

TERM PROJECT
CSC-518
EXPENSES ESTIMATOR

SUBMITTED BY:

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PREFACE

The report has been made in fulfillment of the requirement for the subject: Object Oriented Programming in Java, under the supervision of Professor Srinivasan Mandyam. For making this project we have studied various concepts related to the daily wages and expenditures and how they can be used. We also studied about Java concept and tools that can be used to solve the problem easily. The project aims at creating an application which mainly focuses on providing you an approximate budget fluctuation expected when you move from one state to another in the United States of America.

ACKNOWLEDGMENT

We take this opportunity to express our gratitude to the people who have been instrumental in the successful completion of this project. We would like to show our greatest appreciation to Professor Srinivasan Mandyam . We thank him for his tremendous support and help.

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1. SPECIFICATIONS

1.1 INTRODUCTION:

When you plan to move to a new state your first question in mind is:

"WHAT WOULD BE THE COST OF LIVING? AND HOW FAR MY SALARY WOULD GO IN THE NEW STATE?"

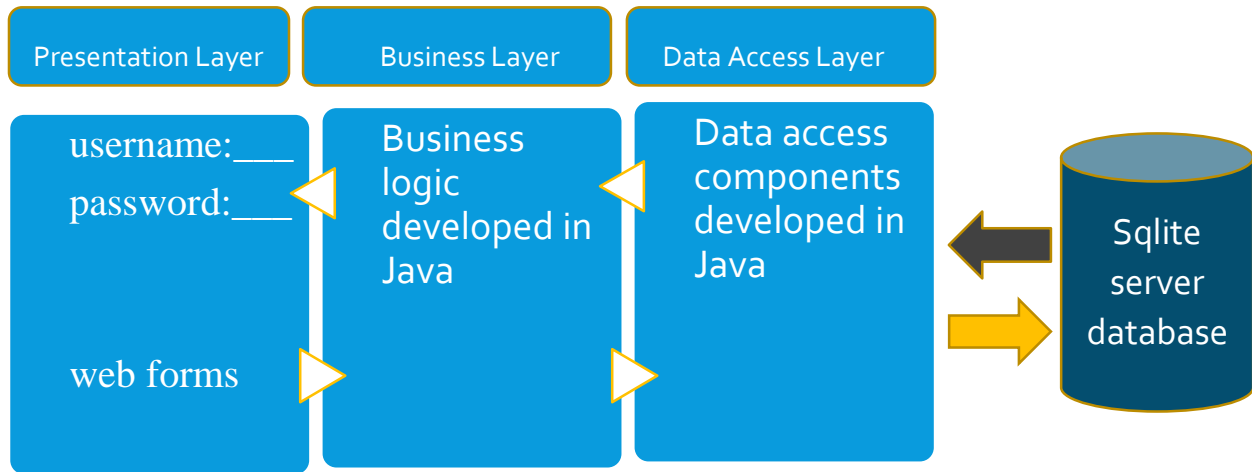
This application is mainly focused on providing you an approximate budget fluctuation as you move from one state to another in the United States of America. Based on your income and type of requirements you are provided with an average monthly budget for that state. The application mainly takes into consideration 50 US states. Expenditures mainly are identified as your accommodation expenses, taxes, transportation costs, food expenses and other miscellaneous costs.

1.2 PROJECT OBJECTIVE

The objective of this project is to create an application using Java programming language that would help the users to preplan their expenses based on the prevalent approximate rates and taxes in the new state before shifting there.

1.3 DESIGN SPECIFICATIONS

We follow a client-server architecture where:



- Presentation Layer consists of following files:
 - estimator.jsp
 - logOut.jsp
 - signIn.jsp
 - signUpForm.jsp
 - signUpSuccess.jsp
 - userForm.jsp
- Business Layer includes following files:
 - SignInService.java
 - SignUpService.java
 - UserFormService.java
- Data Access Layer includes following files:
 - LogoutServlet.java
 - SignInServlet.java
 - SignUpServlet.java
 - UserFormServlet.java

2. IMPLIMENTATION

2.1 INPUT:

All the required inputs are passed through the presentation layer.

