Write Java code to take a 5 number from the user and display it as an output.

```
import java.util.Scanner;

public class TakeInput {

    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        int[] arr = new int[5];
        for (int i = 0; i < 5; i++) {
            System.out.print("Enter number " + (i + 1) + ": ");
            arr[i] = sc.nextInt();
        }
        System.out.println("The numbers you entered are: ");
        for (int i = 0; i < 5; i++) {
            System.out.print(arr[i] + " ");
        }
    }
}
```

2. Java program to calculate the sum of all numbers present in array.

```
import java.util.Scanner;

public class SumOfArray {

    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        int[] arr = new int[5];
        int sum = 0;
        for (int i = 0; i < 5; i++) {
            System.out.print("Enter number " + (i + 1) + ": ");
            arr[i] = sc.nextInt();
        }
        for (int i = 0; i < 5; i++) {
            sum += arr[i];
        }
        System.out.println("The sum of all numbers is: " + sum);
    }
}
```

3.Java program to calculate the average of all the numbers present in array.
import java.util.Scanner;

```
public class AverageOfArray {

    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        int[] arr = new int[5];
        int sum = 0;
        for (int i = 0; i < 5; i++) {
            System.out.print("Enter number " + (i + 1) + ": ");
            arr[i] = sc.nextInt();
        }
        for (int i = 0; i < 5; i++) {
            sum += arr[i];
        }
        float average = sum / 5;
        System.out.println("The average of all numbers is: " + average);
    }
}
```

4.Java code to display only even numbers present in the array(provide some numbers)

```
import java.util.Scanner;

public class EvenNumbersArray {

    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter the number of elements in the array: ");
        int n = sc.nextInt();
        int[] arr = new int[n];
        System.out.println("Enter the elements of the array: ");
        for (int i = 0; i < n; i++) {
            arr[i] = sc.nextInt();
        }
        System.out.println("The even numbers present in the array are: ");
        for (int i = 0; i < n; i++) {
            if (arr[i] % 2 == 0) {
```

```
            System.out.print(arr[i] + " ");
        }
    }
  }
}
```

5.Java program to perform addition, subtraction, multiplcation, division operation using two array integers.

```
import java.util.Scanner;

public class ArrayOperations {

    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter the number of elements in the first array: ");
        int m = sc.nextInt();
        int[] arr1 = new int[m];
        System.out.println("Enter the elements of the first array: ");
        for (int i = 0; i < m; i++) {
            arr1[i] = sc.next
```

6.Write a Java program to find the index of an array element.

```
import java.util.Scanner;

public class ArrayIndex {

    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter the number of elements in the array: ");
        int n = sc.nextInt();
        int[] arr = new int[n];
        System.out.println("Enter the elements of the array: ");
        for (int i = 0; i < n; i++) {
            arr[i] = sc.nextInt();
        }
        System.out.println("Enter the element you want to find: ");
        int x = sc.nextInt();
        int index = -1;
```

```
        for (int i = 0; i < n; i++) {
            if (arr[i] == x) {
                index = i;
                break;
            }
        }
        if (index == -1) {
            System.out.println("The element is not present in the array");
        } else {
            System.out.println("The element is present at index " + index);
        }
    }
}
```

7.Write a Java program to reverse an array of integer values.

```
import java.util.Scanner;

public class ReverseArray {

    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter the number of elements in the array: ");
        int n = sc.nextInt();
        int[] arr = new int[n];
        System.out.println("Enter the elements of the array: ");
        for (int i = 0; i < n; i++) {
            arr[i] = sc.nextInt();
        }
        System.out.println("The original array is: ");
        for (int i = 0; i < n; i++) {
            System.out.print(arr[i] + " ");
        }
        System.out.println();
        // Reversing the array
        for (int i = 0; i < n / 2; i++) {
            int temp = arr[i];
            arr[i] = arr[n - 1 - i];
            arr[n - 1 - i] = temp;
        }
        System.out.println("The reversed array is: ");
        for (int i = 0; i < n; i++) {
```

```
            System.out.print(arr[i] + " ");
        }
    }
}
```

8.write a program to display 2 dimension matrix using array.

```
import java.util.Scanner;

public class TwoDimensionMatrix {

    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter the number of rows in the matrix: ");
        int m = sc.nextInt();
        System.out.println("Enter the number of columns in the matrix: ");
        int n = sc.nextInt();
        int[][] arr = new int[m][n];
        System.out.println("Enter the elements of the matrix: ");
        for (int i = 0; i < m; i++) {
            for (int j = 0; j < n; j++) {
                arr[i][j] = sc.nextInt();
            }
        }
        System.out.println("The 2D matrix is: ");
        for (int i = 0; i < m; i++) {
            for (int j = 0; j < n; j++) {
                System.out.print(arr[i][j] + " ");
            }
            System.out.println();
        }
    }
}
```

