Introduction to lab and project tools

The present document describes how to use the Mac computers of Room 143 of the Internef building (hereafter *the lab*) as well as the software configuration required to work on your project. The configuration of Netbeans in the lab differs from the Netbeans configuration you might have on your laptop. Concerning the configuration of Xcode, it should be the same between computers of the lab and your laptop if you have a Mac. For the project, you can use computers from the lab or your personal computer, i.e., laptop.

Software versions

- 1. Netbeans version 8.2 with Glassfish server version $5.0 \Rightarrow$ Mac OS, Windows, Linux
- 2. Xcode version $9.2 \Rightarrow Mac \text{ OS only}$

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1 How to log into a computer of the lab?

In order to log into a computer of the lab, select *Other...* and enter the username and password of your HEC account. If you do not have an HEC account, you can select *Guest* but all files created during your session will be deleted when you log out!

1.1 How to create an HEC account ?

Below we indicate the procedure to create an HEC account depending on your university:

- UNIL and UNINE students: usually such students already have an HEC account. If you do not know what is an HEC account or if you still do not have one, please follow this link https://www2.hec. unil.ch/wpmu/infocentre/compte/ and create an account as soon as possible.
- EPFL students: such students should create an HEC account by clicking on "Création d'un compte HEC pour les Etudiants mobilité et EPFL" on this page https://www2.hec.unil.ch/wpmu/infocentre/compte/, using the EPFL login (SWITCHaai).

Beware that when creating an HEC account, it will not be active immediately, it usually takes 1 day on average! You can use a *Guest* account during this waiting period.

2 Netbeans Configuration

2.1 Netbeans Configuration in the lab

The configuration procedure of Netbeans in the lab explained hereafter is required if you work on another computer or if the computer you used before was rebooted. You will know this if you do not find the new Glassfish server you created in Netbeans (see the procedure below).

Configuration of the Glassfish application server

Netbeans version 8.2 is already installed on lab computers, therefore you do not need to download and install it. As you will notice, when you open Netbeans, a server for Glassfish version 4.1.1. is created by default. However you **must not** use this server! Instead, you need to create a new one as described below.

1. Right-click on Servers and on Add server... as seen in Figure 1.

- 2. Set the installation location as indicated in Figure 2.
- 3. Set the domain location (if you are logged in with a *Guest* account, you must not change the domain location) as indicated in Figure 3 (*USERNAME* must be the username of your HEC account) and click on finish. Now you must wait until receiving a message confirming the domain creation!

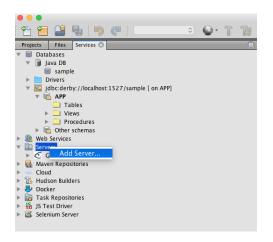


Figure 1: Add a new Glassfish server on Netbeans (1)

| iteps | Server Location | | | |
|--|---|--|--|--|
| Choose Server Server Location Domain | Installation Location: | | | |
| | /Applications/NetBeans/glassfish5 Browse | | | |
| Name/Location | Local Domain Remote Domain | | | |
| | Download Now I have read and accept the license agreement (click) | | | |
| | | | | |
| | Detected a GlassFish Server 5.0 install. Click Next to register remote or custom local domains. | | | |

Figure 2: Add a new Glassfish server on Netbeans (2)

Now you can start the new Glassfish server you created and open its admin console as described in Figures 4, 5 and 6.

| | | Add Server Instance | e | | |
|--|------------|---------------------------------------|------------|--------------------|---------------|
| Steps | Domain Loc | ation | | | |
| Choose Server Server Location Domain | Domain: | /tmp/USERNAME/personal_domain | | | \$ |
| Name/Location | Host: | localhost | | | 🗘 🗹 Loopback |
| | DAS Port: | 4848 | HTTP Port: | 8080 | 🗌 Default |
| | Target: | | | | |
| | User Name: | | | | |
| | Password: | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | Create do | nain at /tmp/USERNAME/personal_domain | | | |
| | | | | Help < Back Next > | Finish Cancel |

Figure 3: Add a new Glassfish server on Netbeans (3)

