

Statement of Requirement & Design

[Feature Specification](#)

[Additional Requirements](#)

[Class Diagram](#)

[MVC model](#)

[EmployeeInfo.java & TimesheetBean.java](#)

[EmployeeModel.java, Timesheet.java & TimesheetRow.java](#)

[EmployeeTracker .java & TimesheetManager.java](#)

[UI Screenshot](#)

[Sample Page in Chinese](#)

[Test Plan](#)

[Please see separately attached document for test results.](#)

[Build and Deploy instruction](#)

[Import and Configure Project in Eclipse](#)

[Importing Project into Eclipse](#)

[Importing Timesheet Project into Eclipse](#)

[Setup Database and dataSource](#)

[Build and Deploy Project From Eclipse](#)

[Use the Timesheet Website](#)

[Test user](#)

[Admin Test user](#)

[Features and Constraints Defined](#)

[Timesheet](#)

[View Past Timesheet](#)

[Change Password](#)

[Admin User](#)

[Supported Language](#)

Feature Specification

- app will have the follow pages:
 - Login Page
 - Allow user to login with username and password
 - Validate input username against list of existing usernames
 - if no username matches, will display error message to user
 - else, will direct user to landing page
 - View Timesheet Page
 - Is initialized with 5 empty rows
 - Contains a “New Row” button to add additional entries
 - Has project field that is numerical
 - Has work package field that is string
 - Project field and work package must be unique
 - Has hour field that is stored as BigDecimal with 1 fractional digit, valid value between 0 - 24.
 - Week number and Week ending field corresponds to current week
 - Total column and row are the sum of the week-day columns
 - If user’s input total hours exceed 40, the extra hours will overflow to overtime
 - If user’s input total hours is less than 40, then user will to give warning to
 - Landing Page
 - IF superuser/admin they get additional links to view users
 - Link to create/fill timesheet page
 - Link to view all timesheet page
 - Users have a link to view profile
 - Profile Page
 - Prompt for existing password
 - Prompt for new password (Maybe double check twice)
 - Admins can change their own username
 - View all timesheet page
 - List all timesheets in order of most recent date to earliest entry
 - Click on a timesheet to view
 - Only current week can be editable
 - View all users page
 - Only available to superuser
 - Lists all users
 - Click on a user to view
 - Create new user button
 - Delete an existing user button
 - User page
 - Include options for superuser to edit user properties

- Create New User Page
 - Fields for first/last name, username, password
- Header component
 - once user login, this component should always display user's name and employ
- Logout Page
 - Shows a link to go back to the login page

