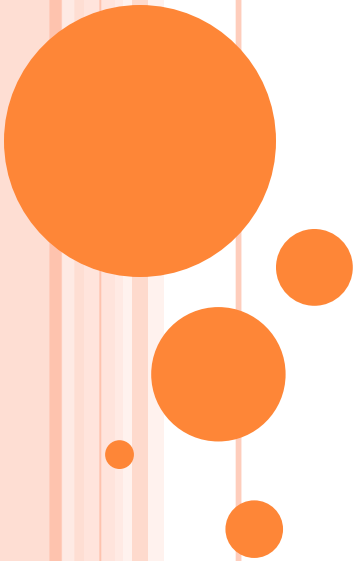
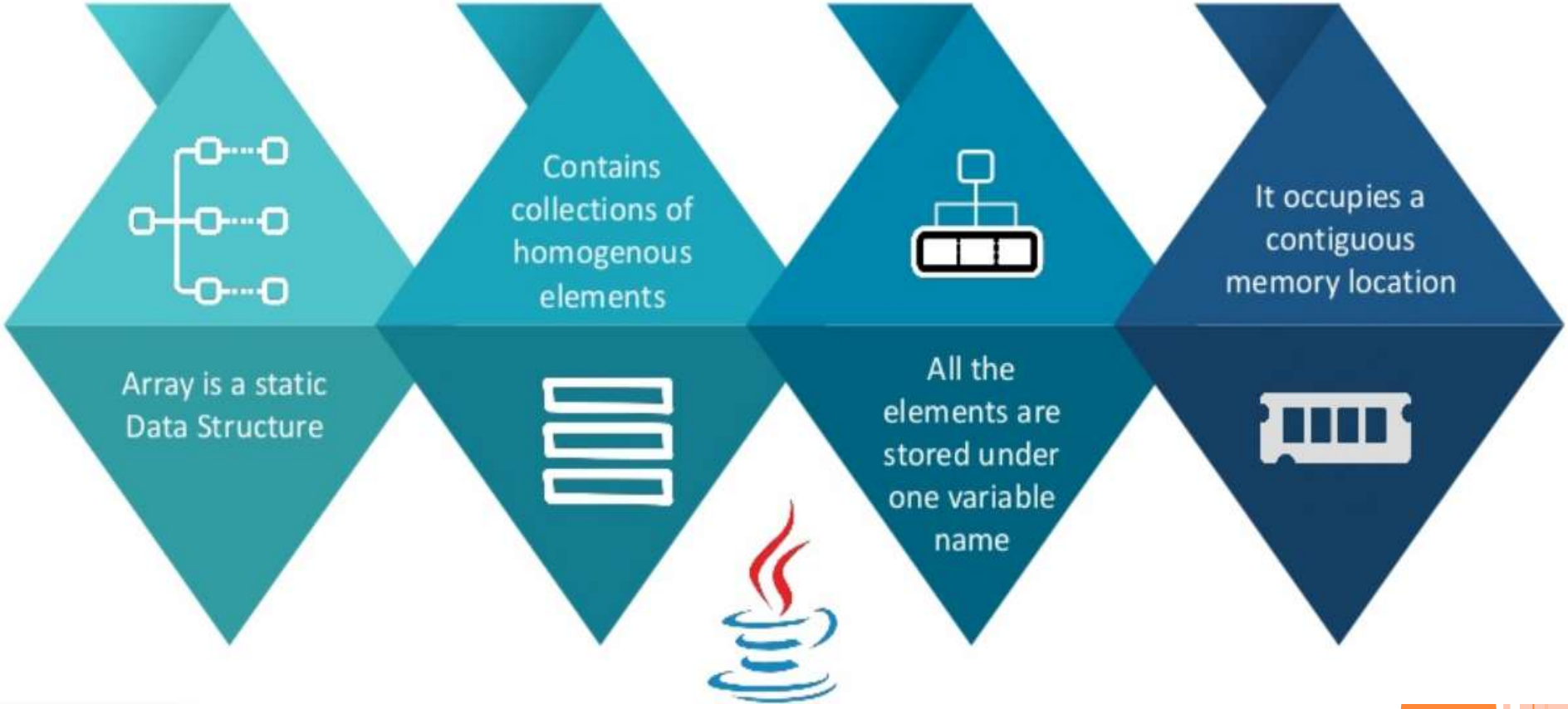


Java arrays

ARRAYS

- Arrays in Java is similar to that of C++ or any other programming language.
- An array is a data structure which holds the sequential elements of the same type.

Arrays


Array is a static Data Structure
Contains collections of homogenous elements
All the elements are stored under one variable name
It occupies a contiguous memory location

Types Of Arrays

Single Dimensional 01

Single Dimensional or 1-D array is a type of linear array in which elements are stored in a continuous row

Two Dimensional 02

Two Dimensional or 2-D array is a type of matrix in which elements are stored in rows and columns

Multi Dimensional 03

Multi Dimensional array is a type of nested array

Creating an array

Creation of array involves three steps.

1. Declaring the array.
2. Creating memory locations.
3. Putting values into the memory locations.

Declaration of arrays

Arrays in Java may be declared in two forms :

Form 1

```
type arrayname[ ];
```

Form 2

```
type [ ] arrayname;
```

Examples:

```
int          number[ ];
float        average[ ];
int[ ]       counter;
float[ ]     marks;
```

Remember, we do not enter the size of the arrays in the declaration.