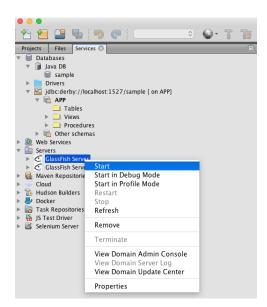


Figure 4: Start the new Glassfish server on Netbeans (4)

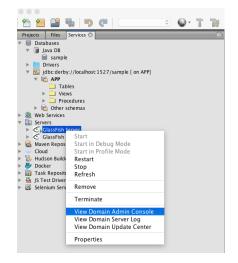


Figure 5: Open the admin console of the new Glassfish server (5)

| • • • JMS Resources × | | | | | |
|--|--|--|--|--|--|
| $\leftrightarrow \rightarrow \mathbf{C}$ (i) localhost:24144/common/index.jsf | | | | | |
| Home About | | | | | |
| User: anonymous Domain: personal_domain Server: localhost | | | | | |
| GlassFish [™] Server Open Source Edition | | | | | |
| 0 | | | | | |
| Common Tasks | JMS Resources | | | | |
| Domain server (Admin Server) Clusters Standalone Instances Applications Lifecycle Modules Monitoring Data Messources Connectors JDBC JMS Resources MNDI JAVAMail Sessions Resource Adapter Configs Configurations Genaut-config server-config Update Tool | Connection Factories Destination Resources | | | | |

Figure 6: Admin console of the new Glassfish server (6)

Configuration of the Derby database:

After creating the new Glassfish server, we need to create a new database linked to this new server.

- 1. Start by deleting the database connector as well as the database already created as shown in Figures 7 and 8.
- 2. Set the properties (if you are logged in with a *Guest* account, you must not change the database location) of the database as shown in Figures 9 and 10 (*USERNAME* must be the username of your HEC account) and click on *OK*.
- 3. You can now create a new database called *sample* and connect it as shown in Figures 11, 12 and 13.

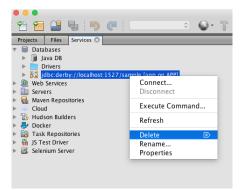


Figure 7: Delete the existing database connector

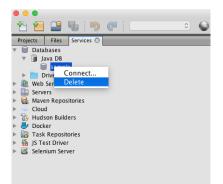


Figure 8: Delete the existing database

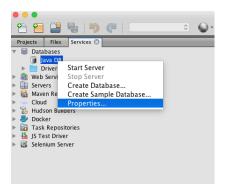


Figure 9: Set database properties (1)

| | Java DB Properties | | | | | |
|--|--|--------|--|--|--|--|
| Specify the folder where Java DB is installed and the folder where you will keep your databases. The database location folder will be used as the value of the derby.system.home property. | | | | | | |
| Java DB Installation: | /Applications/NetBeans/glassfish5/javadb | Browse | | | | |
| Database Location: | Browse | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | Cancel | ОК | | | | |

Figure 10: Set database properties (2)

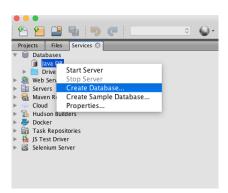


Figure 11: Create a new database (1)

2.2 Netbeans configuration for your laptop

If Netbeans is not installed on your laptop yet, you can download the full 8.2 version, called *All*, from https://netbeans.org/downloads/. Then, you need to download Glassfish version 5.0 - Full platform on https://javaee.github.io/glassfish/download (because Glassfish version 4.1.1 is installed by default with Netbeans 8.2) and perform the steps explained above without modifying the domain and database locations set by default!

| | Create Java DB Database | | |
|---------------------------------------|---------------------------------------|--------|------------|
| Database Name: | sample | | |
| User Name: | | | |
| Password: | | | |
| Confirm Password: | | | |
| Database Location: | /tmp/ /.netbeans-derby | | Properties |
| It is recommended | ed to enter a user name and password. | | |
| | | Cancel | ОК |

Figure 12: Create a new database (2)

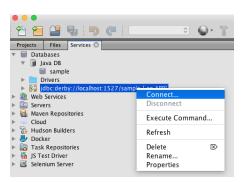


Figure 13: Connect the new database

3 Xcode configuration

For this course, we work with Xcode version 9.2. Xcode is already installed in the Mac computers of the lab. You just need to open it to start working with the tool. If you want to install it on your laptop, which must be a Mac laptop, you need to download and install it via the App Store.