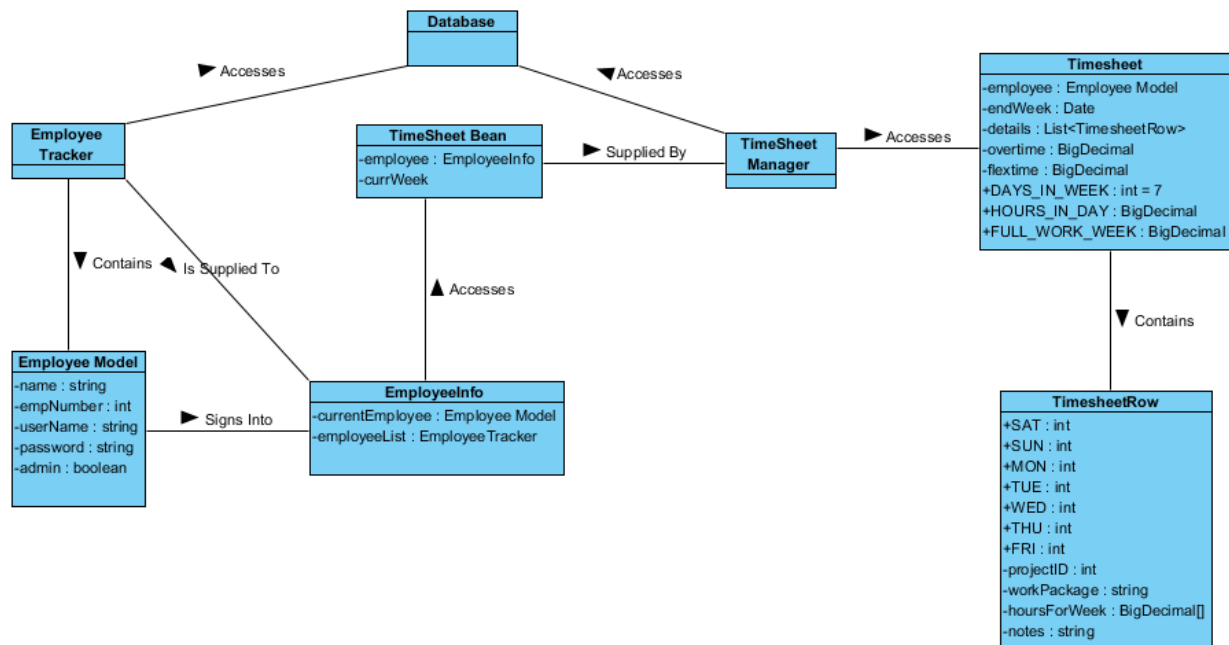
Additional Requirements

- app will use templates to re-use UI as much as possible
- app will be written in JSF or Facelets
- app will simulate database with Java

System Requirement

- Windows and Linux Operating system
- Maven 3.1 or later
- JBoss Wildfly 8.1 or later

Class Diagram



MVC model

EmployeeInfo.java & TimesheetBean.java

These files will be responsible to interact with JSF xHTMLs. Using managers from access layer to get information, or allow JSF xHTMLs to set information.

EmployeeModel.java, Timesheet.java & TimesheetRow.java

These files will serve as business object, entity beans, holding functions to get and set data.

EmployeeTracker.java & TimesheetManager.java

These files will server as access layer to actually manage the CRUD operation of data stored in MySql database.

UI Screenshot

Login Page



Timesheet COMP3910 Information Systems

Username

Password

Landing Page

[Timesheet](#)[Fill Timesheet](#)[View History](#)[Profile](#)[Logout](#)**Gabriel Smith** (E Num: 103)

Welcome back, Gabriel Smith!

[Fill Timesheet](#)[View History](#)[Profile](#)[Manage Users](#)

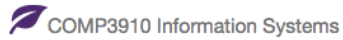
Landing Page for admin user

[Timesheet](#)[Fill Timesheet](#)[View History](#)[Profile](#)[User Admin](#)[Logout](#)**Bob Smith:** (E Num: 2)

Welcome back, Bob Smith!

[Fill Timesheet](#)[View History](#)[Profile](#)[User Admin](#)[Logout](#)

Create Timesheet Page - error



[Timesheet](#) [Fill Timesheet](#) [View History](#) [Profile](#) [User Admin](#) [Logout](#)

Bob Smith: (E Num: 2)

Timesheet

Current Week of Year: 46

Week ends on: 11/14/2014

- Work hours must add up to 40. Please add additional hours into overtime or flexible hour field

ProjectID	WP#	Total	SAT	SUN	MON	TUE	WED	THU	FRI	NOTE
20	RE03	32.0			8.0	8.0	8.0	8.0		
20	DEV	8.0			8.0					
33	EW45	16.0	8.0	8.0						
Total		56.0	8.0	8.0	16.0	8.0	8.0	8.0		

Overtime

Flexible Hours

[Add New Row](#)

[Save Timesheet](#)

Create Timesheet Page - success



Timesheet

Fill Timesheet

[View History](#)

Profile

User Admin

Logout

Bob Smith: (E Num: 2)

Timesheet

Current Week of Year: 44

Week ends on: 10/31/2014

Timesheet successfully saved.

