ARRAYS IN JAVA

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ARRAYS

An array can be considered as a group which is a collection of like variables referred by a common name

	0	1	2	3	4	5
Numbers	123	400	566	688	24	1024

The entire array is referred by a single name

Each index has a value.

- An array can be of any data type for example: Float,String etc
- An element of an array is referred by its index.

ARRAY DECLARATION

- The declaration of an array is as follows:-

type variable_name[ ];

Data type   Array name

For example: int [ ] result= new int[10];

float [ ] result= new float[400];

char[ ] codes= new char[1700];

boolean[ ] flags= new boolean[30];

ARRAY INITIALIZATION

- Initialization of an array is defined by giving values to an array.

- The values are seperated by commas and enclosed in braces.

- Examples:-

    int [ ] scores={26,89,233,344,24,789};

    char [ ] grades ={'A','B','C'};

Note when an array is initialized:

- new operator is not used.

- size value is not specified.

PROCESSING ARRAYS

- All array indexes start with index zero.
- A specified element of an array can be accessed by specifying its index within square brackets.

    Example: int [ ] scores={26,89,233,344,24,789};

    System.out.println(scores[4]);

- A for (   ) loop is used to process each of the elements present in an array turn by turn.
- The loop is controlled by a controlled variable i, which is used to access array elements.

    For Example:

    int scores[ ]=new int[2];

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

                    System.out.println("Numbers:"+scores[i]);

BOUND CHECKING

- Once an array is created, it has a fixed size and the index must be in bounds (0 to N–1) .

- The java interpreter throws ArrayIndexOutOfBoundsException if an array index is out of bounds.

- If an array result contains 100 values then its index must range from 0 to 99. If it does not happen it will cause the above exception to be thrown.

For example: for(int i=0 ; i<=100 ; i++)

result[i]=i*100;

Thank You.

Any Questions?