

INDUSTREE

NESTOR LOBO, VARSHA TERATIPALLY, SHREYA VERMA

CSCI 5448, CU BOULDER

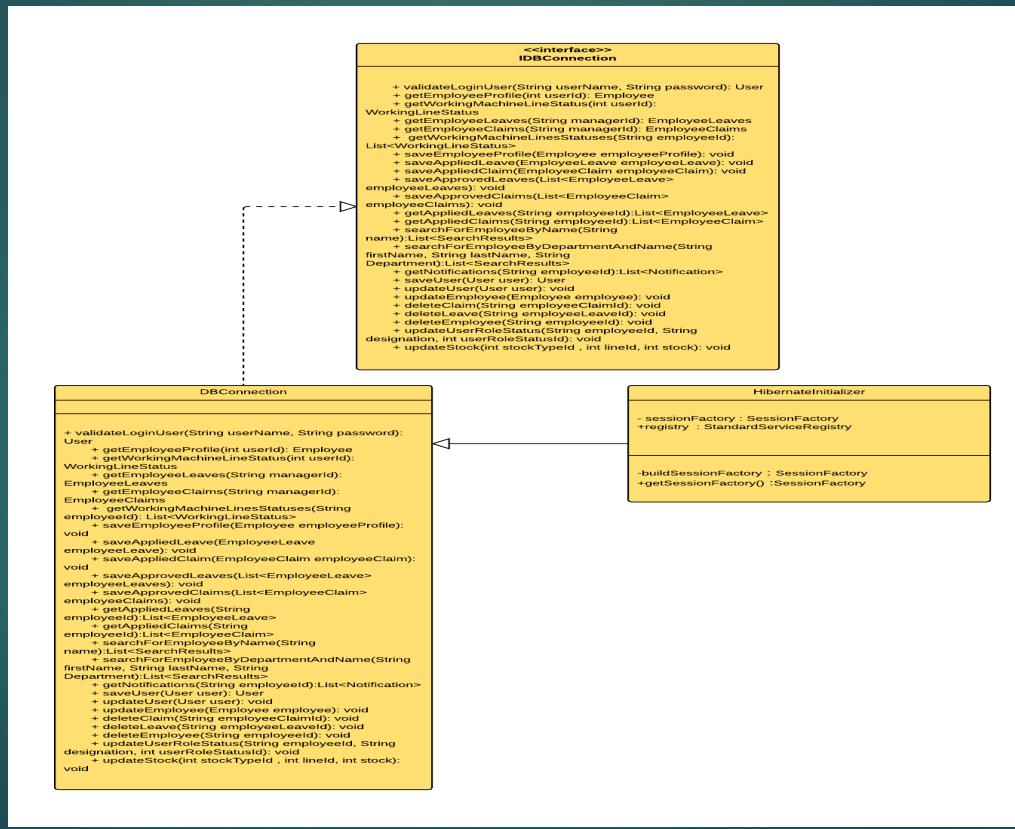
PROJECT SUMMARY

- ▶ A platform to aid in the management of daily workings in a factory.
- ▶ It enables a centralized management system of tasks such as tracking machine stock levels, request stock.
- ▶ It also provides a management system for the Human Resources Department for creating employee and managing employee information and enabling employees to apply for leaves and claims, search for employees and edit personal information.

