Assignment:1 Write a java program to implement synchronized block in a threadprocess. create 2 threads to achieve thread synchonization. use join(), notify()

Program:

```java
package Thread;
class SharedResource
{
private int count = 0;

public synchronized void increment()
{
count++;
}
// Synchronized method to get the current count
        public synchronized int getCount()
        {
         return count;
        }
}
  class MyThread extends Thread
  {
     private SharedResource sharedResource;
      public MyThread(SharedResource sharedResource)
       {
       this.sharedResource = sharedResource;
       }
@Override
public void run()
{
// Synchronized block to ensure thread safety
synchronized (sharedResource)
{
for (int i = 0; i < 5; i++)
{
sharedResource.increment();

System.out.println(Thread.currentThread().getName() + " - Count: "
+sharedResource.getCount());
}

sharedResource.notify();
}
}
}
```

```java
public class Synchronization {
    public static void main(String[] args) {
        SharedResource sharedResource = new SharedResource();

        MyThread t1 = new MyThread(sharedResource);
        MyThread t2 = new MyThread(sharedResource);

        t1.start();
        t2.start();

        try {

            t1.join();
            t2.join();

        } catch (InterruptedException e) {
            e.printStackTrace();
        }
        System.out.println("Final Count: " +
sharedResource.getCount());

        System.out.println("Main thread is finished.");
    }
}
```
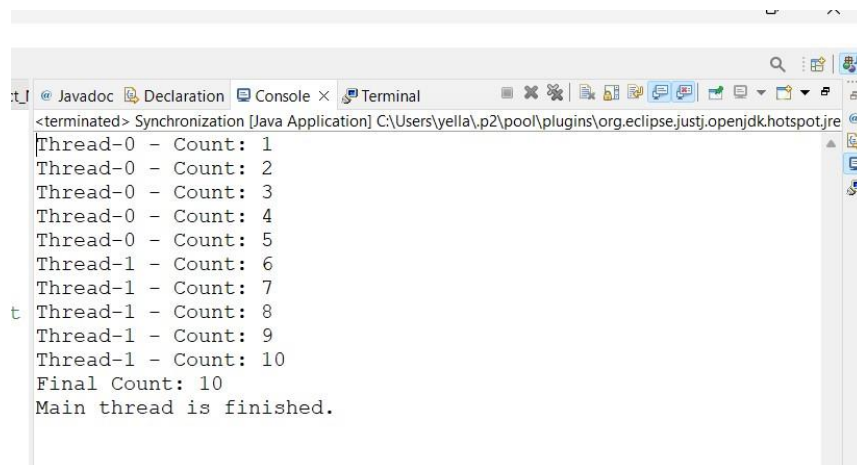
Output: