Data Structures: Lab 3

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Empty Array

- Check if array contains null

```
int arr[] = null;
if (arr == null) {
System.out.println("array is null");
}
```

- Having zero elements

```
arr = new int[0];
if (arr.length == 0) {
System.out.println("array is empty");
}
```

2-D array (Matrix)

- Types

```
int[][] integer2DArray; // 2D integer array

String[][] string2DArray; // 2D String array

double[][] double2DArray; // 2D double array

boolean[][] boolean2DArray; // 2D boolean array

float[][] float2DArray; // 2D float array

double[][] double2DArray; // 2D double array
```

Initialize 2-D array

data_type[][] array_Name = new data_type[no_of_rows][no_of_columns];

array_Name [0][0] = 5; // assign value 5 to first row first column of 2-D array

String comparison vs Integer Comparison

```
String s = "Test String";

if (s.equals("/quit")){

System.out.println(“Not equal”)

}


Int s = 2;

if (s==5){

System.out.println(“Not equal”)

}
```

String comparison vs Integer Comparison

String s = "something", t = "maybe something else";

if (s == t) // Legal, but usually WRONG (used for integer).

if (s.equals(t)) // RIGHT

if (s > t) // ILLEGAL

if (s.compareTo(t) > 0) // also CORRECT>

Input from User

```
import java.util.Scanner;

Scanner scanner = new Scanner (System.in);

System.out.print("Enter your name");

String name = scanner.next(); // Get what the user types.

int i = scanner.nextInt();

scanner .close();
```