

Department:- BCA
Faculty Name:- Er. Ashish Kumar
Subject:- JAVA(5th sem)
Topic:-Methods in java

Java static keyword

- The **static keyword** in Java is used for memory management mainly.
- We can apply static keyword with variables, methods, blocks and nested classes.
- The static keyword belongs to the class than an instance of the class.

The static can be:

1. **Variable (also known as a class variable)**
2. **Method (also known as a class method)**
3. **Block**
4. **Nested class**

1. static variable :-

- If we declare any variable as static, it is known as a static variable.
- The static variable can be used to refer to the common property of all objects (which is not unique for each object), for example, the company name of employees, college name of students, etc.
- The static variable gets memory only once in the class area at the time of class loading.
- It makes your program **memory efficient** (i.e., it saves memory).

Example:-

```
C:\Users\ashishjha\Desktop\java\TestStudent.java - Notepad++
File Edit Search View Encoding Language Settings Tools Macro Run Plugins Window ?

change log ex1.css excss1.css nlncss.html intemalcss.html TestMainOverload.java link.html TestStudent.java

1 //Example of static variable.
2 class Student
3 {
4     int rollno;//instance variable
5     String name;
6     static String college ="tp college";//static variable
7     //constructor
8     Student(int r, String n)
9     {
10        rollno = r;
11        name = n;
12    }
13    //method to display the values
14    void display ()
15    {
16        System.out.println(rollno+" "+name+" "+college);
17    }
18 }
19
20 class TestStudent
21 {
22     public static void main(String args[])
23     {
24         Student s1 = new Student(01,"amit");
25         Student s2 = new Student(02,"sumit");
26         s1.display();
27         s2.display();
28     }
29 }
```