ProjectID	WP#	Total	SAT	SUN	MON	TUE	WED	THU	FRI	NOTE
3910	a1	34.0	14.0	12.0	8.0					
3721	a2	19.0		4.0	5.0	2.0	8.0			
3512	m1	16.0				8.0		8.0		
Total		69.0	14.0	16.0	13.0	10.0	8.0	8.0	0.0	

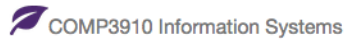
Overtime	29.0
----------	------

Flexible Hours	0.0
----------------	-----

Add New Row

Save Timesheet

Manage Users Page (admin only)



[Timesheet](#) [Fill Timesheet](#) [View History](#) [Profile](#) [User Admin](#) [Logout](#)

Bob Smith: (E Num: 2)

User Admin

[Create User](#)

E Num:	Username	Name		
2	testadmin	Bob Smith	Edit User	Delete User
3	ghung392	Gabriel Hung	Edit User	Delete User
4	starangelam	Angela Ma	Edit User	Delete User
8	test	Johnson Cambridge	Edit User	Delete User
9	testadd	Addie Moore	Edit User	Delete User

Edit a User



[Timesheet](#) [Fill Timesheet](#) [View History](#) [Profile](#) [User Admin](#) [Logout](#)

Bob Smith: (E Num: 2)

Gabriel's Profile

Change User Information - Fields Left Blank Will Be Unchanged

Username

Name

Save Changes

Change Password - All Fields Must Be Filled

New Password

Confirm New Password

Save Changes

Create New User



[Timesheet](#) [Fill Timesheet](#) [View History](#) [Profile](#) [User Admin](#) [Logout](#)

Bob Smith: (E Num: 2)

Create Employee

Fill in Details Below to Create New Employee

Username

Name

New Password

Confirm New Password

Create User

Logout Page

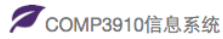


Timesheet

 COMP3910 Information Systems

You are logged out. [Click here to login again.](#)

Sample Page in Chinese



时间表 填写时间表 查看历史记录 设置 用户管理 退出

Bob Smith: (编号: 2)

Bob Smith的个人资料

更改用户信息 - 字段留空将保持不变

用户名

用户名

名称

名称

保存更改

更改密码 - 所有项目必须填写

旧密码

新密码

输入新密码

确认新密码

重新输入新密码

George Leung

Test Plan

Login Page:

- Users/Admins will be able to login with correct username and password
- Error will be displayed if incorrect credentials are entered

Landing Page:

- For Admins:
 - Clicking “User Admin” will go to the “User Admin” page
- Non-Admin users cannot find link to manage users.
- Clicking on “Fill Timesheet” will take the user to the “Fill Timesheet” page
- Clicking on “View all Timesheets” will take the user to a page showing all previously created timesheets
- Clicking on “Profile” will take the user to a page to change their passwords

User Admin Page:

- Admin user should see list of users and their details
 - employee number
 - name
 - username
- Clicking on a user, will take the admin to a “Profile” page of the user. User information of other rows should not be affected.
- Click on “delete” will delete user of the same row
- Click on “Create user” will take the admin user to another page to add new user

Create New User Page:

- Following fields will be presented when user land on this page
 - Name input field
 - Username input field
 - Password input field
 - Create new user button
- If admin-user fill in all fields and click “save” button, a new user will be created with unique employee number
- If admin-user leave any of the above field empty, he will be warned with a message,

Fill Timesheet Page:

- If it's a new entry, five rows are initialized to be empty
- If it's the current week, the fields will be editable
- Clicking on the “add new row” button will generate a new empty row
- The hours of each day and week should sum up to 40 hours

- if hours for entire week is above or below 40 hours, error message will display on top of the timesheet table
- Hours entered must have a numerical value
 - hours per day must not be negative or exceed 24 hours, or else an error message will display on top of the timesheet table
- Project ID must have a numerical value
 - else error message will display on top of the timesheet table
- Project Work Package Number must have a alphanumeric value
 - else error message will display on top of the timesheet table
- Project ID and Project Work Package Number together must be unique
 - else error message will display on top of the timesheet table
- Overtime and flex time fields must have numerical value
 - else error message will display on top of the timesheet table

View History Page:

- Clicking on a timesheet will bring up the timesheet page

Profile Page:

- Only Admins should have the capability to change their username/name
- Upon successful password change, the view will be taken back to the landing page

View User Page:

- Admin will be able to change user details:
 - first/last name
 - password
 - username
- Logout and try logging in with the modified user details

Logout Page:

- Back to login link should go to the login page

Please see separately attached document for test results.

