```java
public class PCThreading {
    public static void main(String[] args) throws InterruptedException {
        ProducerConsumer pc = new ProducerConsumer();

        // Producer Thread
        Thread t1 = new Thread(new Runnable() {
            @Override
            public void run() {
                try {
                    pc.produce();
                } catch (InterruptedException e) {
                    e.printStackTrace();
                }
            }
        });

        // consumer thread
        Thread t2 = new Thread(new Runnable() {
            @Override
            public void run() {
                try {
                    pc.consume();
                } catch (InterruptedException e) {
                    e.printStackTrace();
                }
            }
        });

        // Starting the P & C threads:
        t1.start();
        t2.start();
        // t1 should finish before t2.
        t1.join();
        t2.join();
    }
}

class ProducerConsumer {
    private int index=0, val=0;
    private int[] buffer = new int[2];
    void produce() throws InterruptedException {
        while (true) {
            synchronized (this) {
                int size = 2;
                while (index == size -1)
                    wait();
                System.out.println(("Produced value: " + val));
                buffer[index++] = val++;
                notify();

                Thread.sleep(1000);
            }
        }
    }
    void consume() throws InterruptedException {
        while (true) {
            synchronized (this) {
                while (index==0)
```

```java
                wait();
            System.out.println("Consumed value: " + buffer[--index]);
            notify();

            Thread.sleep(1000);
        }
    }
}
}
```

```
"C:\Program Files\Java\jdk1.8.0_202\bin\java.exe" "-
Produced value: 0
Consumed value: 0
Produced value: 1
Consumed value: 1
Produced value: 2
Consumed value: 2
Produced value: 3
Consumed value: 3
Produced value: 4
Consumed value: 4
Produced value: 5
Consumed value: 5
Produced value: 6
Consumed value: 6
Produced value: 7
Consumed value: 7
Produced value: 8
Consumed value: 8
Produced value: 9
Consumed value: 9
Produced value: 10
Consumed value: 10

Process finished with exit code -1
```