9.write a java program to perform the addition of 2D matrix.

```
  import java.util.Scanner;

public class AddTwoDimensionMatrix {
```

```
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter the number of rows in the first matrix: ");
        int m = sc.nextInt();
        System.out.println("Enter the number of columns in the first matrix: ");
        int n = sc.nextInt();
        int[][] arr1 = new int[m][n];
        System.out.println("Enter the elements of the first matrix: ");
        for (int i = 0; i < m; i++) {
            for (int j = 0; j < n; j++) {
                arr1[i][j] = sc.nextInt();
            }
        }
        System.out.println("Enter the number of rows in the second matrix: ");
        int m2 = sc.nextInt();
        System.out.println("Enter the number of columns in the second matrix: ");
        int n2 = sc.nextInt();
        int[][] arr2 = new int[m2][n2];
        System.out.println("Enter the elements of the second matrix: ");
        for (int i = 0; i < m2; i++) {
            for (int j = 0; j < n2; j++) {
                arr2[i][j] = sc.nextInt();
            }
        }
        int[][] sum = new int[m][n];
        for (int i = 0; i < m; i++) {
            for (int j = 0; j < n; j++) {
                sum[i][j] = arr1[i][j] + arr2[i][j];
            }
        }
        System.out.println("The sum of the two matrices is: ");
        for (int i = 0; i < m; i++) {
            for (int j = 0; j < n; j++) {
                System.out.print(sum[i][j] + " ");
            }
            System.out.println();
        }
    }
}
```

10.write a java program to display 3D matrix.

```
import java.util.Scanner;

public class ThreeDimensionMatrix {

    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter the number of rows in the matrix: ");
        int m = sc.nextInt();
        System.out.println("Enter the number of columns in the matrix: ");
        int n = sc.nextInt();
        System.out.println("Enter the number of layers in the matrix: ");
        int p = sc.nextInt();
        int[][][] arr = new int[m][n][p];
        System.out.println("Enter the elements of the matrix: ");
        for (int i = 0; i < m; i++) {
            for (int j = 0; j < n; j++) {
                for (int k = 0; k < p; k++) {
                    arr[i][j][k] = sc.nextInt();
                }
            }
        }
        System.out.println("The 3D matrix is: ");
        for (int i = 0; i < m; i++) {
            for (int j = 0; j < n; j++) {
                for (int k = 0; k < p; k++) {
                    System.out.print(arr[i][j][k] + " ");
                }
                System.out.println();
            }
        }
    }
}
```

11. write a java code to reverse the array elements .

```
import java.util.Scanner;

public class ReverseArrayElements {

    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter the number of elements in the array: ");
```

```
        int n = sc.nextInt();
        int[] arr = new int[n];
        System.out.println("Enter the elements of the array: ");
        for (int i = 0; i < n; i++) {
            arr[i] = sc.nextInt();
        }
        System.out.println("The original array is: ");
        for (int i = 0; i < n; i++) {
            System.out.print(arr[i] + " ");
        }
        System.out.println();
        // Reversing the array elements
        for (int i = 0; i < n / 2; i++) {
            int temp = arr[i];
            arr[i] = arr[n - 1 - i];
            arr[n - 1 - i] = temp;
        }
        System.out.println("The reversed array is: ");
        for (int i = 0; i < n; i++) {
            System.out.print(arr[i] + " ");
        }
    }
}
```

12. write a code to display array elements in vertical and horizontal order.

```
import java.util.Scanner;

public class DisplayArrayElements {

    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter the number of elements in the array: ");
        int n = sc.nextInt();
        int[] arr = new int[n];
        System.out.println("Enter the elements of the array: ");
        for (int i = 0; i < n; i++) {
            arr[i] = sc.nextInt();
        }
        System.out.println("The array elements in vertical order are: ");
        for (int i = 0; i < n; i++) {
            System.out.println(arr[i]);
        }
```

```
        System.out.println();
        System.out.println("The array elements in horizontal order are: ");
        for (int i = 0; i < n; i++) {
            for (int j = 0; j < n; j++) {
                if (i == j) {
                    System.out.
```

13.write a code to calculate matrix multiplication.

```
import java.util.Scanner;

public class MatrixMultiplication {

    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter the number of rows in the first matrix: ");
        int m = sc.nextInt();
        System.out.println("Enter the number of columns in the first matrix: ");
        int n = sc.nextInt();
        System.out.println("Enter the number of columns in the second matrix: ");
        int p = sc.nextInt();
        int[][] arr1 = new int[m][n];
        int[][] arr2 = new int[n][p];
        System.out.println("Enter the elements of the first matrix: ");
        for (int i = 0; i < m; i++) {
            for (int j = 0; j < n; j++) {
                arr1[i][j] = sc.nextInt();
            }
        }
        System.out.println("Enter the elements of the second matrix: ");
        for (int i = 0; i < n; i++) {
            for (int j = 0; j < p; j++) {
                arr2[i][j] = sc.nextInt();
            }
        }
        int[][] product = new int[m][p];
        for (int i = 0; i < m; i++) {
            for (int j = 0; j < p; j++) {
                for (int k = 0; k < n; k++) {
                    product[i][j] += arr1[i][k] * arr2[k][j];
                }
            }
        }
```

```
        System.out.println("The product of the two matrices is: ");
        for (int i = 0; i < m; i++) {
            for (int j = 0; j < p; j++) {
                System.out.print(product[i][j] + " ");
            }
            System.out.println();
        }
    }
}
```

