

Dynamic Web Development in JSP

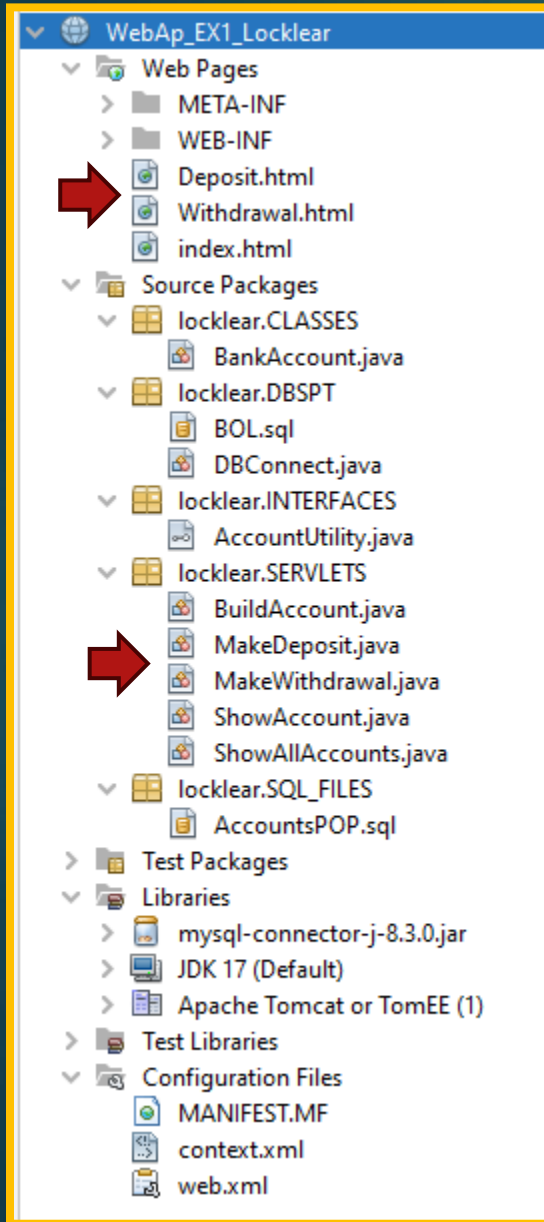
Spring 2024



Assignment 3: Simple Web Application Development

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Program Structure



We will **modify the current application** to include additional functionality

A screenshot of a web browser displaying the 'Make Deposit' form. The form is titled 'Make Deposit' and contains the following fields and buttons:

- Account Number:
- Deposit Amount:
- Deposit To:
- Deposit Request
- Go To Withdrawals
- Go To Main Menu

A screenshot of a web browser displaying the 'Make Withdrawals' form. The form is titled 'Make Withdrawals' and contains the following fields and buttons:

- Account Number:
- Withdrawal Amount:
- Withdrawal From:
- Withdraw Request
- Go To Deposits
- Go To Main Menu

Additional Methods (BankAccount)

| Method | Input | Processing |
|----------------------|---------------|---|
| depositToChecking | double d | Adds d to the checkingBalance of the BankAccount object updates the maxCheckingWithdrawal amount and <u>returns</u> true |
| depositToSavings | double d | Adds d to the savingsBalance of the BankAccount object updates the maxSavingsWithdrawal amount and <u>returns</u> true |
| depositChecking | double amount | Calls the depositToChecking method, updates the database and the BankAccount object. <u>Returns</u> a HTML formatted string. See Slide 5 |
| depositSavings | double amount | Calls the depositToSavings method, updates the database and the BankAccount object. <u>Returns</u> a HTML formatted string. See Slide 5 |
| WithdrawFromChecking | double amount | Verifies withdrawal conditions and subtracts the specified amount from the checkingBalance of the BankAccount object. Updates the database and the maxCheckingWithdrawal amount. <u>Returns</u> a HTML formatted String. See Slide 6 and 7 |
| WithdrawFromSavings | double amount | Verifies withdrawal conditions and subtracts the specified amount from the savingsBalance of the BankAccount object. Updates the database and the maxSavingWithdrawal amount. <u>Returns</u> a HTML formatted String. See Slide 6 and 7 |