Creation of arrays

- After declaring an array, we need to create it in the memory. Java allows us to create arrays using new operator only.

- **arrayname = new type[size];**

- Examples :

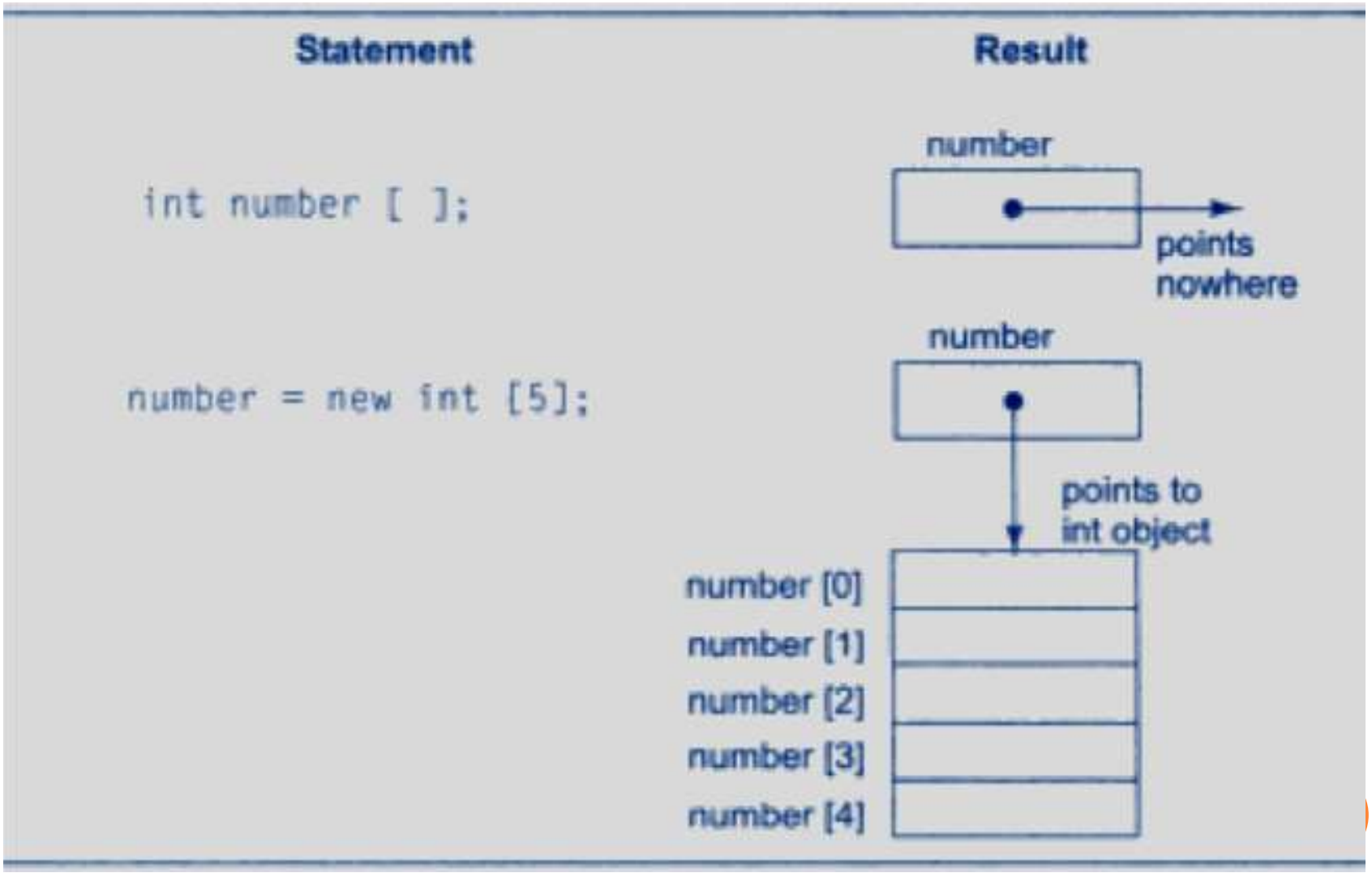
  number = new int[5];

  average = new float[10];

- It is possible to combine the two steps – declaration and initialization .

- **int number [ ] = new int [5];**
- **int [ ] number = new int [5];**

Creation of arrays



Java Arrays – 2 Dimensional

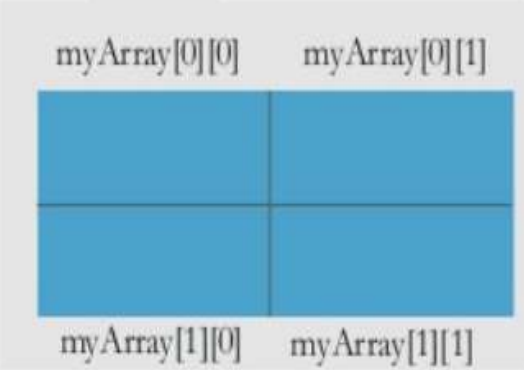
Like a 1D array, a 2D array is also a collection of data cells, all of the same type, which can be given a single name

```
datatype[][] arrayRefVar   =   new dataType[row][col];
```

```
int[][] myArray    =    new int[2][2]
```

or

int myArray [ ] [ ] = new int [2] [2];




```
myArray[0][0]   =   100
```