Condition Variables

Condition variables allow threads to wait for certain conditions to be met.

The wait() method makes a thread wait until another thread invokes notify() or notifyAll() on the same object.

*public class* ConditionExample {

 *// Condition variables allow threads to wait for certain conditions to be met.
 // The wait() method makes a thread wait until another thread invokes notify() or notifyAll()
 // on the same object.

 private static final* Object *lock* = *new* Object();
 *private static boolean dataReady* = *false*;

 *public static void* main(String[] args) *throws* InterruptedException {
 Thread producer = *new* Thread(() -> {
 *synchronized* (*lock*) {
 *dataReady* = *true*;
 *lock*.notifyAll();
 }
 });

 Thread consumer = *new* Thread(() -> {
 *synchronized* (*lock*) {
 *while* (!*dataReady*) {
 *try* {
 System.*out*.println("Waiting for data...");
 *lock*.wait();
 } *catch* (InterruptedException e) {
 Thread.*currentThread*().interrupt();
 }
 }
 System.*out*.println("Data is ready!");
 }
 });

 consumer.start();
 Thread.*sleep*(1000); *// Ensure consumer is waiting* producer.start();

 producer.join();
 consumer.join();
 }
}

Waiting for data...

Data is ready!