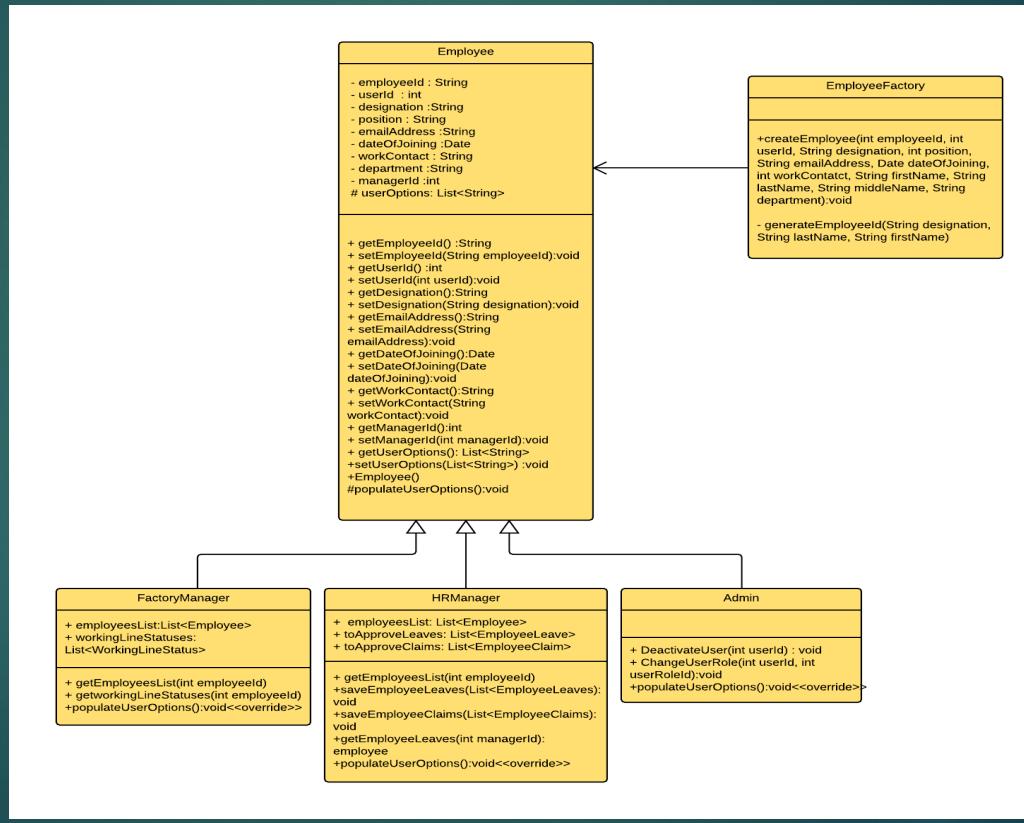
DESIGN PATTERNS

- ▶ PROXY DESIGN PATTERN
- ▶ FACTORY DESIGN PATTERN

PROXY DESIGN PATTERN



FACTORY DESIGN PATTERN



USE CASE #1

CREATION OF NEW USER PROFILES

- ▶ Allows the HRManager to create user profiles
- ▶ HRManager can create the employee profiles for the
 - ▶ Factory Employee
 - ▶ Factory Manager
 - ▶ HR Manager
- ▶ The system generates the unique Ids based on the entered information

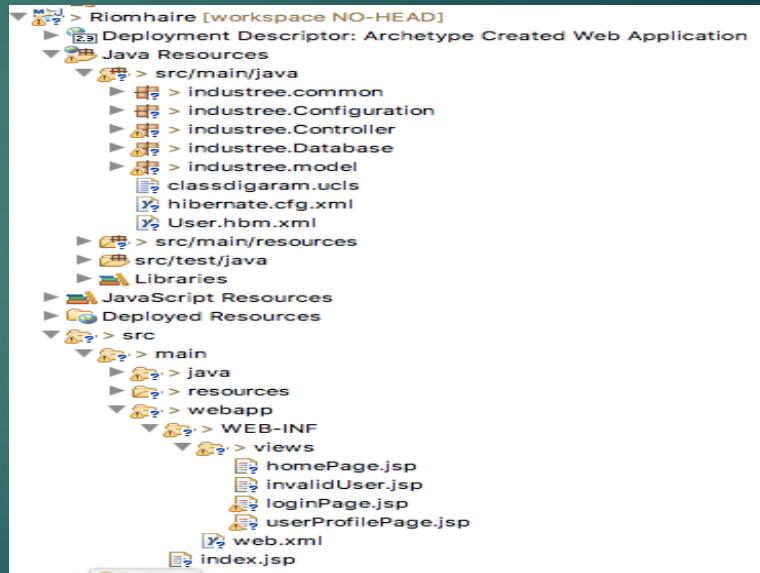
USE CASE #2

SEARCHING OF USER PROFILES

- ▶ Allows users to search for and view the profile of the other employees
- ▶ A Factory employee can view public information of the employees based on the input query such as employee name, department and mail address
- ▶ The HR manager can view the information of the employees based on the input query such as employee name, department, mail address, contact number and employee ID

MVC Design Pattern

- ▶ MVC design pattern is made up of the Model responsible for handling the data, the Controller responsible for responding to the user input and performing the data operations on the Model objects, and the View is responsible for the presentation of the data.
- ▶ In the IndusTree application,
 - ▶ Model contains the java bean classes
 - ▶ Controller is the Home Controller
 - ▶ Views are the jsp files



Hibernate Mapping and Annotations

- ▶ Hibernate enables object/relational mappings defined in a XML document.
- ▶ The mapping file instructs how to map the defined class to the database tables.
- ▶ All the metadata is clubbed into a POJO file along with the code
- ▶ Annotations used
 - ▶ `@Id`
 - ▶ `@GeneratedValue`
 - ▶ `@Entity`

Learnings

- ▶ The MVC Architecture is gaining prominence due to its ease of use.
- ▶ Class and UML Diagrams are important visualization tools in the design process.
- ▶ Design patterns make the difference between a programmer and a software engineer.

PRODUCT DEMO

[https://github.com/varshateratipally/CSCI5448_Project/blob/master/
52_IndusTree_Video.mp4](https://github.com/varshateratipally/CSCI5448_Project/blob/master/52_IndusTree_Video.mp4)

