

Hand-in 4

In this assignment we've made a TaskManager application, which uses a reviewed XML format and the server can now handle multiple concurrent clients.

Task and TaskList

We have made a few modifications to these classes.

Task has been updated to fit the reviewed XML format.

TaskList has been given a few helper methods to search through its list of tasks and to check whether a tasks conditions has been met or not.

The Client

Our client is a very simple client, which allows users to execute a task.

A server holds the tasks.

Concurrency in the UDP Server

Our server reads a TaskList from XML. Clients can then connect to our server, and execute tasks.

When a change is made, the server will write to XML.

We use Java's synchronized-block functionality to lock a task or a file when we make a change to these.

Test Run

We had a test-run, as seen below. Input is marked in green.

```
UdpServer [Java Application] C:\Program Files\Java\jre7\bin\javaw.exe (06/11/2012 12:51:29)
Server running...
Received message from Michael: handin-01
Received message from Michael: reject-01
Received message from Michael: asdf-01
Received message from Michael: review-01
Received message from Michael: reject-0%1
Received message from Michael: reject-01
Received message from Michael: handin-01
Received message from Michael: approve-01
Received message from Michael: review-01
Received message from Michael: approve-01
Received message from Michael: qualify-for-exam
```

```
UdpClient [Java Application] C:\Program Files\Java\jre7\bin\javaw.exe (06/11/2012 12:51:36)
Welcome to the TaskManagerConcurrent UDPCClient. Please identify.
User ID: Michael
Hello, Michael. Enter the name of a task to execute it, "q" to exit.
handin-01
Sending request...
Reply received:
    Task handin-01 has been executed
reject-01
Sending request...
Reply received:
    Task not executable. Conditions not met.
asdf-01
Sending request...
Reply received:
    Task not found
review-01
Sending request...
Reply received:
    Task review-01 has been executed
reject-01
Sending request...
Reply received:
    Task not found
reject-01
Sending request...
Reply received:
    Task reject-01 has been executed
handin-01
Sending request...
Reply received:
    Task handin-01 has been executed
approve-01
Sending request...
Reply received:
    Task not executable. Conditions not met.
review-01
Sending request...
Reply received:
    Task review-01 has been executed
approve-01
Sending request...
Reply received:
    Task approve-01 has been executed
qualify-for-exam
Sending request...
Reply received:
    Task qualify-for-exam has been executed
```