JBK1013-Array

Program for declare,initialize and display array

```
public class Testarray{
public static void main(String args[]){
int a[]=new int[5];//declaration  and instantiation
a[0]=10;//initialization
a[1]=20;
a[2]=70;
a[3]=40;
a[4]=50;
//printing array
for(int i=0;i<a.length;i++)//length is the property
of array
System.out.println(a[i]);

}   }
```

Java program that uses array

```
public class Program {
    public static void main(String[] args) {
        // Create int array.
        int[] array = new int[5];
        // Assign first three elements.
        array[0] = 1;
        array[1] = 10;
        array[2] = 100;
        // Loop over elements.
        for (int i = 0; i < array.length; i++) {
            // Get value.
            int value = array[i];
            // Print value.
```

```
        System.out.println(value);
    }
  } }
```

Java program that uses char array, loop

```java
public class Program {
    public static void main(String[] args) {
        // Create an array of four chars.
        char[] values = new char[4];
        values[0] = 'j';
        values[1] = 'a';
        values[2] = 'v';
        values[3] = 'a';

        // Loop over array with for-loop.
        for (char value : values) {
           System.out.println(value);
        }
    } }
```

Program for diplay declared array

```java
class Testarray1{
public static void main(String args[]){

int a[]={33,3,4,5};//declaration, instantiation and
initialization

//printing array
for(int i=0;i<a.length;i++)//length is the property
of array
System.out.println(a[i]);
```

```
 }}
class Test{
   public static void main (String[] args) {
      int arr1[] = {1, 2, 3};
      int arr2[] = {1, 2, 3};
      if (arr1 == arr2) // Same as arr1.equals(arr2)
        System.out.println("Same");
      else
        System.out.println("Not same");
   } }
```

Java program that initializes arrays

```
public class Program {
   public static void main(String[] args) {

      // Two input arrays.
      int[] array1 = {1, 3, 5};
      String[] array2 = {"frog", "toad", "squirrel"};

      // Array lengths.
      System.out.println(array1.length);
      System.out.println(array2.length);

      // First elements in each array.
      System.out.println(array1[0]);
      System.out.println(array2[0]);
   } }
```

Java program that loops over array in reverse

```
public class Program {
   public static void main(String[] args) {
```

```java
boolean[] values = { false, true, true, true };

// Loop over array elements in reverse order.
for (int i = values.length - 1; i >= 0; i--) {
    System.out.println(values[i]);
}  }  }
```

Java that merges two arrays

```java
import java.util.Arrays;
public class Program {
    public static void main(String[] args) {
        int[] values = { 10, 20, 30 };
        int[] values2 = { 100, 200, 300 };
        // Merge the two arrays with for-loops.
        int[] merge = new int[values.length + values2.length];
        for (int i = 0; i < values.length; i++) {
            merge[i] = values[i];
        }
        for (int i = 0; i < values2.length; i++) {
            merge[i + values.length] = values2[i];
        }
        // Display the merged array.
        System.out.println(Arrays.toString(merge));
    } }
```

Program for display addition of two array

```java
class Testarray5{
public static void main(String args[]){
//creating two matrices
int a[][]={{1,3,4},{3,4,5}};
```

```
int b[][]={{1,3,4},{3,4,5}};

//creating another matrix to store the sum of two
matrices
int c[][]=new int[2][3];

//adding and printing addition of 2 matrices
for(int i=0;i<2;i++){
for(int j=0;j<3;j++){
c[i][j]=a[i][j]+b[i][j];
System.out.print(c[i][j]+" ");
}
System.out.println();//new line
} } }
```

Program for display average of array elements

```
class Average {
 public static void main(String args[]) {

  double nums[] = {10.1, 11.2, 12.3, 13.4, 14.5};//
Here We Define Array
  double result = 0; // Result variable to Store the
sum of array of values
  int i;

  for(i=0; i<5; i++)
   result = result + nums[i]; //addition of Values
  System.out.println("Average is " + result / 5);
} }
```

Program for find length of array

```
class Length {
```

```
  public static void main(String args[]) {
    int a1[] = new int[10];
    int a2[] = {3, 5, 7, 1, 8, 99, 44, -10};
    int a3[] = {4, 3, 2, 1};

    System.out.println("length of a1 is " + a1.length);
    System.out.println("length of a2 is " + a2.length);
    System.out.println("length of a3 is " + a3.length);
  } }
public class Program {
  public static void main(String[] args) {

    // Use initialize syntax.
    int[][] values = { { 1, 2 }, { 3, 4 } };
    System.out.println(values[0][0]);
    System.out.println(values[1][0]);
    System.out.println(values[0][1]);
    System.out.println(values[1][1]);
  } }
```

Java program that creates 3D array

```
public class Program {
  public static void main(String[] args) {

    // Create space cube with 9 points.
    byte[][][] space = new byte[3][3][3];
    space[0][0][0] = 10;
    space[1][1][1] = 20; // Middle of the cube.
    space[2][2][2] = 30;

    // Display points in our space-cube.
    System.out.println(space[0][0][0]);
```

```java
        System.out.println(space[1][1][1]);
        System.out.println(space[2][2][2]);
   } }
```

Program for Copying an array to another

```java
public class CopyArray {
 public static void main(String[] args) {
 int array1[]= {2,3,4,5,8,9};
 int array2[] = new int[6];
 System.out.println("array:");
 System.out.print("[");
 for (int i=0; i<array1.length; i++){
 System.out.print(" "+array1[i]);
 }
 System.out.print("]");
 System.out.println("\narray1:");
 System.out.print("[");
 for(int j=0; j<array1.length; j++){
 array2[j] = array1[j];
 System.out.print(" "+ array2[j]);
 }
 System.out.print("]");
 } }
```

Program for sort interger array

```java
public class SortIntArrayInJava {
  public static void bubbleSort(int[] arr) {
    int j = 0;
    int tmp;
    boolean sorted = false;
    while (!sorted) {
```

```
        sorted = true;
        j++;
        for (int i = 0; i < arr.length - j; i++) {
          if (arr[i] > arr[i + 1]) {
            tmp = arr[i];
            arr[i] = arr[i + 1];
            arr[i + 1] = tmp;
            sorted = false } } }
   }
   public static void main(String[] args) {
     int[] thisIsAnIntArray = { 5, 1, 100, 50, 75, 12, 89,
51, 11, 28, 99 };
     bubbleSort(thisIsAnIntArray);

System.out.println(Arrays.toString(thisIsAnIntArray)); } }
```

Program for accept array from user and display it

```
import java.util.*;
class A1{
 public static void main(String[] args){
   int[] z = new int[10];
   Scanner s = new Scanner(System.in);
System.out.println("Enter 10 integers of array");
 for (int i=0;i<10;i++){
System.out.println("Enter array element");
 z[i] = s.nextInt();
  }
System.out.println("You have entered");
  for (int i=0;i<10;i++){
    System.out.println(z[i]);
  } } }
```