Build and Deploy instruction

Import and Configure Project in Eclipse

We assume the following software have been installed and configured properly

- Java Development Kit 7.x
- Eclipse Luna 4.4 with Wildfly Tools
- Wildfly 8.x and JBOSS_HOME defined
- MySQL 5.x
- MySQL user *stock* with password *check* created

Importing Project into Eclipse

1. Unzip submitted zip folder onto your chosen directory (we will call this *project root* from now on).
2. Open your eclipse program
3. Select "File >> Import ..."
4. Select "JSF Project" from Other category in the import window
5. Press the next button
6. Press the Browse button on the import window
7. In the *project root*, select **web.xml** from path *a1/WebContent/WEB-INF/*
8. Press the next button
9. Select **3.1** in the dropdown for Servlet Version
10. Make sure **Wildfly 8.x** is selected as Target Server
11. Press the finish button to complete the import

Importing Timesheet Project into Eclipse

1. Unzip submitted zip folder onto your chosen directory (we will call this *project root* from now on).
2. Open your eclipse program
3. Select "File >> Import ..."
4. Select "Existing Projects into Workspace" from General category in the import window
5. Press the next button
6. Press the Browse button on the import window
7. Select the location of the "timesheet" folder in the *project root*.
8. Select OK
9. Press the finish button to complete the import

Configure Project into Eclipse

1. Right click on the project folder in Package View
2. Select "Build Path >> Configure Build Path..." in the context menu
3. Select Project tab in the "Properties for a1" window

4. Click on Add button
5. Select “timesheet” project in the Required Project Selection window
6. Select “Deployment Assembly” section from the left panel
7. Click on Add button
8. Select “Project” in the Select Directive window
9. Click next button
10. Select “timesheet” project
11. Click on Finish
12. Click on OK to save the configuration.

Setup Database and dataSource

Clean up MySQL to avoid any collision

1. Login to your mysql database with root user
2. Drop timesheet database to avoid collision:

```
drop database timesheet;
```
3. Exit mysql.

Setup Database and import data

4. Running ***timesheet_mysql.sql*** under the source directory

```
mysql -uroot -p < timesheet_mysql.sql
```

This creates database timesheet, and grant user stock all access to this database.

Setup datasource in Wildfly’s Administrative Console

5. Add datasource with following configuration:
 - a. **JNDI:**
`java:jboss/datasources/Timesheet`
 - b. **JDBC Connection URL:**
`jdbc:mysql://localhost/timesheet`
 - c. Choose Mysql as Driver

Build and Deploy Project From Eclipse

1. In Eclipse, stop WildFly8.x Server, and delete all previously deployed versions of this project
2. Start the WildFly8.x Server
3. Right click on the project folder in Package View
4. Select “Run As >> Run on Server” choice in the context menu
5. Project page will launch in Eclipse once its successfully deployed into server

Use the Timesheet Website

Test user

username: test

password: test

Admin Test user

username: testadmin

password: testadmin

Features and Constraints Defined

Timesheet

1. In **Fill Timesheet** page, you can enter the data for each project, work package, hours worked for each day, and note.
2. You can enter over 40 hours per week in the timesheet, but you must declare any hour over 40 in the **Overtime** and/or **Flex Hour** fields
3. You can use 0 as project ID, but WorkPackage# field must not be empty - even if you have only 1 row
4. You can add new row to the timesheet, and any empty rows will be trimmed (deleted) when you click "Save Timesheet" button (rows with 0 hours, but has projectId and work packages are kept)

View Past Timesheet

1. Go to **View History** page, you can view all timesheet entries you had entered in the past. Note, weeks without any entry are not displayed in this list.
2. Click on an entry to view details
3. You may not edit past week's entries. Previous week's entries were recorded and reported, thus should not be meddled again.
4. You may not add entries in future week's either, you should not claim hours you have not worked.

Change Password

1. You can change your password in the **Profile** page
2. You need to enter your current password to do this

Admin User

1. Admin user, and only Admin user, can manage users in the **User Admin** page
2. As an admin user, you can create and delete users
3. You can edit user's username, name and password by clicking on the user entry.
4. When you change user's password through User Admin page, you do not need to enter old password - you are the admin, you have more power.
5. Admin user can change his own Username and Name directly from **Profile** page.

Supported Language

This project website supports viewing in both English(en) and Chinese Simplified Mandarin (zh).