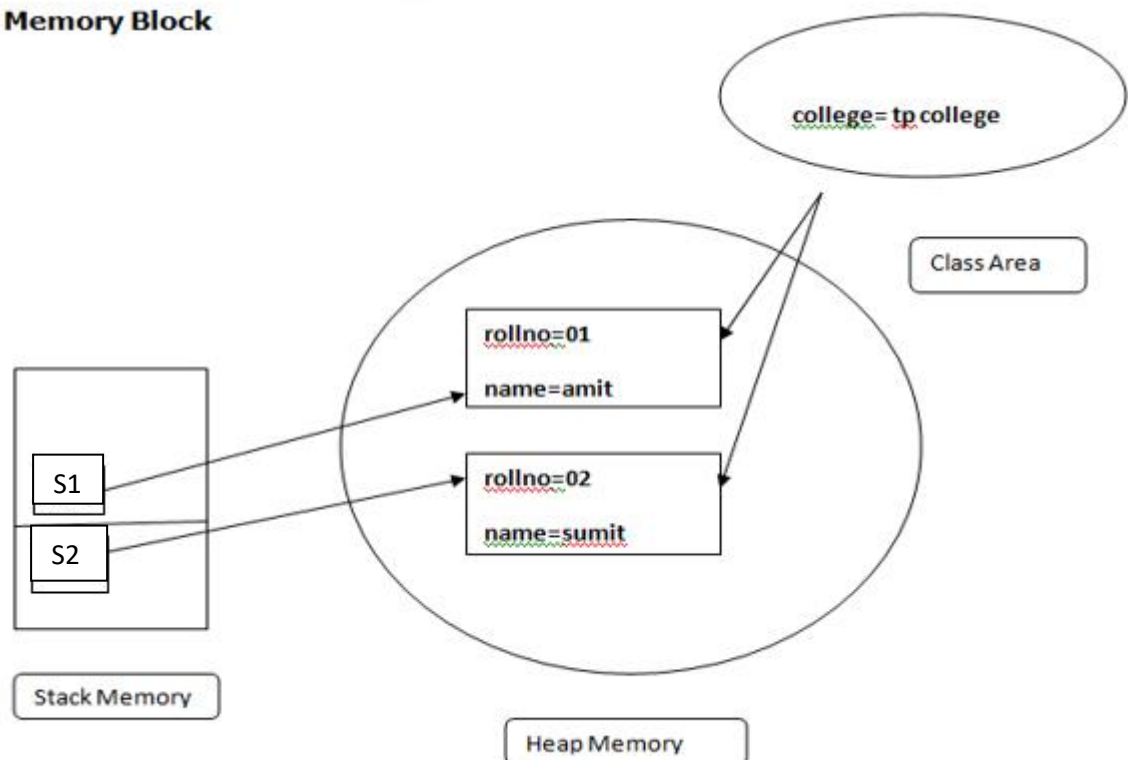
Command Prompt

```
C:\Users\ashishjha\Desktop\java>java TestStudent
1 amit tp college
2 sumit tp college

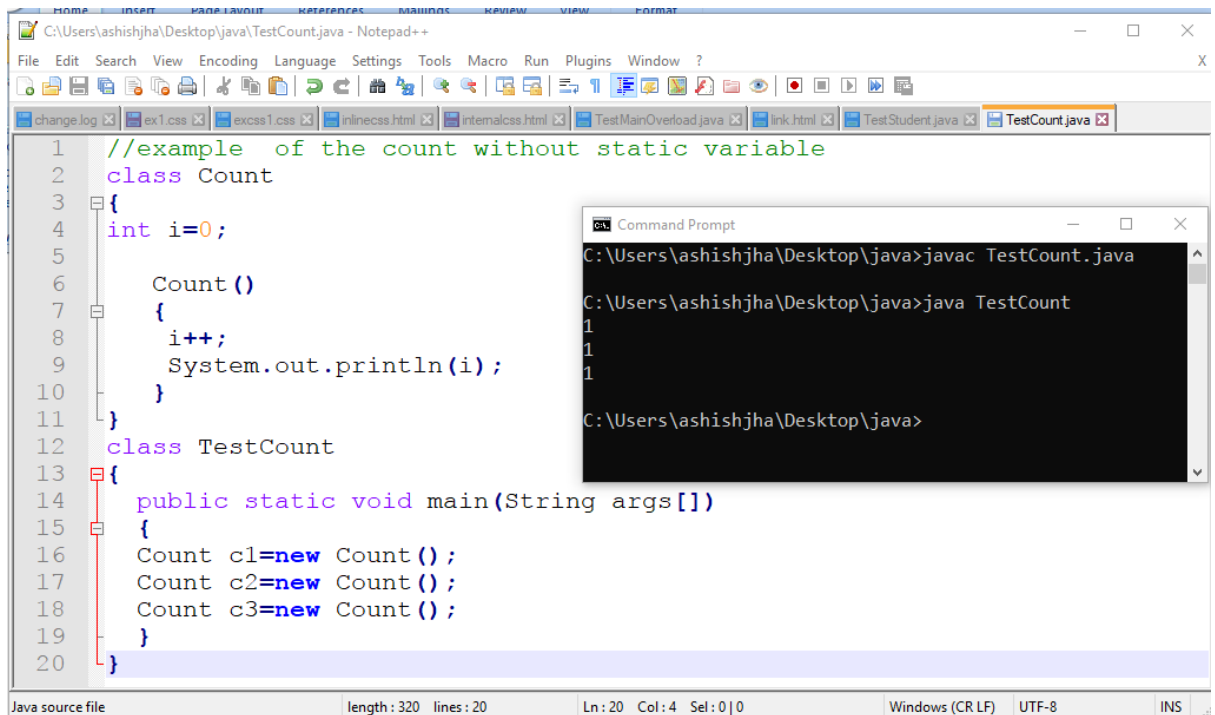
C:\Users\ashishjha\Desktop\java>
```

Java source file length: 620 lines: 29 Ln: 28 Col: 5 Sel: 0|0 Windows (CR LF) UTF-8 INS

Memory Block



Example(Program of the count without static variable)



