Homework Assignment 3
Java Remote Method Invocation
ECE 155B – Spring 2009
Due Friday, May 8

In the last assignment you implemented the Party Planner Service using Java Sockets. In this assignment you will explore the use of Java Remote Method Invocation (RMI).

Requirements

This assignment requires that you extend your Party Planner Service to include the Caterers. The Party Planner will communicate with the Caterers using Java Remote Method Invocation (RMI).

From the Party Planner's point of view, the Caterer acts as a Java server application and the Party Planner acts as a Java client application. The Party Planner will use the same Graphical User Interface (GUI) as in the last assignment but with some additional views. However, now, it must be able to send party information to the Caterer using RMI. The Caterer application waits for party requests from the Party Planner application. When it receives a party description, the Caterer application sends back to the Party Planner application an ID for that particular party. The Caterer then starts working on the party. When the Caterer has finished doing so, the Caterer application informs the Party Planner application again using RMI, passing the ID as a parameter in its response.

For this assignment, you need to introduce the Caterer application into your Party Planner Service, and to modify the Party Planner application to use RMI for communication with the Caterer. You don't need to change the socket communication between the Client and the Party Planner. The overall system should look like that shown in

Figure 1. The Caterer application will run as a remote server object waiting for RMI communication from the Party Planner. The Party Planner still uses socket connections to communicate with the Clients.

At the Web site, there will be a project template and information about how to implement your third project.

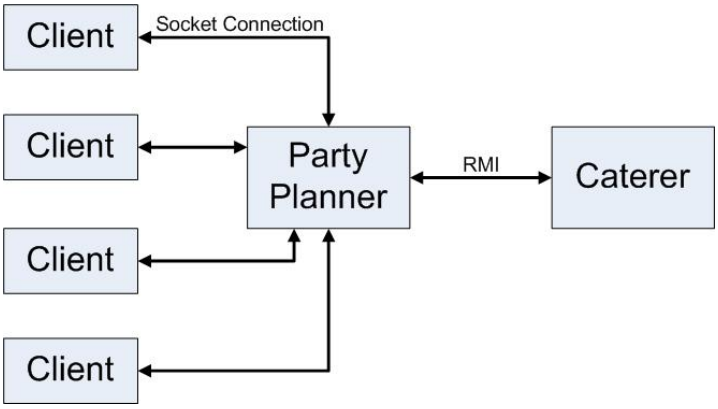

Figure 1. Overall Party Planner Service. (Note that the number of Caterers is not limited to one.)

Report (10%)

In addition to the programming portion of this assignment, you will write a small report. The report should be clear, well organized and concise. It needs to include the following:

1) An overview of how your system operates
2) Details of the design of your RMI interfaces
3) A class diagram sketch outlining the hierarchy of your class structure.

Demonstration (10%)

You will be performing a project demonstration for this assignment as for the others. You will be responsible for scheduling a 5-15 minute timeslot for your demonstration with the TA. Because time is limited, you should run your application on the PCs on which you will do your demo before the demo. In particular, make sure that those PCs are set up correctly. You will be required to demonstrate your application's functionality, and answer several questions covering the technology and your particular implementation. Demonstrations for the assignments will be scheduled through email, or during office hours/discussion.

Submission (10%)

You will submit a compressed file *(tar)*. You will need to type "*ant submission*" in order to create your submission file. If there is anything missing in the submission file, edit the *build.xml* file to include the missing information. Make sure you modify the *User* property in the *build.xml* file. The *ant* call will create submission file with the username you provide.

The compressed file should include a folder with all project content necessary to build/run the program (.java, README, Report). The projects are to be sent to ece155b.ta@gmail.com with subject line "Project 03: FirstName LastName".