Assignment 4 - Web services
Network Programming, ID1212

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1 Introduction

Goals:

- Develop a three-tier web-based application using frameworks

- Deploy and run a web-based application on an application server.

2 Literature Study

As in previous assignments, the main source were the video lectures on the topic and the example code.

3 Method

As in previous assignments, the mvc approach has been used again to layer the program.

The choice for a database fell on MySQL because of past works with it. The implementation was realized in Netbeans in Java 8 EE using Pyara as the application server.

4 Result

Link to public Github repository with code: https://github.com/MemBernd/ID1212-Web-services

4.1 Layering

The layering of the application is divided into four layers:

- The *view* holds the JSF page.

- The *controller* holds a "normal" java class.

- The *model* holds the JPA entities.

- The *storage* holds the EJB, a class responsible for connecting to the MySQL database.

4.2 Database

The database in 1 consists of two tables. The first table acts as a catalog, holding the different currencies, while the second one is the result of a many to many association of the catalog to itself.
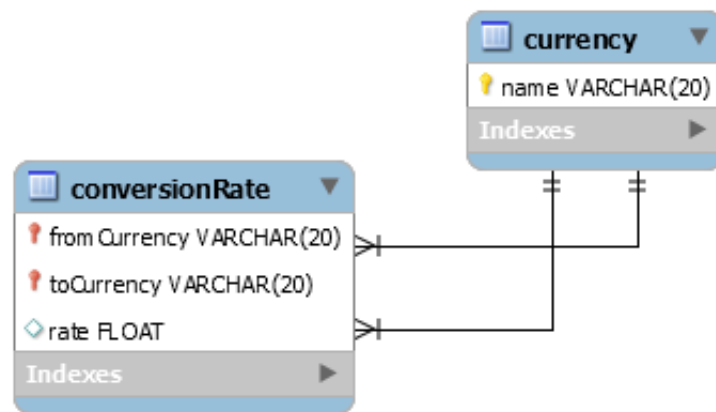

Figure 1: Table relations in database.

4.3 Frameworks

4.3.1 JSF

4.3.2 EJB

4.3.3 JPA

4.4 Client side

The user can access the application through a browser, which presents him with the jsf (see 2). The user is able to select between 4 currencies to convert between them. In case he selects the same currency, the application will return, hence show, the same amount as entered.
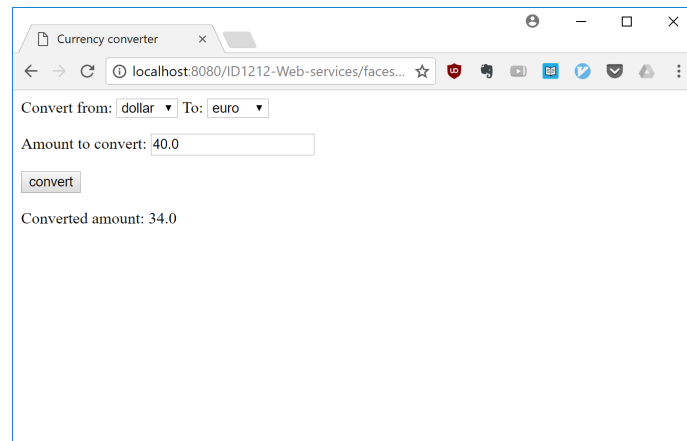
Figure 2: Browser interface

5 Discussion

6 Comments About the Course

The time invested in this project were almost 12 hours.

- 7h 35 min for coding.

- 1h 50 min for the report.

- 2h 40 min watching videos, taking notes and thinking about how to tackle the problem.