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**1.Write a program to print all the elements of an array**.

Solution:

**package** assignment3;

**publicclass** Qstn1 {**publicstaticvoid** main(String[] args)

{**int**arr[]= {12,78,90,34,45};

System.***out***.print("Array Elements are:");

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

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

}

**Output:**

Array Elements are:12 78 90 34 45

**2.Write a program to copy all the elements of one array into other.**

**Solution:**

**package** assignment3;

**publicclass** Qstn2 {

**publicstaticvoid** main(String args[])

{**int**arr1[]= {12,3,5,78};

**int**arr2[]=**newint**[arr1.length];

**int**i=0;

**while**(i<arr1.length)

{arr2[i]=arr1[i];

i++;}

System.***out***.println("Elements of the original array:");

**for**(i=0;i<arr1.length;i++)

{System.***out***.print(arr1[i]+" ");}

System.***out***.println("Elements of the second array after copying elements from the first array:");

**for**(i=0;i<arr2.length;i++)

{System.***out***.print(arr1[i]+" ");}

}}

**Output:**Elements of the original array:

12 3 5 78

Elements of the second array after copying elements from the first array:

12 3 5 78

**3.Write a program to find the frequency of each element in a given array.**

**Solution:**

**package** assignment3;

**class** Frequency {

**publicstaticvoid** main(String[] args) {

**int**arr[]= {12,34,2,6,4,3,3,34},i;

**int**count;

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

{count=1;

**for**(**int**j=i+1;j<arr.length;j++)

{**if**(arr[i]==arr[j] &&arr[i]!='\0')

{arr[j]='\0';

count++;

}

}

**if**(arr[i]!='\0')

System.***out***.println("Frequency of "+arr[i]+" is "+count);

}

}

}

**Output:**Frequency of 12 is 1

Frequency of 34 is 2

Frequency of 2 is 1

Frequency of 6 is 1

Frequency of 4 is 1

Frequency of 3 is 2

**4.Write a program to Left Rotate the Elements of an array.**

**Solution:**

**package** assignment3;

**import**java.util.Scanner;

**publicclass** Qstn4 {

**publicstaticvoid** main(String[] args) {

Scanner s=**new**Scanner(System.***in***);

**int**arr[]= {2,2,3,4};

**int**n,tmp=0,j;

System.***out***.println("Enter no. of left rotations");

n=s.nextInt();

**for**(**int**i=0;i<n;i++)

{tmp=arr[0];

**for**(j=0;j<arr.length-1;j++)

{arr[j]=arr[j+1];

}

arr[j]=tmp;

}

System.***out***.println("Array after rortaion is:");

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

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

}

}

**Output:**Enter no. of left rotations

3

Array after rortaion is:

4 2 2 3

**5.Write a java program to print the duplicate elements of an array.**

**Solution:**

**package** assignment3;

**import**java.util.Arrays;

**publicclass** Duplicate {

**publicstaticvoid** main(String[] args) {

**int**[] my\_array = {1, 2, 5, 5,2,2, 6, 6, 7,7,7,9, 2};

**int**tmp=0;

System.***out***.println("Duplicate Elements are:");

Arrays.*sort*(my\_array);

**for** (**int**i = 0; i<my\_array.length-1; i++)

{

**int**count=1;

**while**(my\_array[i]==my\_array[i+1])

{

count++;

tmp=my\_array[i];

i++;

}

**if**(count>1)

System.***out***.print(" "+tmp);}

}}

**Output:**Duplicate Elements are:

2 5 6 7

**6.Write a java program to print elements of an array in reverse order.**

Solution:

**package** assignment3;

**publicclass** Qstn6 {

**publicstaticvoid** main(String[] args) {

**int**arr[]= {12,89,20,34,54};

**int**n=arr.length;

System.***out***.println("Elements of the original array are:");

**for**(**int**i=0;i<n;i++)

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

System.***out***.println("\nArray Elements in reverse order:");

**for**(**int**i=n-1;i>=0;i--)

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

}

}

**Output:**

Elements of the original array are:

12 89 20 34 54

Array Elements in reverse order:

54 34 20 89 12

**7.Write a java program to print Elements of an array on even position.**

**Solution:**

**package** assignment3;

**import**java.util.Scanner;

**publicclass** Qstn7 {

**publicstaticvoid** main(String[] args) {

**int**arr[]= **newint**[20];

**int**n;

Scanner s=**new**Scanner(System.***in***);

System.***out***.println("Enter no. of elements you want to enter into the array\n");

n=s.nextInt();

System.***out***.print("Enter Elements");

**for**(**int**i=0;i<n;i++)

arr[i]=s.nextInt();

System.***out***.println("Elements at the even position are:");

**for**(**int**i=0;i<n;i++)

{**if**(i%2!=0)

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

}

}}

**Output:**

Enter no. of elements you want to enter into the array

5

Enter Elements12 56 78 23 89

Elements at the even position are:

56 23

**8.Write a java program to print elements of an array on odd position.**

**Solution:**

**package** assignment3;

**import**java.util.Scanner;

**publicclass** Qstn8 {

**publicstaticvoid** main(String[] args) {

Scanner s=**new**Scanner(System.***in***);

**int**arr[]=**newint**[20];

**int**n;

System.***out***.println("Enter no. of elements");

n=s.nextInt();

System.***out***.println("Enter the array elements");

**for**(**int**i=0;i<n;i++)

arr[i]=s.nextInt();

System.***out***.println("Elements at odd position are:");

**for**(**int**i=0;i<n;i++)

{**if**(i%2==0)

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

}

}

}

**Output:**

Enter no. of elements

4

Enter the array elements

45 5

8 9

Elements at odd position are:

45 8

**9.Write a java program to print the largest element of an array.**

**Solution:**

**package** assignment3;

**import**java.util.Scanner;

**publicclass** Qstn9 {

**publicstaticint** maximum(**int**[] arr)

{**int**max=arr[0];

**for**(**int**i=1;i<arr.length;i++)

{**if**(arr[i]>max)

max=arr[i];

}

**return**max;

}

**publicstaticvoid** main(String[] args) {

**int**arr[]=**newint**[20];

Scanner s=**new**Scanner(System.***in***);

**int**n;

**int**max;

System.***out***.println("Enter no. of elements");

n=s.nextInt();

System.***out***.println(" Enter Elements");

**for**(**int**i=0;i<n;i++)

arr[i]=s.nextInt();

max=*maximum*(arr);

System.***out***.print("Maximum of the array is "+max);

}

}

**Output:**

Enter no. of elements

5

Enter Elements

12 45 89 63 4

Maximum of the array is 89

**10.Write a java program to print the smallest element of an array.**

**Output:**

**package** assignment3;

**publicclass** Smallest {

**publicstaticint** minimum(**int**[] arr)

{**int**min=arr[0];

**for**(**int**i=1;i<arr.length;i++)

{**if**(arr[i]<min)

min=arr[i];

}

**return**min;

}

**publicstaticvoid** main(String[] args) {

**int**arr[]= {12,45,78,3,5};

**int**min;

min=*minimum*(arr);

System.***out***.print("Minimum of the array is "+min);

}

**}**

**Output:**Minimum of the array is 3