]).append(" ");

        }

        return reversedString.toString().trim();

    }

     public static void main(String[] args) {

        String inputString = "Java World";

        String reversedString = reverseWords(inputString);

        System.out.println("Original String: " + inputString);

        System.out.println("Reversed String: " + reversedString);

    }

}

Output:

22. Write a program in Java to count the total number of alphabets, digits and special characters in a string.

Code:

public class CharacterCount22 {

    public static void countCharacters(String str) {

        int alphabetCount = 0;

        int digitCount = 0;

        int specialCharCount = 0;

        for (int i = 0; i < str.length(); i++) {

            char ch = str.charAt(i);

            if (Character.isLetter(ch)) {

                alphabetCount++;

            } else if (Character.isDigit(ch)) {

                digitCount++;

            } else {

                specialCharCount++;

            }

        }

        System.out.println("Total Alphabets: " + alphabetCount);

        System.out.println("Total Digits: " + digitCount);

        System.out.println("Total Special Characters: " + specialCharCount);

    }

    public static void main(String[] args) {

        String inputString = "Hello123!@#";

        countCharacters(inputString);

    }

}

Output:

23. Write a Java program to check whether a substring is present in a string.

Code:

public class SubstringCheck23 {

    public static boolean isSubstringPresent(String str, String sub) {

        return str.contains(sub);

    }

    public static void main(String[] args) {

        String mainString = "Hello, World!";

        String subString = "World";

        if (isSubstringPresent(mainString, subString)) {

            System.out.println("Substring '" + subString + "' is present in the main string.");

        } else {

            System.out.println("Substring '" + subString + "' is not present in the main string.");

        }

    }

}

Output:

24. Write a program in C to find the frequency of characters.

Code:

#include <stdio.h>

#include <string.h>

#define MAX\_SIZE 100

int main() {

    char str[MAX\_SIZE];

    int freq[256] = {0};

    printf("Enter a string: ");

    fgets(str, MAX\_SIZE, stdin);

    for (int i = 0; i < strlen(str); i++) {

        freq[(int)str[i]]++;

    }

    printf("Character Frequency:\n");

    for (int i = 0; i < 256; i++) {

        if (freq[i] != 0) {

            printf("%c - %d\n", i, freq[i]);

        }

    }

    return 0;

}

Output: