

COMP 3095 – Java Web Application Development

Due Date: Friday, December 29th, 2017 (11:59 pm)

Team Size: 1 – 6 Team Members.

Problem statement:

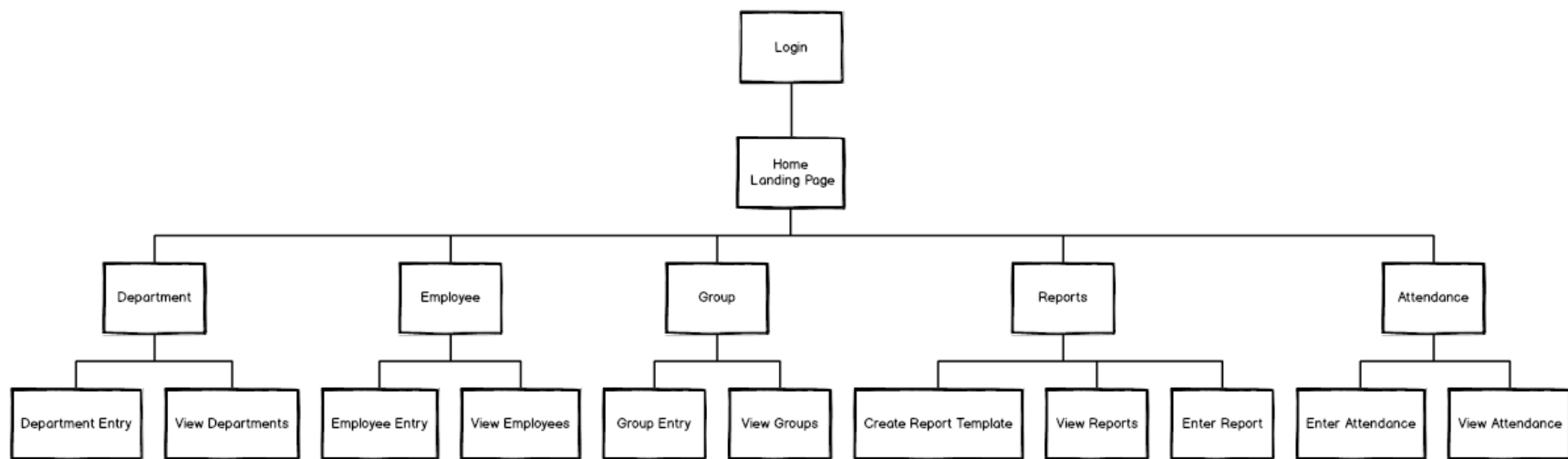
Having submitted and reviewed your first assignment, your manager is presently surprised in your capabilities. The management team has taken note to your strong skill-set and have overwhelmingly received excellent feedback directly from the clients on the first phase of the application.

Based on the review of your first assignment however, the clients have now come back to your managers and business analysts (BA) with even more requirements. These new requirements have been gathered by your BA's and after a number of meetings, have been conveniently tabulated into an updated business requirements document. The summary of these new requirements have been captured in the wireframes and pages below.

Your manager continues to be under direct pressure from the company Director to produce the final product that essentially encompasses all client requirements. Your manager, fully recognizes your potential, has much more confidence in you and is now allowing you to lead the remaining portion of this project to project completion and delivery.

Please note, for Assignment 2, you are required to build upon and extend the original assignment (Assignment 1). Again, you will continue to use, Java 8, Eclipse and Tomcat (version 8). Your assignment **must** meet the requirements as specified below.

The Updated Phase 2 Web Application Site Map



Page Summary

Title	Brief Description	Phase
Login	Page where admin user logs in. Username and password authentication level.	Phase 1
Home Page/Landing Page	Single page that appears in response to a successful admin login.	Phase 1
Department	Department landing page	Phase 1
<ul style="list-style-type: none"> • Department Entry 	Form page to create and enter a new department.	Phase 1
<ul style="list-style-type: none"> • View Departments 	Page to display and view department information	Phase 2
Employee	Employee landing page	Phase 1
<ul style="list-style-type: none"> • Employee Entry 	Form page to create and enter a new employee.	Phase 1
<ul style="list-style-type: none"> • View Employees 	Page to display and view employee information	Phase 2
Group	Group landing page	Phase 1
<ul style="list-style-type: none"> • Group Entry 	Form page to create and enter a new group.	Phase 1
<ul style="list-style-type: none"> • View Groups 	Page to view and display group information	Phase 2
Reports	Reports landing page	Phase 1
<ul style="list-style-type: none"> • Create Report 	Page to create a report template	Phase 2
<ul style="list-style-type: none"> • View Reports 	Page to view reports	Phase 2
<ul style="list-style-type: none"> • Enter Report 	Page to enter reports	Phase 2
Employee Attendance	Employee landing page.	Phase 1
<ul style="list-style-type: none"> • Enter Attendance 	Page to enter attendance information	Phase 2
<ul style="list-style-type: none"> • View Attendance 	Page to view attendance information	Phase 2

Department

All organizations have specialized areas within them that handle specific verticals of the company's work, called Departments. Departments such as accounting, Marketing, Planning, Application Development, IT, Support etc.... exist to house and oversee related and associated tasks. Your application must allow for the entry of the different departments within your company's growing organization.

The new wireframes added, conceptualize the new View Departments Page.

View Departments Page

The Business Analysts have provided a wireframe mockup of a potential view department page below:

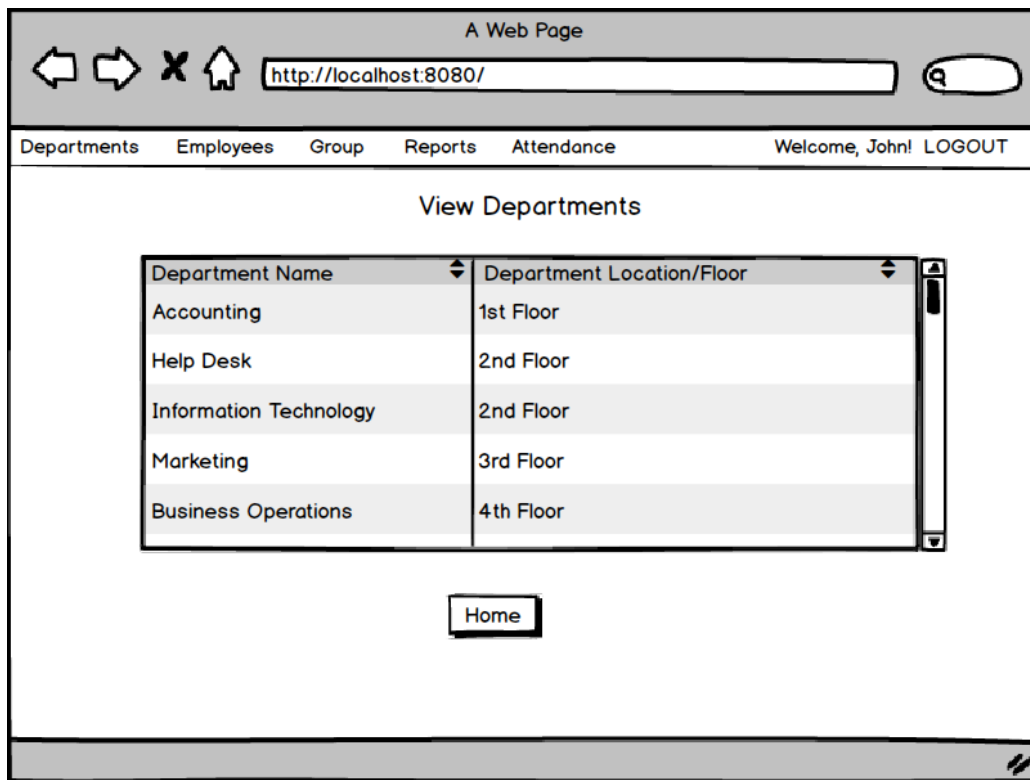


Figure 1: View Departments Page

Please note, the wire frame is a mock-up only, and used to convey a way of presenting the information. In all cases however, the Business Analysts have decided to leave the final design decision for the View Departments page, for the developers to ultimately decide.

Employee

Companies are built by/on/with employees. The application you are required to build must also allow for the entry of employee profiles.

The new wireframes added, conceptualize the new View Employee Page.

View Employee Page

The Business Analysts have provided a wireframe mockup of a view employee listing page below:

A Web Page

http://localhost:8080/

Departments Employees Group Reports Attendance Welcome, John! LOGOUT

EMPLOYEE LISTING

Quick Filter

Select Department

Search Cancel

Lastname	Firstname	Employee #	Hire Date	Email	Job Position

Home

Figure 2: View Employee Page - Initial

Please note, the wire frame is a mock-up only, and used to convey a way of presenting the information. In all cases however, the Business Analysts have decided to leave the final design decision for the View Employee page, for the developers to ultimately decide.

View Employee Page – Example

The Business Analysts have provided a wireframe mockup of a view employee listing page for a sample/example query on **all** the employees in the **accounting** department below:

The wireframe shows a web browser window titled "A Web Page" with a URL bar containing "http://localhost:8080/". The page has a navigation bar with links: Departments, Employees, Group, Reports, Attendance, and a user greeting "Welcome, John! LOGOUT". The main content area is titled "EMPLOYEE LISTING" and includes a "Quick Filter" section with a dropdown menu set to "Accounting" and "Search" and "Cancel" buttons. Below this is a table with 6 columns: Lastname, Firstname, Employee ID, Hire Date, Email, and Job Position. The table contains 5 rows of employee data. At the bottom of the page is a "Home" button.

Lastname	Firstname	Employee	Hire Date	Email	Job Position
Wayne	Bruce	1234	10/5/2017	b.wayne@batman.com	Owner
Parker	Peter	3894	10/5/2017	p.parker@spidey.com	Student
Stark	Anthony	4141	10/5/2017	t.stark@ironman.com	Owner
Prince	Diana	5678	10/5/2017	d.prince@wonderwoman.com	Owner
Kent	Clark	4566	10/5/2017	k.clark@superman.com	Reporter

Figure 3: Employee Listing for Accounting Department

Group

Departments can be further divided into groups. A group can be thought synonymous to a team. A department can have many groups, your application must allow for the entry and configuration of a group.

The new wireframes added, conceptualize the new View Group Page.

Group View Page

The Business Analysts have provided a wireframe mockup of a potential view group page below

The wireframe shows a web browser window titled "A Web Page" with a URL bar containing "http://". The page has a navigation bar with links: Departments, Employees, Group, Reports, Attendance, and a user greeting "Welcome, John! LOGOUT". The main content area is titled "VIEW GROUP". Below the title is a "Quick Filter" section with two dropdown menus labeled "Department" and "Group", and two buttons labeled "Search" and "Cancel". Below the filter is a table with the following columns: Department, Group Name, Employee Lastname, Employee Firstname, and Employee#. The table has several rows of data. Below the table is a "Home" button.

Department	Group Name	Employee Lastname	Employee Firstname	Employee#

Figure 4: Group View - Initial

Please note, the wire frame is a mock-up only, and used to convey a way of presenting the information. In all cases however, the Business Analysts have decided to leave the final design decision for the View Group page, for the developers to ultimately decide.

Group View Page – Example

The Business Analysts have provided a wireframe mockup of an example view group page, for a query on the Accounting department, “Super Heroes” group. Please take note, that a group can only be associated with one department, as such, the drop down for the groups, should only be populated with the groups associated (and thus visible) to the selected department.

A Web Page

Departments Employees Group Reports Attendance Welcome, John! LOGOUT

VIEW GROUP

Quick Filter

Accounting Super Heroes

Search Cancel

Department	Group Name	Employee Lastname	Employee Firstname	Employee#
Accounting	Super Heros	Wayne	Bruce	1234
Accounting	Super Heros	Parker	Peter	3894
Accounting	Super Heros	Stark	Anthony	4141
Accounting	Super Heros	Prince	Diana	5678
Accounting	Super Heros	Kent	Clark	4566

Home

Figure 5: View Group Page - Example

Reports

The Business Analysts have identified the need for a Reports section, but have decided to leave the implementation for a later phase in the project. For this phase however, a simple Reporting Landing page is sufficient.

The new wireframes added, conceptualize the new Create Report Template, Enter Report and View Report Pages. To help clarify these requirements, examples of each of these new pages, with sample entry data has been provided.

Create Report Template - Example

The Business Analysts have provided a wireframe mockup of a potential create report template page below

A Web Page

http://localhost:8080/

Departments Employees Group Reports Attendance Welcome, John! LOGOUT

CREATE REPORT TEMPLATE

1. Details:

Report Template: Date:

Department:

2. Section I:

Criteria 1: maximum:

Criteria 2: maximum:

Criteria 3: maximum:

Criteria 4: maximum:

Criteria 5: maximum:

3. Section II:

Criteria 1: maximum:

Criteria 2: maximum:

Criteria 3: maximum:

3. Section III:

Criteria 1: maximum:

Criteria 2: maximum:

Criteria 3: maximum:

Figure 6: Create Report Template - Example

Enter Group Report – Example

The Business Analysts have provided a wireframe mockup of a potential enter report page, for an example group, has been provided below.

A Web Page

http://localhost:8080/

Departments Employees Group Reports Attendance Welcome, John! LOGOUT

ENTER REPORT

1. Details:

Report Template: Report Title: Date:

Department:

Report Type: ☒ Group ☐ Employee

2. Contribution

Research and Gathering Evaluation:

Sharing Information Evaluation:

Using Time Wisely Evaluation:

Ready to Work Evaluation:

Excellent work.

3. Responsibility

Fulfill Teams Role Evaluation:

Sharing Work Equally Evaluation:

Helping Team Members Evaluation:

All responsiblites are being exceeded.

4. Value

Listen to others Evaluation:

Include Teammates Evaluation:

Make fair decisions Evaluation:

Overall, very impression group dynamics!

TOTAL: / 50

Figure 7: Enter Report - Example Group

Enter Employee Report - Example

The Business Analysts have provided a wireframe mockup of a potential enter report page, for an example employee, has been provided below.

A Web Page

http://localhost:8080/

Departments Employees Group Reports Attendance Welcome, John! LOGOUT

ENTER REPORT

1. Details:

Report Template: Report Title: Date:

Department:

Report Type: ☐ Group ☒ Employee

2. Contribution

Category	Evaluation	Notes
<input type="text" value="Research and Gathering"/>	<input type="text" value="4"/>	<input type="text" value="Bruce is always contributig to corporate objectives."/>
<input type="text" value="Sharing Information"/>	<input type="text" value="4"/>	
<input type="text" value="Using Time Wisely"/>	<input type="text" value="4"/>	
<input type="text" value="Ready to Work"/>	<input type="text" value="5"/>	

3. Responsibility

Category	Evaluation	Notes
<input type="text" value="Fulfill Teams Role"/>	<input type="text" value="4"/>	<input type="text" value="Bruce meets all his responsibilities."/>
<input type="text" value="Sharing Work Equally"/>	<input type="text" value="5"/>	
<input type="text" value="Helping Team Members"/>	<input type="text" value="4"/>	

4. Value

Category	Evaluation	Notes
<input type="text" value="Listen to others"/>	<input type="text" value="4"/>	<input type="text" value="Overall, Bruce bring much value to our organization."/>
<input type="text" value="Include Teammates"/>	<input type="text" value="4"/>	
<input type="text" value="Make fair decisions"/>	<input type="text" value="3"/>	

TOTAL: / 50

Figure 8: Enter Report - Example Employee

View Report

The Business Analysts have provided a wireframe mockup of a potential view report page below

The wireframe shows a web browser window titled "A Web Page" with the address bar displaying "http://localhost:8080/". The page has a navigation bar with links: Departments, Employees, Group, Reports, Attendance, and a user greeting "Welcome, John! LOG-OUT". The main content area is titled "VIEW REPORT" and contains a "Quick Filter" section with three dropdown menus: "Select Report Template", "Select Department", and "Select Report Title". Below these are "View" and "Cancel" buttons. The main report area is a large rectangle labeled "Report" in the top-left corner, containing the text "VIEW REPORT HERE" and a yellow callout box that says "double-click to edit".

Figure 9: View Reports Page - Initial

View Report - Example

To further assist, the Business Analysts have provided a wireframe mockup of a sample/example view report page.

A Web Page

http://localhost:8080/

Departments Employees Group Reports Attendance Welcome, John! LOGOUT

VIEW REPORT

Quick Filter

Fall Report 2017 Accounting Bruce Wayne Report

View Cancel

Report

1. Details:

Report	Fall Report
Report Title	Bruce Wayne
Date Created	02/12/20
Department	Accounting

2. Contribution:

Research and Gathering	Evaluation: 4	Bruce is always contributig to corporate objectives.
Sharing Information	Evaluation: 4	
Using Time Wisely	Evaluation: 4	
Ready to Work	Evaluation: 5	

3. Responsibilities

Fulfill Teams Role	Evaluation: 4	Bruce meets all his responsibilities.
Sharing Work Equally	Evaluation: 5	
Helping Team Members	Evaluation: 4	

4. Value

Listen to others	Evaluation: 4	Overall, Bruce bring much value to our organization.
Include Teammates	Evaluation: 4	
Make fair decisions	Evaluation: 3	

TOTAL: 41 / 50

Edit Back

Figure 10: View Report Page - Example

Attendance

The Business Analysts have identified the need for an Attendance section, a simple and convenient way to track employee attendance, on a department-by-department basis. The section below further depicts what the business is thinking of, as usual wireframe mockups have been provided to help clarify and conceptualize some of the requirements desirables.

The new wireframes added, conceptualize the new Enter Attendance and View Attendance pages.

Enter Attendance

The Business Analysts have provided a wireframe mockup of a potential enter attendance page below

A Web Page

Departments Employees Group Reports Attendance Welcome, John! LOGOUT

ENTER ATTENDANCE

Quick Filter

Department

Search Cancel

//

Employee Lastname	Employee Firstname	Employee#	Present

Enter

Figure 11: Enter Attendance – Initial

Enter Attendance - Example

The Business Analysts have provided a wireframe mockup of a potential enter attendance page below

The wireframe shows a web browser window titled 'A Web Page'. The address bar contains 'http://'. The navigation bar includes links for 'Departments', 'Employees', 'Group', 'Reports', and 'Attendance', along with a user greeting 'Welcome, John!' and a 'LOGOUT' link. The main heading is 'ENTER ATTENDANCE'. Below this is a 'Quick Filter' section with a dropdown menu currently set to 'Accounting', and 'Search' and 'Cancel' buttons. A date selector shows '11 /21 /2017' with a calendar icon. The main content area features a table with four columns: 'Employee Lastname', 'Employee Firstname', 'Employee#', and 'Present'. The table lists six employees: Wayne (Bruce, 1234, Present), Parker (Peter, 3894, Not Present), Stark (Anthony, 4141, Present), Prince (Diana, 5678, Present), Kent (Clark, 4566, Not Present), and Liberty (Valerie, 4234, Present). Below the table is an 'Enter' button.

Employee Lastname	Employee Firstname	Employee#	Present
Wayne	Bruce	1234	<input checked="" type="checkbox"/>
Parker	Peter	3894	<input type="checkbox"/>
Stark	Anthony	4141	<input checked="" type="checkbox"/>
Prince	Diana	5678	<input checked="" type="checkbox"/>
Kent	Clark	4566	<input type="checkbox"/>
Liberty	Valerie	4234	<input checked="" type="checkbox"/>

Figure 12: Enter Attendance - Example for Accounting Department

View Attendance

The Business Analysts have provided a wireframe mockup of a potential view attendance page below

A Web Page

Departments Employees Group Reports Attendance Welcome, John! LOGOUT

VIEW ATTENDANCE

Quick Filter

Department

Search Cancel

Employee Lastname	Employee Firstname	Employee#

Enter

Figure 13: View Attendance - Initial

View Attendance Example

The Business Analysts have provided a wireframe mockup of a potential view attendance page below

The wireframe shows a web browser window titled 'A Web Page'. The address bar contains 'http://'. The navigation bar includes links for 'Departments', 'Employees', 'Group', 'Reports', and 'Attendance', along with a user greeting 'Welcome, John!' and a 'LOGOUT' link. The main content area is titled 'VIEW ATTENDANCE'. Below this, there is a 'Quick Filter' section with a dropdown menu currently set to 'Accounting'. Below the dropdown are 'Search' and 'Cancel' buttons. A table displays attendance data for six employees. The table has columns for 'Employee Lastname', 'Employee Firstname', 'Employee#', and three dates: '11/7/2017', '11/14/2017', and '11/21/2017'. Each date column contains a checkbox indicating attendance status. An 'Enter' button is located below the table. The browser window also features standard navigation icons (back, forward, stop, home) and a search icon in the top right corner.

Employee Lastname	Employee Firstname	Employee#	11/7/2017	11/14/2017	11/21/2017
Wayne	Bruce	1234	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Parker	Peter	3894	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Stark	Anthony	4141	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Prince	Diana	5678	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Kent	Clark	4566	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Liberty	Valerie	4234	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Figure 14: View Attendance - Example Accounting Department

Database and Data Persistence

Knowing assignment 2 is an extension of assignment 1, you will still be required to implement (modify) your data persistence in order to store and meet the full requirements of assignment 2. Data such as, user, departmental, employee profiles, group and now reports and attendance information, must all be stored.

You and your team will be required to construct and provide a **complete** and **updated** sql script (**database.sql**) to assist in the creation of your entire applications database schema. The schema design will once again be largely of the development teams (aka your teams) responsibility. Please ensure that your sql script seeds any initial data (if necessary) while being executed.

Naturally, you will be **required** to **submit** the completed database.sql that will ultimately construct and seed your backend database for your proposed solution, as part of your submission (please review assignment submission guidelines section below for more details).

MVC Architecture and JSP Requirements

Now that you and your team are familiar with the jsp technology and MVC architecture, you will be required to remove all html files from your existing project, utilizing jsp's (wherever deemed necessary) and design your solution based on an MVC design. Please note and for clarity, jsp, java servlets and java should form the basis of the technologies associated with assignment solution.

Validation Requirements

All pages under the Login page should continue to **not** be visible/accessible to users who either have not authenticated or failed to authenticate. If a non-authenticated user attempts to access such pages, they should be directed to the login page with an appropriate error message displayed.

Assignment Submission Guidelines:

1. You must submit your assignment to your manager (Professor Santilli) using your assigned georgebrown.ca emails only.
2. All members in the project team must be **cc'd** on the final assignment submission. Failure to do so will result in a mark of zero for those member not cc'd on the assignment submission email.
3. Within the body of the email, clarify course code, team name, team members and student numbers. Title the email accordingly COMP 3095 – Assignment 2.

Example:

Course: COMP 3095

Team Name: The Hackers

Team Members: John Smith - 1234567
 Sally Jones - 7654321
 Jane Wilson - 2342342

4. When uploading, cc' a copy to yourself for backup and time verification.
5. The uploaded compressed file must be in **.rar** or **.zip** format.
6. The contents of the compressed file must include:
 1. **.war** file of the project (with source code, no source code, no marks)
 2. **script** folder – .sql scripts located inside.
7. The .zip/.rar file naming convention as follows:

COMP3095_YOUR_TEAM_NAME.rar or COMP3095_YOUR_TEAM_NAME.zip

Example: COMP3095_The_Hackers.zip

*where **YOUR_TEAM_NAME** should be replaced with your team name in the company.

8. Each java file (.java) should include a header.

```
//*****
* Project:          <project name ... >
* Assignment:      <assignment # >
* Author(s):        <author name ...>
* Student Number: <student number ... >
* Date:
* Description:      <describe the java file and its purpose briefly only – 1 or 2 lines>
*****//
```

9. Your code should be modular and should show no signs of dry (don't repeat yourself) code.
10. You are required to devise and use a form of persistent data storage.
11. The technologies used for this assignment are Java 8, Tomcat 8 and MySQL.
12. Your manager should need only to deploy your application (possibly run some .sql scripts) and be able to use and evaluate your application immediately (navigating to the pages described).
13. Be cautious **DO NOT** share your application with others. Complete failures will be assigned if code is shared. All assignments will be reviewed and analyzed strictly within these regards.
14. Late assignments are assigned a penalty of 10% per day.