

StringAnalysis.java

```
1 import java.util.Scanner;
2
3 public class StringAnalysis {
4     public static void main(String[] args) {
5         Scanner scanner = new Scanner(System.in);
6
7         System.out.print("Enter a string: ");
8         String input = scanner.nextLine();
9
10        int vowels = 0, consonants = 0, digits = 0, specialChars = 0;
11
12        input = input.toLowerCase(); // Convert to lowercase for uniform comparison
13
14        for (char ch : input.toCharArray()) {
15            if (Character.isLetter(ch)) {
16                if ("aeiou".indexOf(ch) != -1) {
17                    vowels++;
18                } else {
19                    consonants++;
20                }
21            } else if (Character.isDigit(ch)) {
22                digits++;
23            } else if (!Character.isWhitespace(ch)) {
24                specialChars++;
25            }
26        }
27
28        System.out.println("Vowels: " + vowels);
```

Enter a string: Hello World 2024
Vowels: 3
Consonants: 7
Digits: 4
Special Characters: 0

...Program finished with exit code 0

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MatrixOperations.j...

```
2
3 public class MatrixOperations {
4     public static void main(String[] args) {
5         Scanner scanner = new Scanner(System.in);
6
7         System.out.println("Enter dimensions of matrices (rows and columns): ");
8         int rows = scanner.nextInt();
9         int cols = scanner.nextInt();
10
11         int[][] matrix1 = new int[rows][cols];
12         int[][] matrix2 = new int[rows][cols];
13
14         System.out.println("Enter elements of Matrix 1:");
15         inputMatrix(scanner, matrix1);
16
17         System.out.println("Enter elements of Matrix 2:");
18         inputMatrix(scanner, matrix2);
19
20         System.out.println("Addition:");
21         printMatrix(addMatrices(matrix1, matrix2));
22
23         System.out.println("Subtraction:");
```

input

Enter dimensions of matrices (rows and columns):

2 2

Enter elements of Matrix 1:

1 2 3 4

Enter elements of Matrix 2:

5 6 7 8

Addition:

6 8

10 12

Subtraction:

-4 -4

-4 -4

Multiplication:

19 22

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BankingSystem.java

```
35 public void withdraw(double amount) {
36     if (amount > 0 && amount <= balance) {
37         balance -= amount;
38         System.out.println("Withdrawal successful! Current Balance: " + balance);
39     } else {
40         System.out.println("Error: Insufficient funds. Current Balance: " + balance);
41     }
42 }
43 }
44
45 public class BankingSystem {
46     public static void main(String[] args) {
47         Scanner scanner = new Scanner(System.in);
48
49         System.out.println("Enter Name:");
50         String name = scanner.nextLine();
51
52         System.out.println("Enter Account Number:");
53         String accountNumber = scanner.nextLine();
54
55         System.out.println("Enter Initial Balance:");
56         double initialBalance = scanner.nextDouble();
```

input

Enter Name:

Shubham

Enter Account Number:

33015486

Enter Initial Balance:

20000

Choose an operation: 1. Deposit 2. Withdraw 3. Exit

2

Enter amount to withdraw:

5000

Withdrawal successful! Current Balance: 15000.0

Choose an operation: 1. Deposit 2. Withdraw 3. Exit