

Main.java



Run

```
1- import java.util.Scanner;
2
3- public class EligibleToVote {
4-     public static void main(String[] args) {
5         Scanner scanner = new Scanner(System.in);
6         System.out.print("Enter your age: ");
7         int age = scanner.nextInt();
8         if (age >= 18) {
9             System.out.println("You are eligible to vote!");
10        } else {
11            System.out.println("You are not eligible to vote yet.");
12        }
13        scanner.close();
14    }
15 }
16
```

Output

Clear

```
java -cp /tmp/Yu9dCqxGZh EligibleToVote
Enter your age: 11
You are not eligible to vote yet.
```



Main.java

```
1 import java.util.Scanner;
2
3 public class SimpleInterestCalculator {
4     public static void main(String[] args) {
5         Scanner scanner = new Scanner(System.in);
6
7         System.out.print("Enter principal amount: ");
8         double principal = scanner.nextDouble();
9
10        System.out.print("Enter rate of interest (in percentage): ");
11        double rate = scanner.nextDouble();
12
13        System.out.print("Enter time (in years): ");
14        double time = scanner.nextDouble();
15
16        double simpleInterest = (principal * rate * time) / 100;
17
18        System.out.println("Simple Interest: " + simpleInterest);
19
20        scanner.close();
21    }
22 }
23
```

Run

Output

Clear

```
java -cp /tmp/0UcFw8XtMq SimpleInterestCalculator
Enter principal amount: 200000
Enter rate of interest (in percentage): 5
Enter time (in years): 3
Simple Interest: 30000.0
```

Main.java

```
1 import java.util.Scanner;
2 public class UserNameValidator {
3     public static void main(String[] args) {
4         Scanner scanner = new Scanner(System.in);
5         System.out.println("Enter the user name:");
6         String userName = scanner.nextLine();
7         System.out.println("Reenter the user name:");
8         String reenteredUserName = scanner.nextLine();
9         if (isValidUserName(userName) && isValidUserName(reenteredUserName)) {
10             System.out.println("User name is valid");
11         } else {
12             System.out.println("User name is invalid");
13         }
14         public static boolean isValidUserName(String userName) {
15             if (userName.length() < 6) {
16                 return false;
17             }
18             char firstChar = userName.charAt(0);
19             if (!Character.isLetter(firstChar)) {
20                 return false;
21             }
22             for (int i = 0; i < userName.length(); i++) {
23                 char ch = userName.charAt(i);
24                 if (!Character.isLetterOrDigit(ch) && ch != '_' ) {
25                     return false;
26                 }
27             }
28         }
29     }
30 }
```

Run

Output

Clear

```
java -cp /tmp/hwjH6LXer3 UserNameValidator
Enter the user name:
sai@1234
Reenter the user name:
sai@1234
User name is invalid
|
```



Main.java



Run

Output

Clear

```
1 import java.util.Scanner;
2
3 public class PerfectNumbers {
4
5     static boolean isPerfect(int number) {
6         int sum = 1;
7         for (int i = 2; i * i <= number; i++) {
8             if (number % i == 0) {
9                 if (i * i != number)
10                     sum = sum + i + number / i;
11                 else
12                     sum = sum + i;
13             }
14         }
15
16         return sum == number && number != 1;
17     }
18
19     public static void main(String[] args) {
20         Scanner scanner = new Scanner(System.in);
21         System.out.print("Enter the value of n: ");
22         int n = scanner.nextInt();
23
24         int count = 0;
25         int number = 1;
26     }
```

```
java -cp /tmp/CrB4EVkwnV PerfectNumbers
Enter the value of n: 4
First 4 perfect numbers are:
6
28
496
8128
```

Main.java

```

16-   for (int i = 0; i < n; i++) {
17-       numbers[i] = i + 1;
18-       squares[i] = (i + 1) * (i + 1);
19-   }
20-
21-
22-   int[][] numberSquareArray = new int[n][2];
23-
24-
25-   for (int i = 0; i < n; i++) {
26-       numberSquareArray[i][0] = numbers[i];
27-       numberSquareArray[i][1] = squares[i];
28-   }
29-
30-
31-   System.out.println("Number\tSquare");
32-   for (int i = 0; i < n; i++) {
33-       System.out.println(numberSquareArray[i][0] + "\t" +
34-           numberSquareArray[i][1]);
35-   }
36-
37-   scanner.close();
38- }
39- }
40-

```

Ruin

Output

```

^ java -cp /tmp/vCFg7QhpIv NumberSquareArray
Enter the number of elements: 4
Number Square
1 1
2 4
3 9
4 16

```




Main.java



Run

Output

Clear

```
1 import java.util.Scanner;
2
3 public class NumberPattern {
4     public static void main(String[] args) {
5         Scanner scanner = new Scanner(System.in);
6         System.out.print("Enter the number of rows: ");
7         int rows = scanner.nextInt();
8         scanner.close();
9
10        for (int i = 1; i <= rows; i++) {
11            int num = 1;
12            for (int j = 1; j <= i; j++) {
13                System.out.print(num + " ");
14                num++;
15            }
16            System.out.println();
17        }
18    }
19 }
20
```

```
java -cp /tmp/GneDiSKM2h NumberPattern
Enter the number of rows: 4
1
1 2
1 2 3
1 2 3 4
```





Main.java



Run

Output

Clear

```
44-     for (int j = 0; j < result[i].length; j++) {
45-         System.out.print(result[i][j] + " ");
46-     }
47-     System.out.println();
48- }
49-
50- scanner.close();
51- }
52-
53- public static int[][] multiplyMatrices(int[][] matrix1, int[][] matrix2) {
54-     int m = matrix1.length;
55-     int n = matrix1[0].length;
56-     int p = matrix2[0].length;
57-
58-     int[][] result = new int[m][p];
59-
60-     for (int i = 0; i < m; i++) {
61-         for (int j = 0; j < p; j++) {
62-             for (int k = 0; k < n; k++) {
63-                 result[i][j] += matrix1[i][k] * matrix2[k][j];
64-             }
65-         }
66-     }
67-
68-     return result;
69- }
```

```
java -cp /tmp/SLbQAezIEY MatrixMultiplication
Enter the number of rows for the first matrix:
2
Enter the number of columns for the first matrix:
2
Enter the number of rows for the second matrix:
2
Enter the number of columns for the second matrix:
2
Enter elements of the first matrix:
1 2
3 4
Enter elements of the second matrix:
1 2
3 4
Resultant Matrix:
7 10
15 22
```



Main.java

```
18 System.out.println("Enter the value of n:");
19 int n = scanner.nextInt();
20
21
22 Arrays.sort(array);
23
24
25 int mthMax = array[array.length - m];
26
27 int nthMin = array[n - 1];
28
29
30 int sum = 0;
31 for (int num : array) {
32     sum += num;
33 }
34
35 System.out.println("Array elements: " + Arrays.toString(array));
36 System.out.println("The " + m + "th maximum number is: " + mthMax);
37 System.out.println("The " + n + "th minimum number is: " + nthMin);
38 System.out.println("Sum of array elements: " + sum);
39
40 scanner.close();
41 }
42 }
43
```

Run

Output

Clear

```
java -cp /tmp/RBuKMRb70 Main
Enter the array elements separated by spaces:
14 16 87 36 25 89 34
Enter the value of m:
1
Enter the value of n:
3
Array elements: [14, 16, 25, 34, 36, 87, 89]
The 1th maximum number is: 89
The 3th minimum number is: 25
Sum of array elements: 301
```