

1. Homework 13

Not Final

Posted: November/26/2018

Due: December/3/2018 24.00

All homework solutions are due December/3/2018 24.00. I recommend to submit at least one version of all homework solutions long before due date.

1.1. Homework 13.1 (15 Points)

Objective: Working with a distributed System using UDP

Grading:

Correctness: You can lose up to 40% if your solution is not correct

Quality: You can lose up to 80% if your solution is poorly designed

Testing: You can lose up to 50% if your solution is not well tested

Explanation: You can lose up to 100% if your solution if you can not explain your solution during the grading session

Homework Description:

You have to modify hw 12.2 in the following way:

1. The communication method is TCP/IP and not UDP
2. It must be possible that multiple client connect to the server at the same time. You have to proof that this is possible in your environment. **Requirements:**

You have to use TCP/IP for the network communication. You have to name your files: *qClientTcp.java* and *qServerTcp.java*

Example:

An example of a solution execution:

An example of an execution (line 1 is executed before line 2 and so on, the name of the computer on which the program is executed is indicate in the shell prompt).

```
%glados java qServerTcp
1 connected
0 connected
1 connected
2 connected
1 connected
1 connected

%glados qClientTcp -port 1234 -server glados.cs.rit.edu
This suspense is terrible. I hope it will last. Oscar Wilde

%glados qClientTcp -port 1234 -server glados.cs.rit.edu &
%glados qClientTcp -port 1234 -server glados.cs.rit.edu
The difference between stupidity and genius is that genius has
A lie gets halfway around the world before the truth has a chance
```

(The quotes are copied and there is no way of knowing if they have been said by the person)

Submission:

```
% ssh glados.cs.rit.edu # or use queeg.cs.rit.edu if glados is down
# password
# go to the directory where your solution is ...
% try hpb-grd lab13-1 'All files required'
```

1.2. Homework 13.2 (15 Points)

Objective: Working with a distributed System using RMI

Grading:

Correctness: You can lose up to 40% if your solution is not correct

Quality: You can lose up to 80% if your solution is poorly designed

Testing: You can lose up to 50% if your solution is not well tested

Explanation: You can lose up to 100% if your solution if you can not explain your solution during the grading session

Homework Description:

You have to modify hw 12.3 in the follownig way:

1. The communication method is RMI and not TCP/IP.
2. It must be possible that multiple producer/consumer/storage connect at the same time. You have to proof that this is possible in your environment. **Requirements:**

In other words the producer can run on glados, the consumer on queeg, and the storage unit on your computer. You have to use RMI for the network communication.

Submission:

```
% ssh glados.cs.rit.edu # or use queeg.cs.rit.edu if glados is down
# password
# go to the directory where your solution is ...
% try hpb-grd lab13-2 'All files required'
```

