

Topic 6 – Spring MVC – Homework

This document defines homework assignments from the “Java Web Development” course. Please submit the homework as single **zip / 7z** archive holding the source code of all below described problems.

Problem 1 – Spring MVC Maven project

- Create new Spring MVC Maven project.
- Deploy the project to the Tomcat server.
- Use the created project as base for the remaining of the homework.

Problem 2 – Web Banking Page

- Create new page for Web Banking operations – deposit and withdraw
- Print the following components:
 - Header with Title
 - Form with:
 - Input fields
 - Client (field containing client name/identifier)
 - Current bank account amount
 - Operation (deposit or withdraw)
 - Amount to change
 - Submit button
 - Footer with Project Name and Current Version
- Deploy the project and call the page from the web browser

Problem 3 – Bank Operation

- Create Spring Bean structure (1 or more Spring Beans) that can handle the following logic:
 - Keep global data about users and their bank accounts (1 account per user)
 - Allow deposit and withdraw operations with the following limitations:
 - Withdraw can't be more than the total amount
 - Withdraw per day (take the server date) can't be more than 50% of the total amount but can be done with several requests
 - Deposits and withdrawals can be only with values bigger than 0
 - If client doesn't have account only deposits are allowed that should also create new account

Problem 4 – Bank Operation Controller

- Create new Controller class that takes the request data from the Web Banking Page and calls the Bank Operations actions
- As a result return back to the Web Banking Page with the information about the last user and his current bank account amount

Problem 5 – Currency

- Enhance the program to support currency operations:
 - Accounts should be in some currency
 - At least 3 total currencies should be available with their exchange rates (different exchange rates per date)
 - Deposits and withdraws can be in any of the available currency and should automatically convert to the account currency.