**Day 12\_Java Assignment**

**1. Problem Description:**

What is a Static Method?

**2. My Solution:**

* static is a keyword. If we declare any method as static, it is known as the static method. The core advantage of the static method is that there is no need to create an object to invoke the static method.
* A static method belongs to the class rather than the object of a class.
* A static method can be used to create utility and helper classes that do not require objects.
* A static method can access and modify static variables (class level variables) without using the class’s object (instance).
* A static method can call other static methods directly, without using an object.

**Restrictions in Static Methods:**

* A static method cannot access non-static data (instance variables) or call non-static methods directly.
* A static method cannot use the this or super keywords, as they refer to the current object and the parent class respectively.
* A static method cannot be overridden by a subclass, as it is bound to the class at compile time.

**Syntax to declare the static method:**

Access\_modifier static void methodName()

{

//method body

}

The name of the class can be used to invoke or access static methods.

**Syntax to call a static method:**

className.methodName();

**Example 1:**

The static method does not have access to the instance variable.

The below example we can see that JVM runs the static method first, followed by creation of class instances. Because no objects are accessible when the static method is used.

**package** static\_concept;

**public** **class** Static4 {

**static** **int** *a* = 40;

**int** b = 50;

**void** simpleDisplay()

{

System.***out***.println(*a*);

System.***out***.println(b);

}

**static** **void** staticDisplay()

{

System.***out***.println(*a*);

}

**public** **static** **void** main(String[] args) {

Static4 obj = **new** Static4();

obj.simpleDisplay();

// Calling static method

*staticDisplay*();

}

}

**Output:**

40

50

40