|	CODE:	JWD.L.A101 (Car Park)
FRESHER ACADEMY	TYPE:	**Project/Long Assignment**
	LOC:	**N/A**
	DURATION:	

Project/Long Assignment

Objectives

- Understand the basic concepts of web development technologies with java (JSP / Servlet)

- Able to write servlets using the Java programming language (Java servlets)

- Create dynamic HTML content with Servlets and JavaServer Pages, using the Expression Language, and the JSP Standard Tag Library (JSTL)

- Create robust web applications using MVC architecture, session management, filters, and database integration (JDBC) or Hibernate framework

- Make Servlets and JSP work together cleanly

- Create secure web applications using the features of the Java EE web container

- Deploy your project using Apache Tomcat Server

Product architectures

If you use JDBC to connect to Database, then must use the following architecture:
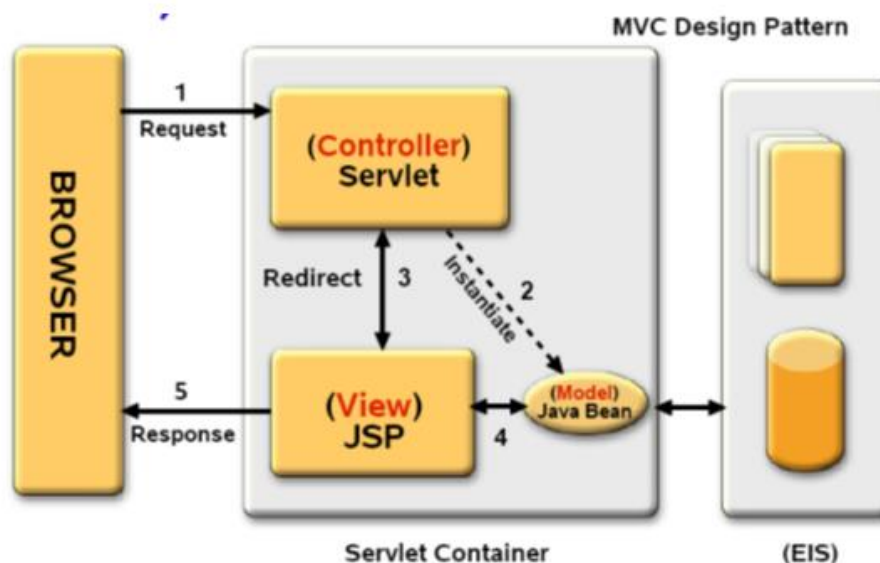
The architecture with Hibernate framework:
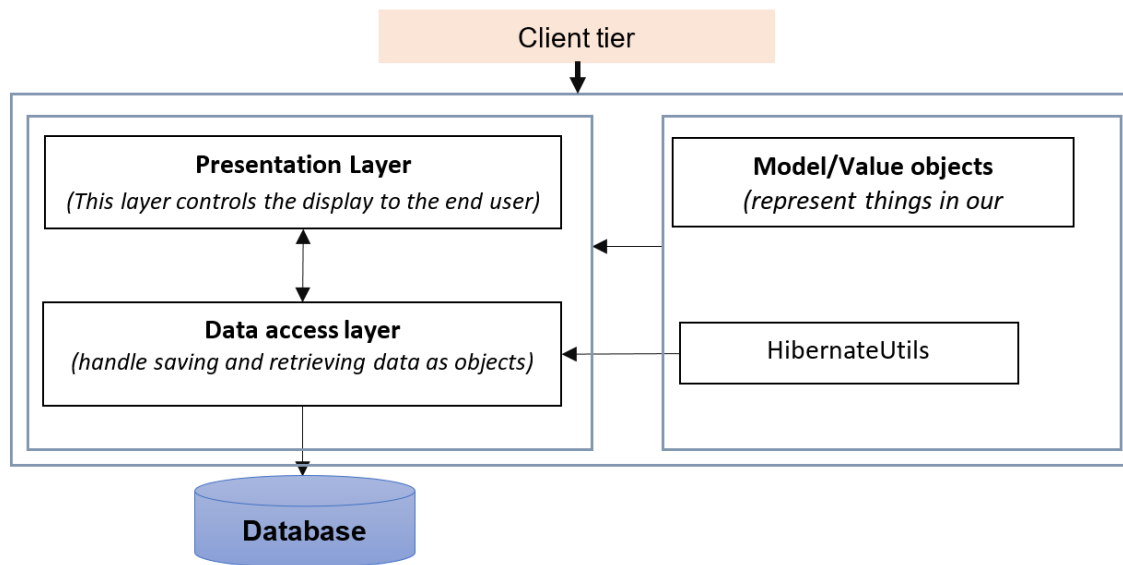
Working and Technial requirements:

Working environment:

        Framwork :   HTML/CSS, JS/jQuery, JSP/Servlet and Hibnerate ORM Framework

        IDE, tools :   Eclipse, Maven 3.x

        Server tool :   Tomcat 8.x

        Java version : Java 1.8 or late
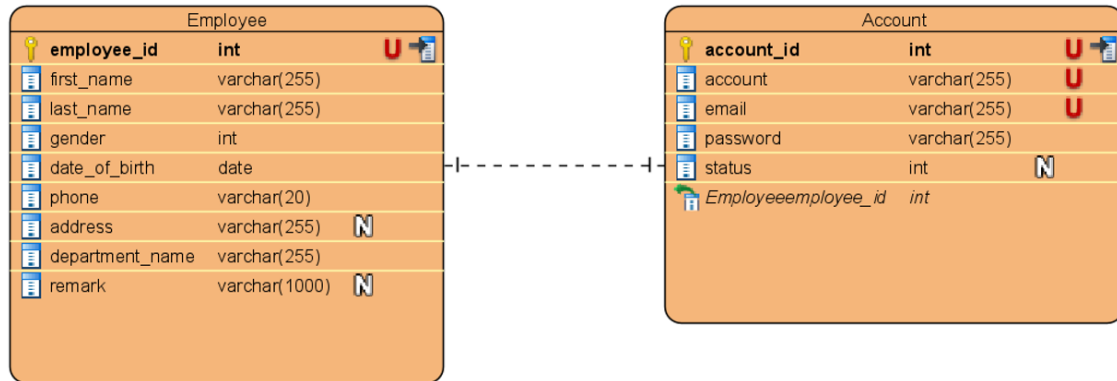
        Data base :   SQL DB Server, Oracle 11g

Delivery:

- Source code, deployment and testing evident packaged in a compress archive.

Business needs

Create a Web application based on HTML, CSS, JavaScript, Ajax, JSP/Servlet, Hibernate ORM framework to build Human resource management (HRM) module.

Database Relationship

- Account stores the detail user information, including account (username), email, password and status.

- Employee stores the employee information, each employee has only one account, including:

  - employee_id: required, the employee id (auto-increment);

  - first_name and last_name: required, the name of the employee;

  - gender: the gender of employee;

  - date_of_birth: the date of birth of employee;

  - phone, address of employee;

  - department_name: it is the department name of employee;

Specifications 1

In this assignment, you will create a program that allows a user to do the login using user and password if existed account in DB.

- **Login page**

List item definition for Login page:

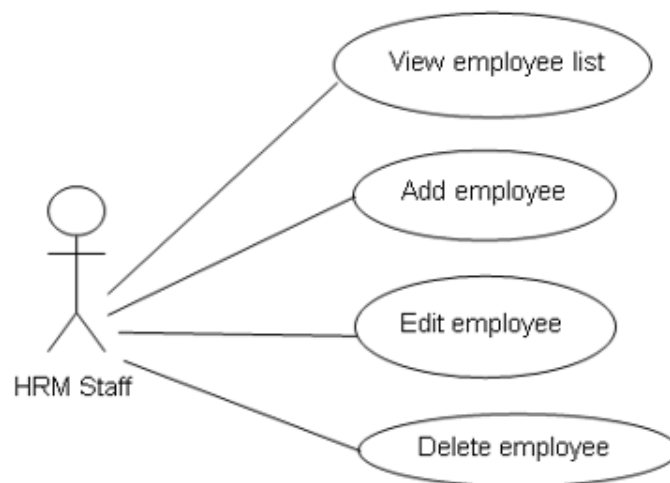| No	Items	Type	Size
1	Username	Text	50
2	Password	Password	50
3	Login	Button	N/A
4	Forgot Password?	Link	N/A

The authentication and authorized user use Case:

- Use form-based authentication with a basic servlet. With form-based authentication, you can customize the login screen and error pages that are presented to the web client for authentication of their user name and password.

- When a user submits their name and password, the server determines if the user name and password are those of an authorized user and, if authorized, will move the user to the screen view display employee list.