User details such as username, password, first anme and last name are taken as varchar.

emailId must be in [the](#) [@.com](#) format.

Contact number in XXX-XXX-XXXX format.

Other details are to be selected from the drop down lists.

Note: All the input requirements need to filled in the asked format or else it will prompt an exception error.

2.2 SOURCE CODE

Entire source code and the database related information has been shared in the submitted folder. The schema required for creating databse is provided in the dependent file database_java_project_final.txt.

2.3 OUTPUT

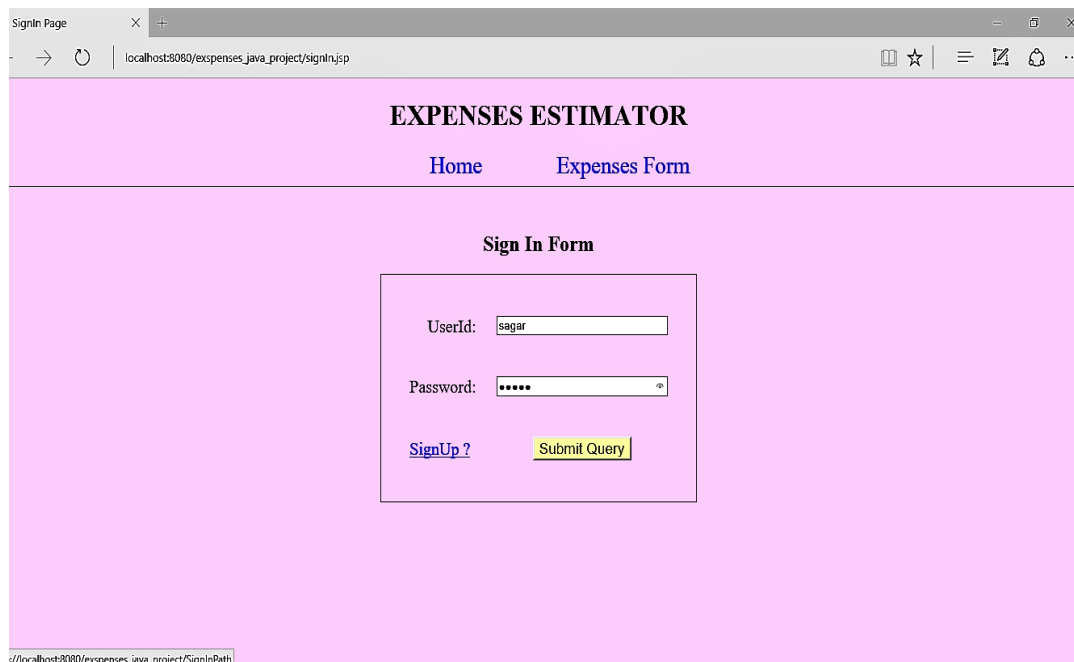
An output file in the .jsp form is prompted on the screen containing all the calculated results for the input queries.

2.4 SAMPLE INPUT FILE WITH THE SCREEN SHOTS:

When you run the signIn.jsp file present in the WebContent folder of the project through the apache tomcat server, a welcome page will be displayed and you will be asked to input all the required details in a systemic order.

- Run the signIn.jsp file.
- A welcome page will appear:
- Enter the sign in details say for example:
userId: sagar
password: sagar
Press “Submit Query”

If you are already signed up by this name it will direct you to a new page.



The screenshot shows a web browser window with the title 'SignIn Page' and the URL 'localhost:8080/expenses_java_project/signIn.jsp'. The page has a light purple background. At the top, there is a header with the text 'EXPENSES ESTIMATOR' and two navigation links: 'Home' and 'Expenses Form'. Below the header, there is a section titled 'Sign In Form'. Inside this section, there is a form with two input fields: 'UserId:' with the value 'sagar' and 'Password:' with masked characters '*****'. Below the password field, there are two links: 'SignUp ?' and 'Submit Query'.

