Dt : 15/12/2020

define length() method?

=>length() method is used to find the length of String and this method is available from 'java.lang.String' class.

Method signature:

public int length();

syntax:

int l = obj.length();

define substring() method?

=>substring() method is used to extract part of string based on index values and this method is also available from 'java.lang.String' class.

Method Signature:

public java.lang.String substring(int,int);

syntax:

String str = obj.substring(6,8);

define toUpperCase() method?

=>toUpperCase() method is used to convert given string into UpperCase and this method is available from 'java.lang.String' class.

Method Signature:

public java.lang.String toUpperCase() method?

syntax:

String str = obj.toUpperCase();

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Note:

=>The methods which are declared with "void" are known as NonReturnType methods and which donot return any value.

=>The methods which are declared without "void" are known as returntype methods and which returns the value.

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***imp**

Blocks in Java:

=>The set-of-statements which are declared with flower brackets({..}) and executed automatically is known as block.

=>Blocks in Java are categorized into two types:

(i)static blocks

(ii)NonStatic blocks(Instance blocks)

(i)static blocks:

=>The blocks which are declared with 'static' keyword are known as static blocks.

syntax:

```
static
{
 //set-of-statements;
}
```

Execution behaviour of static block:

=>static blocks are executed while class loading.

=>Static blocks are executed only once because the class is loaded only once.

Note:

=>In Realtime static blocks are used to hold DB Connection code part of DAO(Data Access Object) layer of MVC(Model View Controller).

Exp program:

```
class Test1 //SubClass
{
	static
	{
System.out.println("===SubClass Static block===");
	}
}
class MainClass9 //MainClass
{
	public static void main(String[] args)
	{
Test1 ob = new Test1();
	}
	static
	{
System.out.println("===MainClass Static block===");
```

```
        }
}
```

(ii)NonStatic blocks(Instance blocks):

=>The blocks which are declared without static keyword are known as NonStatic blocks or Instance blocks.

syntax:

```
{
 //set-of-statements;
}
```

Execution behaviour of NonStatic block:

=>NonStatic blocks are executed while object creation.

=>These NonStatic blocks are executed for all the multiple object creations.

Exp program:

```
class Test2 //SubClass
{
        {
System.out.println("===SubClass NonStatic block===");
        }
}
class MainClass10 //MainClass
{
        public static void main(String[] args)
```

```
        {
Test2 ob1 = new Test2();
Test2 ob2 = new Test2();
Test2 ob3 = new Test2();
Test2 ob4 = new Test2();
        }
}
```

Note:

=>NonStatic blocks are less used when compared to static blocks.

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Dt: 16/12/2020

faq:

wt is the diff b/w

(i)methods

(ii)blocks

=>Methods are executed on method_call,but blocks are executed automatically without block_call.

=>Blocks will have highest priority in execution than methods.

Note:

=>Static blocks will have highest priority in execution than static methods

=>Instance blocks will have highest priority in execution than Instance methods.

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***imp**

Constructors in Java:

=>Constructor is a method having the same name of the class and executed while object creation because the constructor call is available within the object creation syntax attached with new keyword.

Coding Rule:

=>while declaring Constructor we must not use return_type because the constructor will have class_return_type.

Structure of Constructor:

```
Class_name(para_list)
{
  //method_body
}
```

Based on parameters the Constructors are categorized into two types:

(a)Constructors without parameters

(b)Constructors with parameters.

(a)Constructors without parameters:

=>The Constructors which are declared without parameters are known as 0-parameter constructors or Constructors without parameters.

Exp program:

```
class Test //SubClass
{
        static
        {
System.out.println("===Static block===");
        }

        {
System.out.println("===Instance block===");
        }

        Test()//Constructor
        {
System.out.println("===Test()===");
        }

  void add()//Instance method
        {
System.out.println("===add()===");
        }
}
class DCon1 //MainClass
{
        public static void main(String[] args)
```

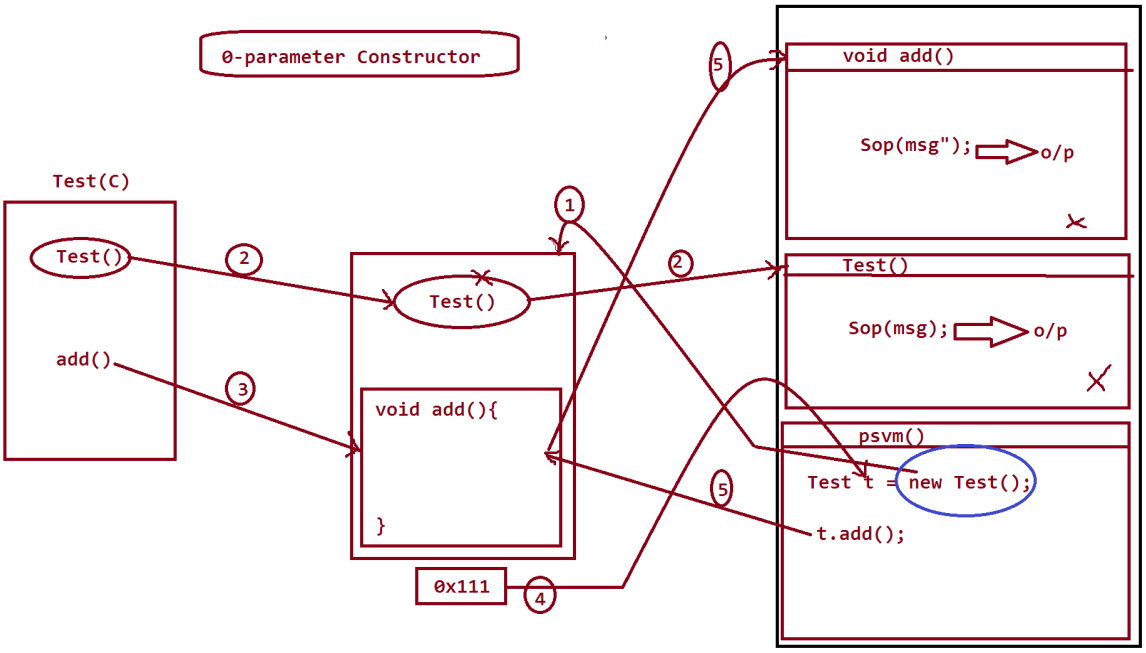
```
        {
Test t = new Test();//Con call
t.add();//method call
t.add();
t.add();
        }
}
```

Execution flow of above program:

ClassFiles:

Test.class

DCon1.class



faq:

wt is the diff b/w

(i)Constructor

(ii)Instance method

=>Constructor is executed while object creation,but the instance method is executed after object creation.

faq:

wt is the diff b/w

(i)Constructor

(ii)Instance block

=>Both components are executed while object creation,but Instance block will have highest priority in execution than Constructor,because Constructor comes under method category.

faq:

wt is the diff b/w

(i)static block

(ii)Constructor

=>Both components are executed only once,but static block is executed while class loading and Constructor is executed while object creation.

faq:

define default constructor?

=>The constructor without parameters added by the compiler at

compilation stage is known as default Constructor.

faq:

In wt situation default constructor is added?

=>The compiler at compilation stage finds the class declared without constructors,then the default constructor is added.
