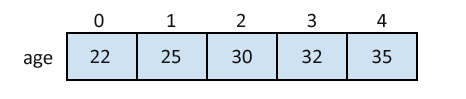
**ARRAY**

Collection of elements with similar datatype



**Advantages**

* **Code Optimization:** It makes the code optimized, we can retrieve or sort the data efficiently.
* **Random access:** We can get any data located at an index position.

**Disadvantages**

* **Size Limit:** We can store only the fixed size of elements in the array. It doesn't grow its size at runtime. To solve this problem, collection framework is used in Java which grows automatically.

**Types of Array in java**

There are two types of array.

* Single Dimensional Array [ ]
* Multi Dimensional Array [ ] [ ]

**Single Dimensional Array**

**Example 1:**

public class ArrayEx {

public static void main(String[] args) {

int[ ] a= {1,23,45};

for(int i=0;i<3;i++) {

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

}

System.out.println(" ");

}

}

**Example 2:**

public class ArrayEx {

public static void main(String[] args) {

int b[ ]=new int[3];

b[0]=45;

b[1]=56;

b[2]=56;

for(int i=0;i<3;i++) {

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

}

System.out.println(" ");

}

**Example 3:**

**import** java.util.Scanner;

**public** **class** ArrayEx {

**public** **static** **void** main(String[] args) {

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

System.***out***.println("Enter the num of rows");

**int** r=s.nextInt();

**int** a[ ]=**new** **int**[r];

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

**for**(**int** i=0;i<r;i++) {

a[i]=s.nextInt();

}

System.***out***.println("the values of array are");

**for**(**int** i=0;i<r;i++) {

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

}

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

}

}

}

**Multi Dimensional Array**

**Example 1:**

public class ArrayEx {

public static void main(String[] args) {

*int[ ][ ] a= {{1,23,45},{12,56,345}};*

*for(int i=0;i<2;i++) {*

*for(int j=0;j<3;j++) {*

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

}

System.out.println(" ");

}

}

**Example 2:**

public class ArrayEx {

public static void main(String[] args) {

int b[][]=new int[2][2];

b[0][0]=45;

b[0][1]=56;

b[1][0]=87;

b[1][1]=23;

System.out.println(b[0][1]);

for(int i=0;i<2;i++) {

for(int j=0;j<2;j++) {

System.out.print(b[i][j]+" ");

}

System.out.println(" ");

}

}

**Example 3:**

import java.util.Scanner;

public class ArrayEx {

public static void main(String[] args) {

System.*out*.println("Enter the num of rows");

int r=s.nextInt();

System.*out*.println("Enter the num of columns");

int c=s.nextInt();

int a[][]=new int[r][c];

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

for(int i=0;i<r;i++) {

for(int j=0;j<c;j++) {

a[i][j]=s.nextInt();

}

}

System.*out*.println("the values of array are");

for(int i=0;i<r;i++) {

for(int j=0;j<c;j++) {

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

}

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

}

}

}