

# ASSIGNMENT- (1D ARRAY)

Q1: Write a program to print the sum of all the elements present on even indices in the given array.

Input 1: arr[] = {3,20,4,6,9}

Output 1: 16

Input 1: arr[] = {4,3,6,7,1}

Output 1: 11

```
Ans- public class Array_Assg1 {  
    public static void main(String[] args) {  
        // int[] arr = { 3, 20, 4, 6, 9 };  
        int[] arr = { 4, 3, 6, 7, 1 };  
        int sum = 0;  
        for (int i = 0; i < arr.length; i++) {  
            if (i % 2 == 0) {  
                sum += arr[i];  
            }  
        }  
        System.out.println("Sum of elements on even indices is: " + sum);  
    }  
}
```

Q2: Write a program to traverse over the elements of the array using for each loop and print all even elements.

```
Ans- public class Array_Assg2 {  
    public static void main(String[] args) {  
        // int[] arr = { 34, 21, 54, 65, 43 };  
        int[] arr = { 4, 3, 6, 7, 1 };  
        for (int i : arr) {  
            if (i % 2 == 0) {  
                System.out.print(i + " ");  
            }  
        }  
    }  
}
```

Q3: Write a program to calculate the maximum element in the array.

```
Ans- public class Array_Assg3 {  
  
    public static void main(String[] args) {  
        // int[] arr = { 34, 21, 54, 65, 43 };  
        int[] arr = { 4, 3, 6, 7, 1 };  
        int max = arr[0];  
        for (int i : arr) {  
            if (i > max) {  
                max = i;  
            }  
        }  
        System.out.println("Maximum element in array is: " + max);  
    }  
}
```

Q4: Write a program to find out the second largest element in a given array.

```
Ans- public class Array_Assg4 {  
  
    public static void main(String[] args) {  
        // int[] arr = { 34, 21, 54, 65, 43 };  
        int[] arr = { 4, 3, 6, 7, 1 };  
        int max_idx = 0;  
        for (int i = 1; i < arr.length; i++) {  
            if (arr[max_idx] < arr[i]) {  
                max_idx = i;  
            }  
        }  
        arr[max_idx] = Integer.MIN_VALUE;  
  
        int max = arr[0];  
        for (int i : arr) {  
            if (i > max) {  
                max = i;  
            }  
        }  
        System.out.println("Second Largest Element in array is: " + max);  
    }  
}
```

Q5: Given an array. Find the first peak element in the array. A peak element is an element that is greater than its just left and just right neighbor.

```
Ans- public class Array_Assg5 {  
    public static void main(String[] args) {  
        // int[] arr = { 1, 3, 2, 6, 5 };  
        int[] arr = { 1, 4, 7, 3, 2, 6, 5 };  
        for (int i = 1; i < arr.length - 1; i++) {  
            if (arr[i] > arr[i - 1] && arr[i] > arr[i + 1]) {  
                System.out.println("Peak element in array is: " + arr[i]);  
                break;  
            }  
        }  
    }  
}
```