*Dt : 4/8/2023*

*Ex-1:(Demonstrating Static block in MainClass)*

*Program : DemoBlock1.java*

```
import java.util.Scanner;

class DemoBlock1
{
    static int k;
    static
    {
        System.out.println("====Static block====");
        System.out.println("The value k:"+k);
    }
    public static void main(String[] args)
    {
        Scanner s = new Scanner(System.in);
        System.out.println("Enter the value for k:");
        k = s.nextInt();
        System.out.println("=====main()=====");
        System.out.println("The value k:"+k);
    }
}
```

*o/p:*

*====Static block====*
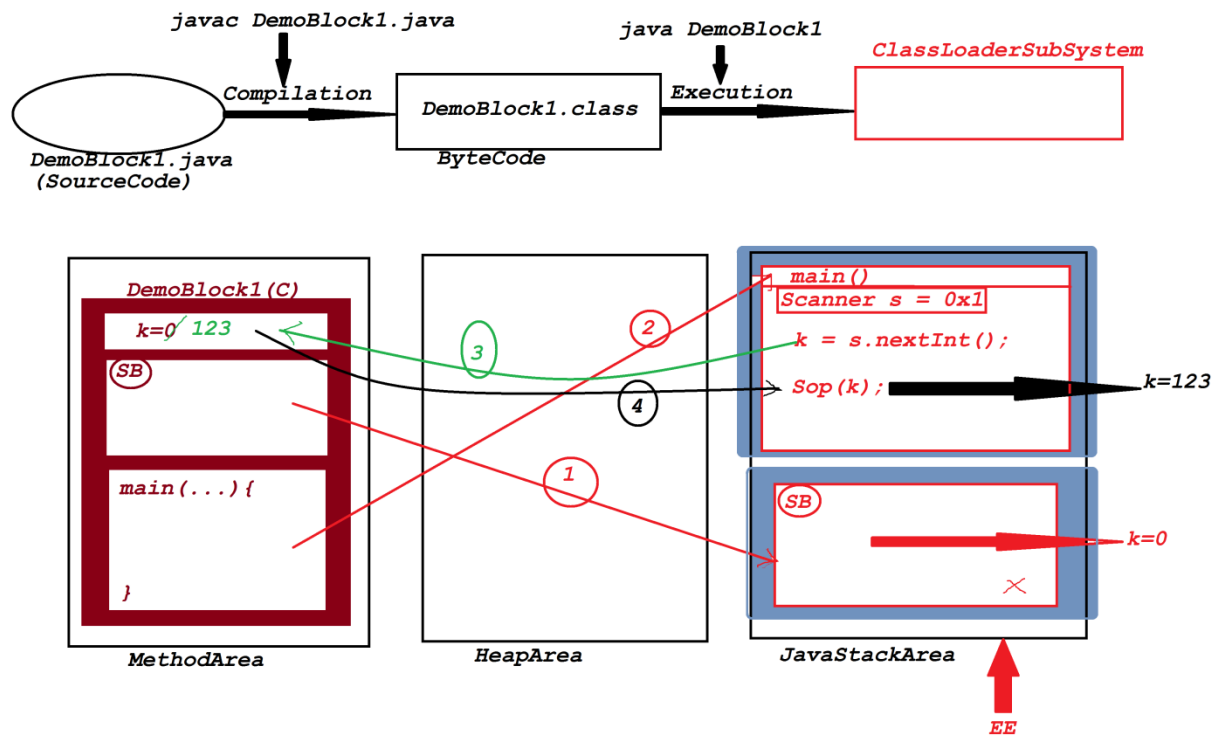
*The value k:0*

*Enter the value for k:*

*123*

*=====main()=====*

*The value k:123*

*Execution flow of above program:*

*ClassFiles:*

*DemoBlock1.class(MainClass)*

javac DemoBlock1.java

java DemoBlock1

ClassLoaderSubSystem

Compilation

DemoBlock1.class

Execution

DemoBlock1.java
(SourceCode)

ByteCode

DemoBlock1(C)

k=0 123

SB

main(...){

}

MethodArea

HeapArea

3

2

1

4

main()

Scanner s = 0x1

k = s.nextInt();

Sop(k);

k=123

SB

k=0

JavaStackArea

EE

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*Ex-2:(Demonstrating Static block in SubClass)*

*Program : DemoBlock2.java*

```java
import java.util.Scanner;

class BTest
{
    static int z;
    static
    {
        System.out.println("=====SubClass-Static Block=====");
        System.out.println("The value z:"+z);
    }
}
class DemoBlock2
{
    public static void main(String[] args)
    {
        Scanner s = new Scanner(System.in);
        System.out.println("Enter the value for z:");
        BTest.z = s.nextInt();
        System.out.println("====main()=====");
```

```
        System.out.println("The value z:"+BTest.z);

    }

}
```

o/p:

Enter the value for z:

123

=====SubClass-Static Block=====

The value z:0

====main()=====

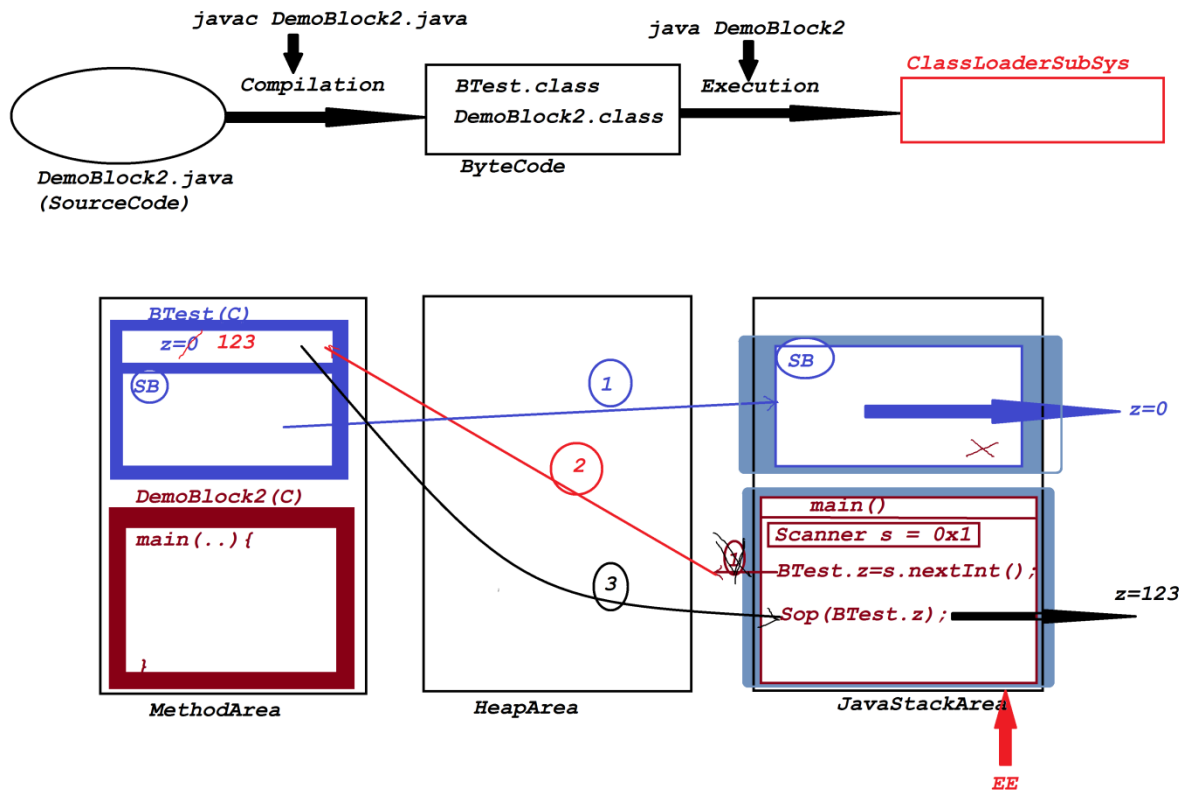The value z:123


Execution flow of above program:

ClassFiles:

  BTest.class

  DemoBlock2.class(MainClass)

```
javac DemoBlock2.java          java DemoBlock2

DemoBlock2.java → Compilation → BTest.class      → Execution → ClassLoaderSubSys
(SourceCode)                    DemoBlock2.class
                                ByteCode
```

BTest(C)
z=0  123
SB

DemoBlock2(C)
main(..){

}

MethodArea

HeapArea

1
2
3

SB
z=0

main()
Scanner s = 0x1
BTest.z=s.nextInt();
Sop(BTest.z);
z=123

JavaStackArea

EE

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*Note:*

 *=>static-block in MainClass will have highest priority in execution than*

*main()-method,because the blocks will have highest priority in execution than*

*methods.*

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*faq:*

*can we execute Java Program with main() method?*

 *=>Yes,we can execute JavaProgram without main() method upto Java6 version,but*

*not posible from Java7 version onwards.*

*=============================================================================*

*2.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 Instance blocks:*

*=>Instance blocks are executed while Object creation process.*

*=>Instance block executes for all multiple Object creations.*

*=>Instance blocks can access Instance Variables and Static Variables*

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