Specifications 2

Provide adequate provisions for a special web system. In this assignment, we will learn about a content management system. The use case diagram is described as below:

The diagram below provides an overview of the groups of functions and actors involved in building the module:

Use Case Name	Employee management
Use Case ID	UC01.
High Level Requirement Ref	Allows to manage information of employee such as creating, viewing details, displaying employee list
Actor	Admin.
Description	All of employee information is accessed from database and displayed on screen. The user can create, view details, display employee list.
Trigger	NA.
Pre-condition	User clicks Employee management on Menu
Post-processing	

- **Display employee list**

Screen of employee list
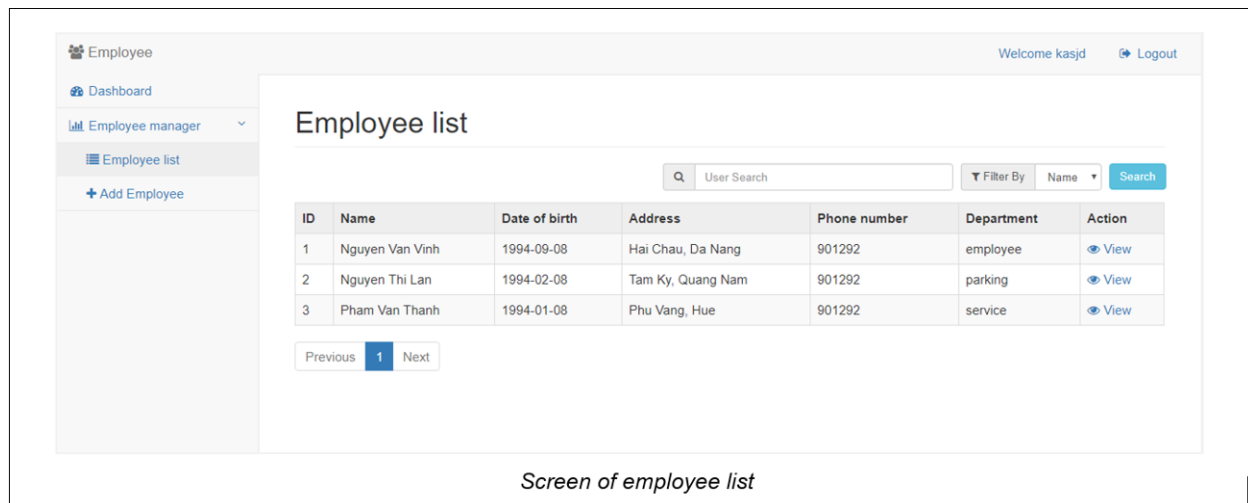
Screen	Employee list
Description	Display employee list
Screen Access	Admin clicks **Employee management -> Employee list ->List**

Screen Content

Item	Type	Description
Search	Search Box	
Search criteria	ComboBox	
Search	Button	
ID	Label - Integer	
Name	Link - String (50)	Display name of employee. When the user clicks employee name, then forward to information page of this employee
Date of birth	Label - Date	
Address	Label -String(50)	
Phone number	Label - String(50)	
Department	Label - String(50)	
Prev	Link	When user clicks this link, then display employee list at the previous page
1	Link	When the user clicks this link, then display employee list at page 1

2	Link	When the user clicks this link, then display employee list at page 2
3	Link	When the user clicks this link, then display employee list at page 3
Next	Link	When user clicks this link, then display employee list at the next page

Screen Actions

Action Name	Description	Success	Failure
Search	When user clicks Search, the system will search employee according to inputted information.	If the user does not input any data to search, the system will display all employees on employee list table. Otherwise, display search result on the employee list table.	When database connection has error -> Display message "Database connection error" When the system does not find out any employee, then display message "No matches".

- **Add employee**

Screen of adding employee

Screen	Add employee
Description	Allows users to add employee
Screen Access	Amin clicks **Employee management -> Employee List -> Add employee**
Screen Content	

Item	Type	Description
Full name	Text field – String (50)	
Date of birth	Date Picker	
Sex	RadioButton	

Address	Text field – String (50)	
Phone number	Text field – String (50)	
Email	Text field – String (50)	
Account	Text field – String (50)	
Password	Password – String(100)	
Department	ComboBox	
Back	Button	The user clicks Back to return to the previous page
Reset	Button	The user clicks Reset to delete all inputted data.
Add	Button	The user clicks Add to add employee into Database

Screen Actions

Action Name	Description	Success	Failure
Back	If user clicks Back, then system forwards to the previous screen.	Display the previous screen.	When database connection has error -> Display message "Database connection error"
Reset	If user clicks Reset, then system deletes inputted information.	Delete all inputted information	When database connection has error -> Display message "Database connection error"
Add	When the user clicks Add, the system validates data. If data is valid, then save inputted data on the database, otherwise display error message.	Back to screen of Employee list and display the message "Add employee successfully".	When inputting password with wrong format -> Display the message "Password must include uppercase, lowercase and number."

	The password must have at least 6 characters, including uppercase, lowercase and number.		
Validation			

Request to Answer:

- All pages will run on the Tomcat server.

- User need use java code to validate data before insert, update employee information to database after validating data on client by Javascript.

Mark scale:

✓ Create project with architectures, Configuration, Mapping : 20% ✓ Specification 1 : 20%	✓ Specification 2 : 50% ✓ Non-Functional, Quality requirements : 10%

The End