Additional Servlets

| Servlet | Webpage | Processing |
|----------------|-----------------|--|
| MakeDeposit | Deposit.html | <ul style="list-style-type: none">• Receives the BankAccount object accountNumber, a deposit amount, and the accountType from the webpage.• Adds the deposit amount to the specified account and updates the appropriate database table and the specified BankAccount object• See Slide 5 for output |
| MakeWithdrawal | Withdrawal.html | <ul style="list-style-type: none">• Receives the BankAccount object accountNumber, a withdrawal amount and the accountType from the webpage.• Checks that the amount can be withdrawn by ensuring that it does not exceed the amount available and the maximum withdrawal amount for the account and fails if those conditions are not met.• If conditions are met, subtracts the withdrawal amount from the specified account and updates the appropriate database table and the specified BankAccount object• See Slides 6 and 7 for output |

Make Deposit



A screenshot of a web browser window titled 'Deposit Menu'. The address bar shows 'localhost:8080/WebAp_EX1_L'. The page has a title 'Make Deposit'. It contains three input fields: 'Account Number:' with 'A101', 'Deposit Amount:' with '1000', and 'Deposit To:' with 'Checking'. Below these fields are three buttons: 'Deposit Request', 'Go To Withdrawals', and 'Go To Main Menu'.

Make Deposit

Account Number:
A101

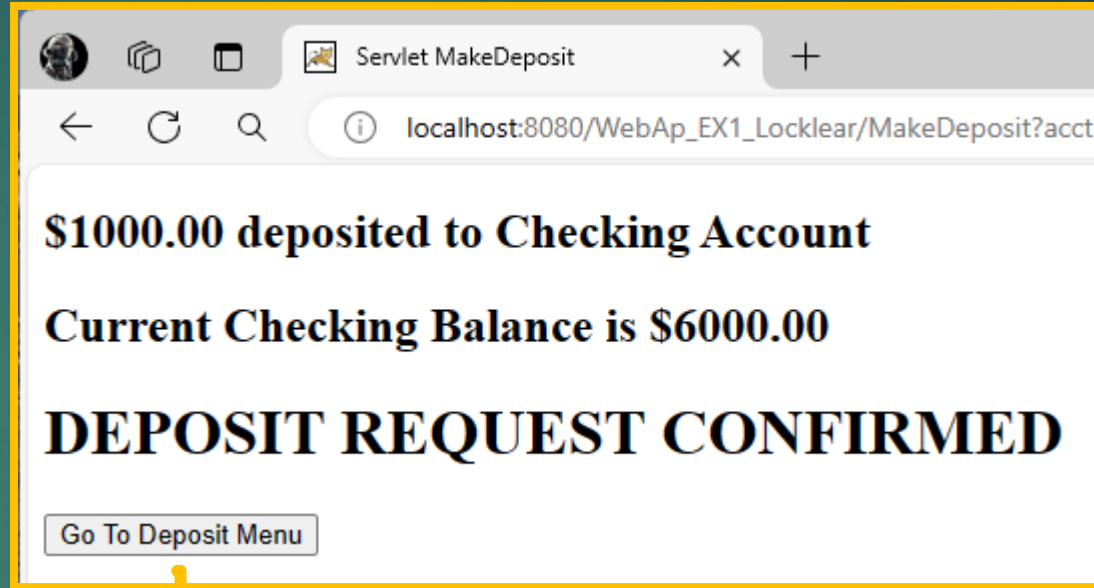
Deposit Amount:
1000

Deposit To:
Checking

Deposit Request

Go To Withdrawals

Go To Main Menu



A screenshot of a web browser window titled 'Servlet MakeDeposit'. The address bar shows 'localhost:8080/WebAp_EX1_Locklear/MakeDeposit?acct'. The page displays the confirmation message: '\$1000.00 deposited to Checking Account', 'Current Checking Balance is \$6000.00', and 'DEPOSIT REQUEST CONFIRMED'. There is a button 'Go To Deposit Menu' at the bottom.