- If you are not signed in you will be asked to sign up on a sign up form:

Fill in the details:

First Name: Damini

Last name: Sharma

Email Id: damin@gmail.com

Mobile: 123-321-9999

User Name: damini

Password: 1234

And press “submit query”

EXPENSES ESTIMATOR

[Home](#) [Expenses Form](#)

Sign Up Form

First Name: damini

Last Name: Shama

Email Id: damin@gmail.com

Mobile[xxx-xxx-xxxx]: 123-321-9999

User Name: damini

Password:

Submit Query Reset

Sign Up Success Page

localhost:8080/expenses_java_project/SignUpPath

EXPENSES ESTIMATOR

Sign Up Successfully.....

[Login](#)

- Once successfully signed up and logged in, a user expense form will be displayed:

Enter details:

Place of interest: Georgia

Annual income: 100000

Accommodation: 2BH Apartment

Transport type: Public transit

Press “submit query”

User Details Form Page × +

← → ↻ | localhost:8080/expenses_java_project/SignInPath

EXPENSES ESTIMATOR

[Home](#) [Expenses Form](#)

logout

User Expenses Form

Place of Interest: Georgia

Annual Income(\$): 100000

Accommodation Type: 2 BH Apartment

Transport Type: Public Transit

Submit Query Reset

http://localhost:8080/expenses_java_project/UserFormPath

- Now an output file can be seen on the screen with following tables:

Details entered

The screenshot shows a web browser window with the title 'Estimation Page'. The address bar shows 'localhost:8080/expenses_java_project/UserFormPath'. The page has a pink background and a navigation bar with 'Home' and 'Expenses Form' links. A 'logout' button is in the top right. The main content area displays a welcome message 'Hello sagar !!!!' and 'Welcome to Expenses Estimator App'. Below this is a section titled 'Details Entered' containing a form with four input fields:

Details Entered	
Accommodation choice :	<input type="text" value="Two_BHK_APT"/>
Transport choice:	<input type="text" value="Public_Transport"/>
State Tax on Income (\$):	<input type="text" value="10590.0"/>
Total Expenditure per annum (\$):	<input type="text" value="31704"/>

Expenses estimated:

The screenshot shows the 'Expenses Estimated' section of the application. It features a pink background and a central box containing a table with six rows of expense categories and their estimated values:

Expenses Estimated	
Living cost(\$):	<input type="text" value="1158"/>
Food(\$):	<input type="text" value="263"/>
Fuel(\$):	<input type="text" value="211"/>
State Tax(\$):	<input type="text" value="10.59"/>
Transport(\$):	<input type="text" value="168"/>
Miscellaneous(\$):	<input type="text" value="1053"/>

3. TEST COVERAGE

Following features will be tested throughout the project. Test Cases will be prepared based on the following features. If any extra testing requirement is identified during the project duration, the below Test Plan shall be updated and the Test Cases will be updated accordingly.

Login

- Verify that all users with valid credentials will be able to login into the system.
- Verify that account password criteria are met

Register new account

- Verify that user will be able to create an account.
- Verify that Admin will be able to update the account in the database.
- Verify that when a new account is added, the unique id will be generated for each account.
- Verify that the new ID that is generated will be unique and not a duplicate of any previous Id.
- Verify Admin is able to delete the existing account.

Application inputs and outputs

- Verify that all the inputs and outputs generated are correct.

4 PROJECT TIME LINE

TASK	START DATE	DURATION(Days)	END DATE
Gather specifications	3/29/2016	7	4/4/2016
Worked on database	4/5/2016	14	4/18/2016
Worked on servlets	4/6/2016	14	4/19/2016
Worked on jsp	4/19/2016	7	4/25/2016
Java coding	4/20/2016	10	4/30/2016
Testing	5/2/2016	3	5/5/2016
Documentation	5/5/2016	2	6/6/2016

5. CONCLUSION AND FUTURE RECOMMENDATIONS

5.1 CONCLUSION

In this project, we learnt concepts of java, java servlets, use of databases and jsp application. We tried to create an application that would analyze that would prompt a useful result based on the user requirements. This application can prove useful to users when they have to compare the cost expenses in different states in the US.

5.2 RECOMMENDATIONS

In future works the scope of the database can be worked upon. Details in reference to cities in the states can be added to the application to enhance its efficiency. Cost details in reference to other commodities may also be added.