Assignment 9

Ans 1. Array is an object which contains elements of a similar data type. The elements of an array are stored in a contiguous memory location. It is a data structure where we store similar elements. We can store only a fixed set of elements in a array.

Ans 2.Creation of array:

Single dimensional array:

- int[]a;
- int a[];
- int a[5];
- int a[]=new int [6];

Ans 3.No we can’t change the size of an array after it has been constructed.

If the array were to be resized later on, then other information would have to be moved somewhere else in order for the array to get bigger. That's creates a lot of shuffling that we don't want to deal with, so computer architects disallow array resizing to make things simpler.

Ans 4. Yes. We can declare an array without size but before using it needs to be initialized.

String[] strArray; //declare without size

Ans 5. Since no values are passed during initialization, all elements of the array are set to their default value of 0.

Ans 6. 1- dimensional array:
Single Dimensional Array in Java is basically a linear array that allows its user to store multiple values of the same data type. It's a collection of data that stores elements of the same type in a sequentially allocated space in memory. These arrays can be utilized to store both simple and complex data types.
Syntax:
datatype[] variable_name = new datatype[size];

Ans 7. Program for 2 D array:

```
class multiArray {
    public static void main(String[] args)
{
        int[][] a = {{1, 2, 3}, {4, 5, 6, 9}, {7} };
```

```
        System.out.println("Length of row 1: " + a[0].length);
        System.out.println("Length of row 2: " + a[1].length);
        System.out.println("Length of row 3: " + a[2].length);
    }
}
```

Output:

```
Length of row 1: 3
Length of row 2: 4
Length of row 3: 1
```