

Client-Server implementation in Java

The purpose of the client-server application is understanding socket programming in Java and to understand how client-server is working. After connection establishment, the client in this example is taking input text from the user and sends it to the server. The server receives the textual data from the client and convert to upper case and returns it the client. The client receives the data in upper case. The client can enter multiple lines. If the user enters "Over", the communication will be ended properly.

To Run both Client.java and Server.java, read the following:

- First study the provided chapter (networking-Chapter 28).
- To run the client and server successfully, one must run the server first and then the client application.
- If you have terminated the server abnormally, the port number (5000) will still be in use, so re-starting the server may give you an error. The easy way to handle it, to change the port number to any other number.
- The server in this example can handle only one client.

Example:

Running the server:

```
--- exec-maven-plugin:3.0.0:exec (default-cli) @ Network ---  
Server started  
Waiting for a client ...
```

Running the client:

```
--- exec-maven-plugin:3.0.0:exec (default-cli) @ Network ---  
Connected  
enter "Over" if you want to terminate the communication  
Enter text for sending to server
```

Entering text on the client side:

```
--- exec-maven-plugin:3.0.0:exec (default-cli) @ Network ---  
Connected  
enter "Over" if you want to terminate the communication  
Enter text for sending to server  
First example of data  
Getting data from server in upper case:  
FIRST EXAMPLE OF DATA  
Enter text for sending to server  
|
```

Server side:

```
--- exec-maven-plugin:3.0.0:exec (default-cli) @ Network ---
Server started
Waiting for a client ...
Client accepted
First example of data
|
```

Client:

```
Enter text for sending to server
Second exmable from client side
Getting data from server in upper case:
SECOND EXMAPLE FROM CLIENT SIDE
Enter text for sending to server
|
```

Server:

```
--- exec-maven-plugin:3.0.0:exec ---
Server started
Waiting for a client ...
Client accepted
First example of data
Second exmable from client side
|
```

Client:

```
Enter text for sending to server
Over
Getting data from server in upper case:
OVER
```

BUILD SUCCESS

Server:

```
Over
Closing connection
```

BUILD SUCCESS