

## Documentation

### 1st Question

**Package:** `tejasvi.assignment.data`

This program has a constructor that contains 2 instance variables without initialization and a method to display these values. It also contains another method that has 2 local variables without initialization, which attempts to display these local variable values.

Learning- Instance variables are initialized with the default values if there are not assigned or initialized with any value

**Int-0**

**Character-null character(\u0000)**

### 2nd Question

**Package:** `tejasvi.assignment.singleton`

This program has a non-static string instance variable. A static method with a string parameter initializes the string and returns an object. The class also contains a method to display the string value.

Learning-

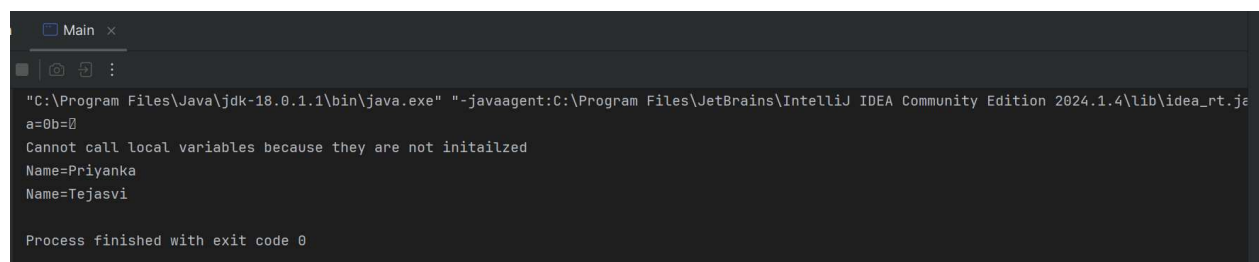
**A proper Singleton pattern should ensure only one instance of the class.**

**But in this manner we are able to get multiple instances for the names string.**

### 3rd Question

**Package:** `tejasvi.assignment.main`

In this program, objects are created for both classes in the above two packages, and their methods are called. The method that tries to display local variables without initialization throws an error ("variables might not have been initialized") because local variables are not initialized with default values during declaration. The static method in the second class results in the creation of multiple instances with different names, which is not the intended behavior of a Singleton pattern.



```

Main x
"C:\Program Files\Java\jdk-18.0.1.1\bin\java.exe" "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.1.4\lib\idea_rt.je
a=0b=0
Cannot call local variables because they are not initialized
Name=Priyanka
Name=Tejasvi

Process finished with exit code 0
```