**package** threadsynchronization;

**public** **class** ThreadSynchronization {

**public** **static** **void** main(String[] args) {

Sender sender = **new** Sender(); // Sender instance

// Create and start threads

Thread sendThread = **new** Thread(() -> {

sender.send("Hi");

});

Thread receiveThread = **new** Thread(() -> {

sender.receive();

});

sendThread.start();

receiveThread.start();

// Wait for threads to finish

**try** {

sendThread.join();

receiveThread.join();

} **catch** (InterruptedException e) {

e.printStackTrace();

}

}

// Shared resource

**static** **class** Sender {

**private** **boolean** messageSent = **false**;

**public** **synchronized** **void** send(String message) {

**while** (messageSent) {

**try** {

wait();

} **catch** (InterruptedException e) {

e.printStackTrace();

}

}

System.***out***.println("sending\t\t" + message);

messageSent = **true**;

notify();

}

**public** **synchronized** **void** receive() {

**while** (!messageSent) {

**try** {

wait();

} **catch** (InterruptedException e) {

e.printStackTrace();

}

}

System.***out***.println("Hi sent");

messageSent = **false**;

notify();

**while** (!messageSent) {

**try** {

wait();

} **catch** (InterruptedException e) {

e.printStackTrace();

}

}

System.***out***.println("sending\t\t" + "bye");

messageSent = **true**;

notify();

}

}

}