The screenshot shows a Notepad++ window with a Java file named TestCount.java. The code defines a Count class with an instance variable i and a TestCount class with a main method that creates three Count objects. A Command Prompt window shows the compilation and execution of the program, resulting in three lines of output: 1, 1, 1.

```
//example of the count without static variable
class Count
{
    int i=0;

    Count ()
    {
        i++;
        System.out.println(i);
    }
}

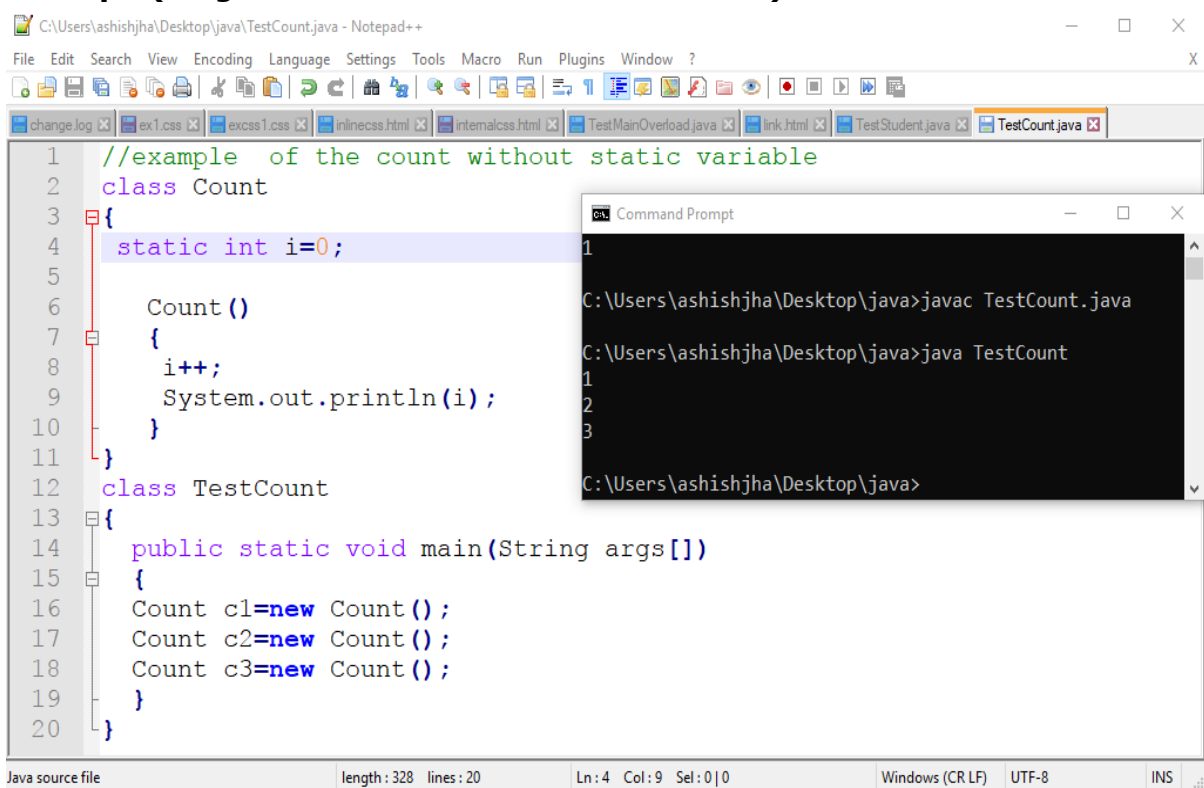
class TestCount
{
    public static void main(String args[])
    {
        Count c1=new Count ();
        Count c2=new Count ();
        Count c3=new Count ();
    }
}
```

```
C:\Users\ashishjha\Desktop\java>javac TestCount.java

C:\Users\ashishjha\Desktop\java>java TestCount
1
1
1

C:\Users\ashishjha\Desktop\java>
```

Example(Program of the count with static variable)



The screenshot shows a Notepad++ window with a Java file named TestCount.java. The code defines a Count class with a static instance variable i and a TestCount class with a main method that creates three Count objects. A Command Prompt window shows the compilation and execution of the program, resulting in three lines of output: 1, 2, 3.

```
//example of the count without static variable
class Count
{
    static int i=0;

    Count ()
    {
        i++;
        System.out.println(i);
    }
}

class TestCount
{
    public static void main(String args[])
    {
        Count c1=new Count ();
        Count c2=new Count ();
        Count c3=new Count ();
    }
}
```

```
C:\Users\ashishjha\Desktop\java>javac TestCount.java

C:\Users\ashishjha\Desktop\java>java TestCount
1
2
3

C:\Users\ashishjha\Desktop\java>
```