Arrays

Q1) what do you mean by an Array?

Ans) Array is a data structure in programming that stores a collection of elements of the same type in contiguous memory locations. It allows you to group related data items together under a single variable name, making it easier to access and manipulate the data.

Q2) How to create an Array?

Ans) by declaring a variable of array type & allocating memory to it using 'new' keyword.

Eg - int [ ] num = new int [3];

Q3) Can we change the size of an array at run time?

Ans) we can't change size of an array after it's constructed. However, you can change the number of elements in an arraylist.

Q4) Can you declare an array without assigning the size of an array?

Ans) Yes, We can declare an array without size but before using it needs to be initialized.

Q5) What is the default value of Array?

Ans) It depends on its data type, each element of an array is assigned a default value

0 in case of int

false in case of boolean

null in case of String

and Unicode (\u0000) in case of char.

Q6) What is a 1D array with an Example?

Ans) One - dimensional array is a collection of elements of the same data type.

eg

```
int [] a = new int [5];
a[0] = 10 ;   a[1] = 20 ;  a[3] = 30 ;  a[4] = 50 ;
```

or

```
int [] a = { 10, 20, 30, 40, 50};
```

Q7) Write a program of 2D Array?

Ans)

```
int arr[][] = {{1,2,3},{2,4,5},{4,4,5}};

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

        System.out.print (arr[i][j] + " ");
    }
    System.out.println (); }
```

Output => 1 2 3
          2 4 5
          4 4 5.