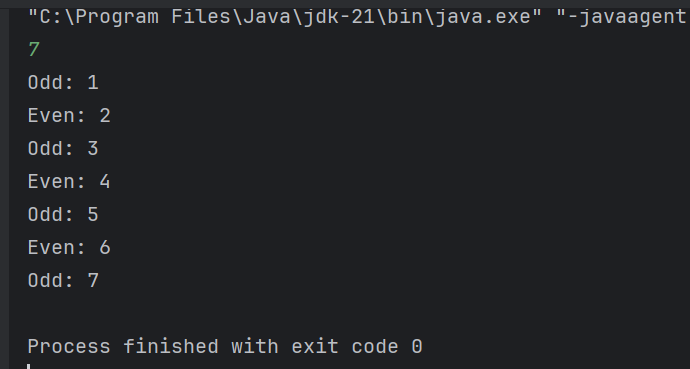
You are tasked with writing a Java program that prints odd and even numbers in sequence using two separate threads. One thread should print odd numbers, and the other thread should print even numbers. The threads should coordinate to ensure the numbers are printed in the correct order.

***Code –***

package Multithreading;  
import java.util.\*;  
  
public class OddEven {  
 static class OddEvenPrinter {  
 private int number = 1;  
 private final int max;  
 private boolean isOddTurn = true;  
 public OddEvenPrinter(int max) {  
 this.max = max;  
 }  
 public synchronized void printOdd() throws InterruptedException {  
 while (number < max) {  
 while (!isOddTurn) {  
 wait();  
 }  
 if (number % 2 == 1) {  
 System.*out*.println("Odd: " + number);  
 number++;  
 isOddTurn = false;  
 notifyAll();  
 }  
 }  
 }  
 public synchronized void printEven() throws InterruptedException {  
 while (number < max) {  
 while (isOddTurn) {  
 wait();  
 }  
 if (number % 2 == 0) {  
 System.*out*.println("Even: " + number);  
 number++;  
 isOddTurn = true;  
 notifyAll();  
 }  
 }  
 }  
 }  
  
 static class OddThread extends Thread {  
 private final OddEvenPrinter printer;  
 public OddThread(OddEvenPrinter printer) {  
 this.printer = printer;  
 }  
 public void run() {  
 try {  
 printer.printOdd();  
 } catch (InterruptedException e) {  
 Thread.*currentThread*().interrupt();  
 }  
 }  
 }  
 static class EvenThread extends Thread {  
 private final OddEvenPrinter printer;  
 public EvenThread(OddEvenPrinter printer) {  
 this.printer = printer;  
 }  
 public void run() {  
 try {  
 printer.printEven();  
 } catch (InterruptedException e) {  
 Thread.*currentThread*().interrupt();  
 }  
 }  
 }  
 public static void main(String[] args) {  
 Scanner sc = new Scanner(System.*in*);  
 int max = sc.nextInt();  
 OddEvenPrinter printer = new OddEvenPrinter(max);  
 Thread oThread = new OddThread(printer);  
 Thread eThread = new EvenThread(printer);  
 oThread.start();  
 eThread.start();  
 }  
}

***Output –***

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