\$1000.00 deposited to Checking Account

Current Checking Balance is \$6000.00

DEPOSIT REQUEST CONFIRMED

Go To Deposit Menu



Make Withdrawal

Withdrawal Menu

localhost:8080/WebAp_EX1_L

Make Withdrawals

Account Number:

Withdrawal Amount:

Withdrawal From:



Servlet MakeWithdrawal

localhost:8080/WebAp_EX1_Locklear/MakeWithdrawal?acct=A101&wit

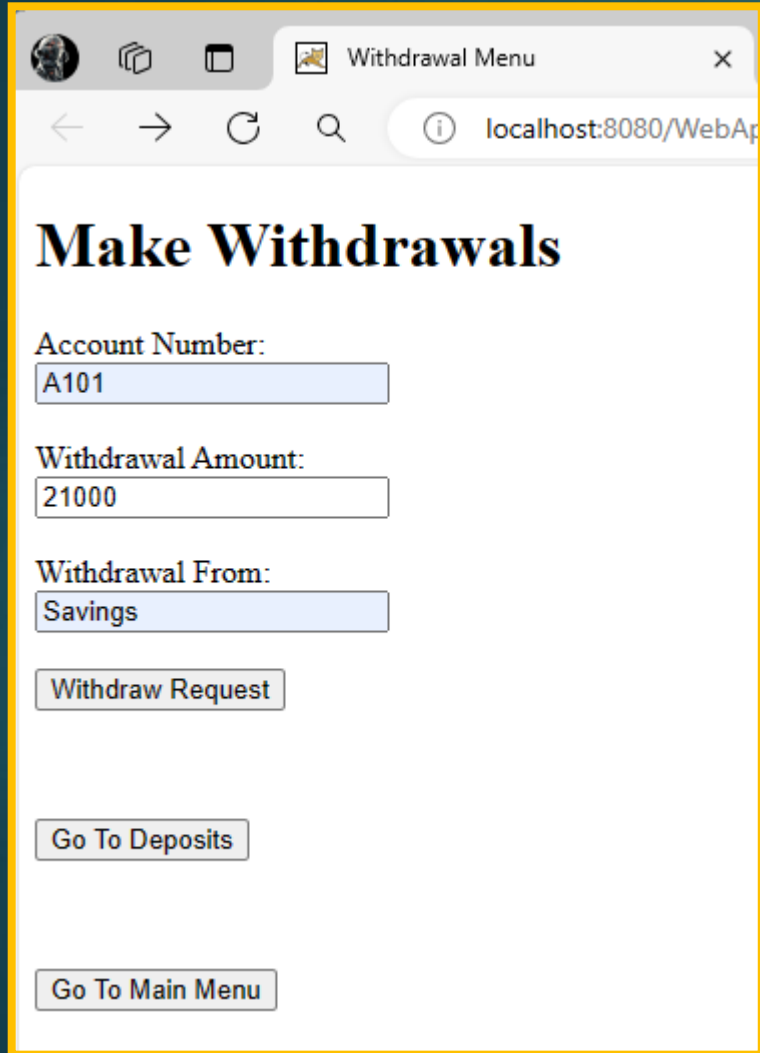
\$1000.00 withdrawn from Savings

Current Savings Balance is \$5399.00

WITHDRAWAL REQUEST CONFIRMED



Make Withdrawal




A screenshot of a web browser window titled 'Withdrawal Menu'. The address bar shows 'localhost:8080/WebAp'. The page has a heading 'Make Withdrawals'. Below it are three input fields: 'Account Number:' with 'A101', 'Withdrawal Amount:' with '21000', and 'Withdrawal From:' with 'Savings'. At the bottom are three buttons: 'Withdraw Request', 'Go To Deposits', and 'Go To Main Menu'.