14.write a java code to access the elements by there index.

```
import java.util.Scanner;

public class AccessArrayElements {

    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter the number of elements in the array: ");
        int n = sc.nextInt();
        int[] arr = new int[n];
        System.out.println("Enter the elements of the array: ");
        for (int i = 0; i < n; i++) {
            arr[i] = sc.nextInt();
        }
        System.out.println("Enter the index of the element you want to access: ");
        int index = sc.nextInt();
        System.out.println("The element at index " + index + " is " + arr[index]);
    }
}
```

15.write a java program to concat to arrays.

```
import java.util.Scanner;

public class ConcatArrays {

    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter the number of elements in the first array: ");
        int m = sc.nextInt();
```

```
        int[] arr1 = new int[m];
        System.out.println("Enter the elements of the first array: ");
        for (int i = 0; i < m; i++) {
            arr1[i] = sc.nextInt();
        }
        System.out.println("Enter the number of elements in the second array: ");
        int n = sc.nextInt();
        int[] arr2 = new int[n];
        System.out.println("Enter the elements of the second array: ");
        for (int i = 0; i < n; i++) {
            arr2[i] = sc.nextInt();
        }
        int[] arr3 = new int[m + n];
        for
```

16. write a java code to sort the array elements in ascending order.

```
import java.util.Arrays;

public class SortArrayElements {

    public static void main(String[] args) {
        int[] arr = {10, 5, 2, 1, 8, 9, 7, 6, 4, 3};
        System.out.println("The original array is: ");
        System.out.println(Arrays.toString(arr));
        Arrays.sort(arr);
        System.out.println("The sorted array in ascending order is: ");
        System.out.println(Arrays.toString(arr));
    }
}
```

17. write a code to find the length of array.

```
import java.util.Scanner;

public class FindArrayLength {

    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter the number of elements in the array: ");
        int n = sc.nextInt();
        int[] arr = new int[n];
        System.out.println("Enter the elements of the array: ");
```

```
        for (int i = 0; i < n; i++) {
            arr[i] = sc.nextInt();
        }
        int length = arr.length;
        System.out.println("The length of the array is: " + length);
    }
}
```

18.write a program to check the whether the array contains the specific value or not.

```
import java.util.Scanner;

public class CheckArrayContainsValue {

    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter the number of elements in the array: ");
        int n = sc.nextInt();
        int[] arr = new int[n];
        System.out.println("Enter the elements of the array: ");
        for (int i = 0; i < n; i++) {
            arr[i] = sc.nextInt();
        }
        System.out.println("Enter the value you want to check: ");
        int x = sc.nextInt();
        boolean found = false;
        for (int i = 0; i < n; i++) {
            if (arr[i] == x) {
                found = true;
                break;
            }
        }
        if (found) {
            System.out.println("The value " + x + " is present in the array");
        } else {
            System.out.println("The value " + x + " is not present in the array");
        }
    }
}
```

19.write a code to check whether the two array are equal or not.

```
import java.util.Scanner;

public class CheckTwoArraysAreEqual {

    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter the number of elements in the first array: ");
        int m = sc.nextInt();
        int[] arr1 = new int[m];
        System.out.println("Enter the elements of the first array: ");
        for (int i = 0; i < m; i++) {
            arr1[i] = sc.nextInt();
        }
        System.out.println("Enter the number of elements in the second array: ");
        int n = sc.nextInt();
        int[] arr2 = new int[n];
        System.out.println("Enter the elements of the second array: ");
        for (int i = 0; i < n; i++) {
            arr2[i] = sc.nextInt();
        }
        boolean equal = true;
        if (m != n) {
            equal = false;
        } else {
            for (int i = 0; i < m; i++) {
                if (arr1[i] != arr2[i]) {
                    equal = false;
                    break;
                }
```

20. write a code to display multidimension arrays as per the user input.

```
import java.util.Scanner;

public class DisplayMultidimensionArrays {

    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter the number of rows in the array: ");
        int m = sc.nextInt();
```

```
        System.out.println("Enter the number of columns in the array: ");
        int n = sc.nextInt();
        int[][] arr = new int[m][n];
        System.out.println("Enter the elements of the array: ");
        for (int i = 0; i < m; i++) {
            for (int j = 0; j < n; j++) {
                arr[i][j] = sc.nextInt();
            }
        }
        System.out.println("The array elements are: ");
        for (int i = 0; i < m; i++) {
            for (int j = 0; j < n; j++) {
                System.out.print(arr[i][j] + " ");
            }
            System.out.println();
        }
    }
}
```

Created by Akash Khatale.