Phase-1 Practice Project: Assisted Practice

3. Write a program in Java to demonstrate synchronization

```java
package Demo;
public class SynchronizationDemo {
    public static void main(String[] args) {
        Counter counter = new Counter();

        Thread thread1 = new Thread(() -> {
            for (int i = 0; i < 1000; i++) {
                counter.increment();
            }
        });

        Thread thread2 = new Thread(() -> {
            for (int i = 0; i < 1000; i++) {
                counter.increment();
            }
        });

        thread1.start();
        thread2.start();

        try {
            thread1.join();
            thread2.join();
        } catch (InterruptedException e) {
            e.printStackTrace();
        }
```
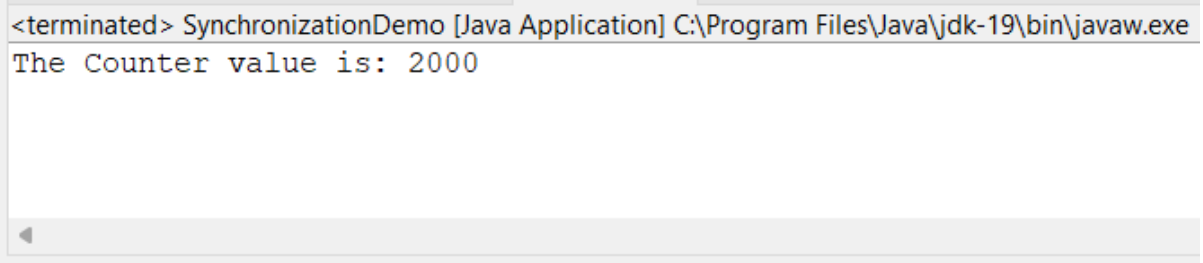
```java
        System.out.println("The Counter value is: " + counter.getValue());

    }

}


class Counter {

    private int value = 0;


    public synchronized void increment() {

        value++;

    }


    public int getValue() {

        return value;

    }

}
```

```
<terminated> SynchronizationDemo [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe
The Counter value is: 2000
```