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Roll: 30

Object Oriented programming using JAVA

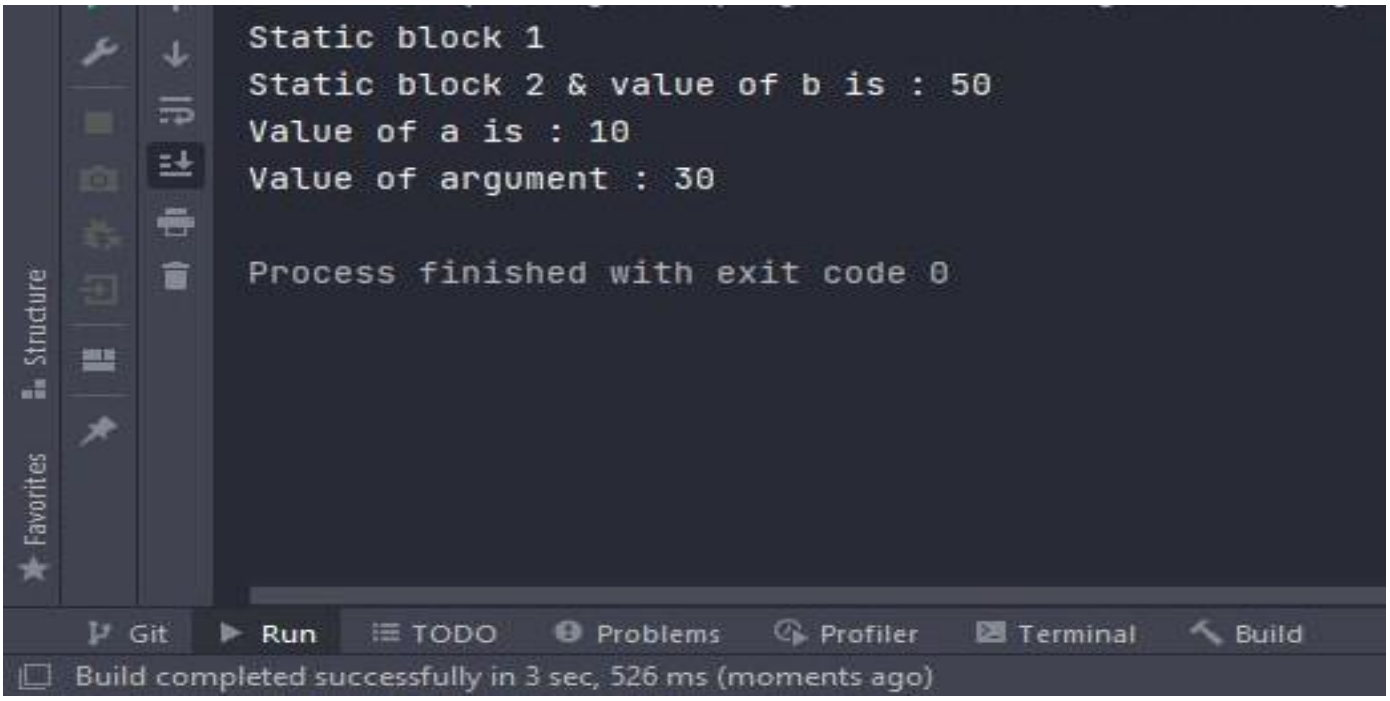
Lab Assessment Test

1. Create a class ‘staticDemo’ which contains method ‘member’ that prints the value of a variable ‘a’ which has initialized in static block and print the value of the argument which will be passed to member method. Create a static block which will initialized another variable ‘b’ in terms of ‘a’ (where b is 4 times of a). Show that when and how static block will be called. Also check whether static block is enough to execute a program without main of your system.

Source Code

```
class staticDemo {
    static int a;
    static int b;

    static {
        a = 10;
        System.out.println("Static block 1");
    }

    static {
        b = 5 * a;
        System.out.println("Static block 2 & value of b is : " + b);
    }

    public static void member(int val) {
        System.out.println("Value of a is : " + a);
        System.out.println("Value of argument : " + val);
    }
}

class stat {
    public static void main(String[] args) {
        staticDemo.member(30);
    }
}
```

Output



Discussion

Static Members load to JVM and load a class for the first time (this is done by the classloader when the class is first referenced in any way) any static blocks or fields are 'loaded' into the JVM and become accessible. The main advantage of static keyword is single copy of memory shared to all instances. Static Block executes first that is class must be loaded before the main method can be executed, which means all static fields and blocks are processed in order and we don’t have to create an object to access static member’s package.