Make Withdrawals

Account Number:

Withdrawal Amount:

Withdrawal From:



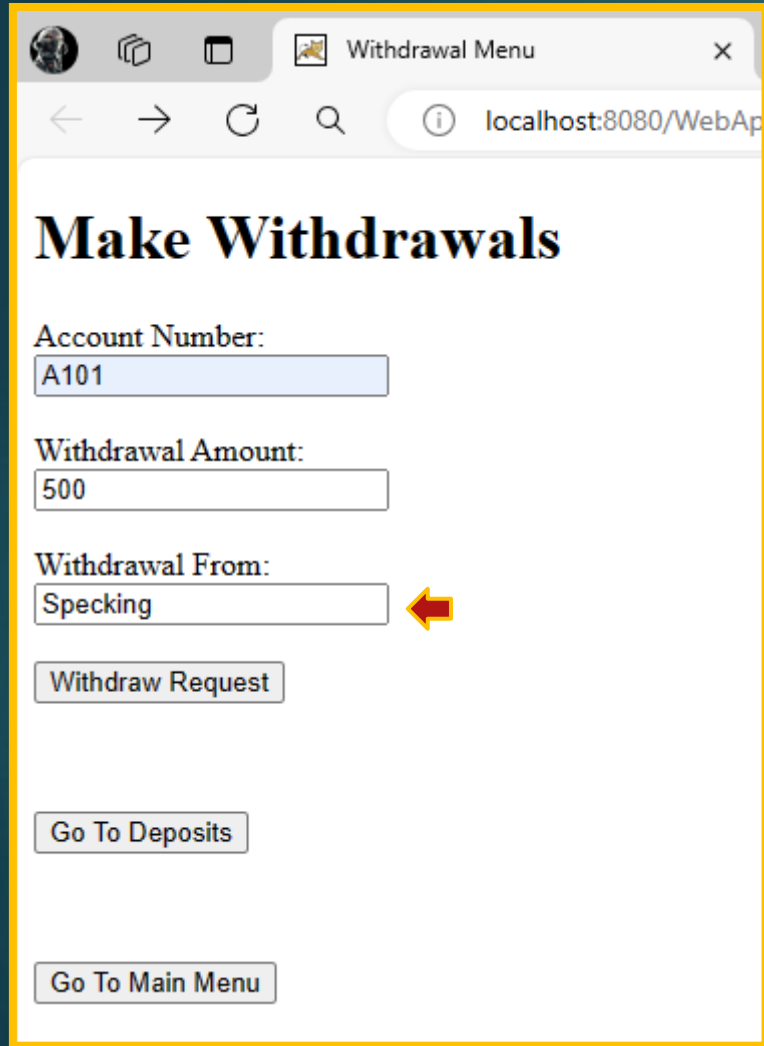
A screenshot of a web browser window titled 'Servlet MakeWithdrawal'. The address bar shows 'localhost:8080/WebAp_EX1_Locklear/MakeWithdrawal?acct=A101&wi'. The page displays a message: 'Withdraw Cannot Be Made', 'Current Savings Balance is \$5399.00', and 'WITHDRAWAL REQUEST CONFIRMED'. At the bottom is a button 'Go To Withdrawal Menu'.

Withdraw Cannot Be Made

Current Savings Balance is \$5399.00

WITHDRAWAL REQUEST CONFIRMED

Make Deposit/Withdrawal



A screenshot of a web browser window titled 'Withdrawal Menu'. The address bar shows 'localhost:8080/WebAp'. The page has a heading 'Make Withdrawals'. Below it are three input fields: 'Account Number:' with 'A101', 'Withdrawal Amount:' with '500', and 'Withdrawal From:' with 'Specking'. A red arrow points to the 'Withdrawal From:' field. Below the fields are three buttons: 'Withdraw Request', 'Go To Deposits', and 'Go To Main Menu'.

Make Withdrawals

Account Number:
A101

Withdrawal Amount:
500

Withdrawal From:
Specking

Withdraw Request

Go To Deposits

Go To Main Menu



A screenshot of a web browser window titled 'Servlet MakeWithdrawal'. The address bar shows 'localhost:8080/WebAp_EX1_Locklear/MakeWithdrawal?acct=A101&w'. The page has a heading 'Enter either Checking or Savings' and a large bold heading 'WITHDRAWAL REQUEST CONFIRMED'. Below it is a button 'Go To Withdrawal Menu'.

Enter either Checking or Savings

WITHDRAWAL REQUEST CONFIRMED

Go To Withdrawal Menu