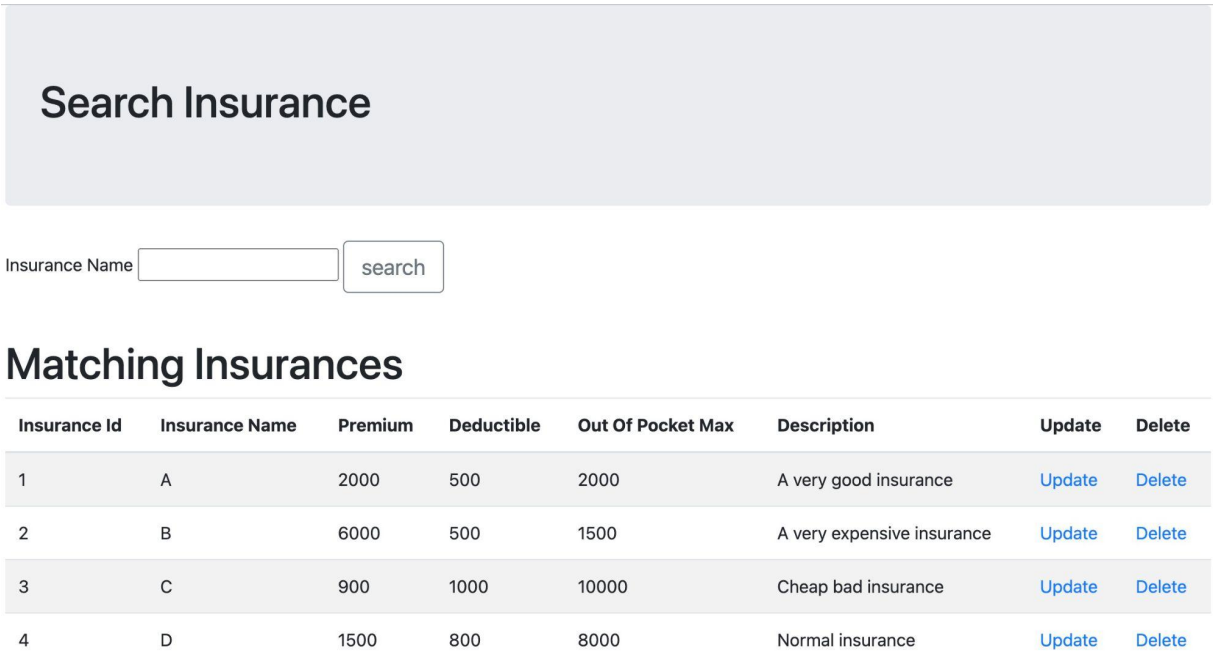
Overview

In this project, I implemented an interactive system to connect to MySQL through JDBC to interact with the database. The frontend of the system adopted JSP(Java Server Pages), and the backend is achieved using JDBC(Java Database Connectivity) interacting with MySQL. I implemented an ORM (Object-Relational Mapping) framework to facilitate the communication between our application and the database. The ORM framework consisted of two main components: a model and a DAL (Data Access Layer). The model represented the objects in our application (e.g. customers, policies) and the DAL was responsible for executing CRUD (Create, Read, Update, Delete) operations on the database. By using the ORM framework, we were able to abstract away much of the complex SQL code and work with the objects in our application directly, making it easier to develop and maintain the database-related functionality of the project. Overall, the ORM framework proved to be a valuable tool in streamlining the interaction between the application and the database and helped to ensure the efficiency and reliability of our insurance database.

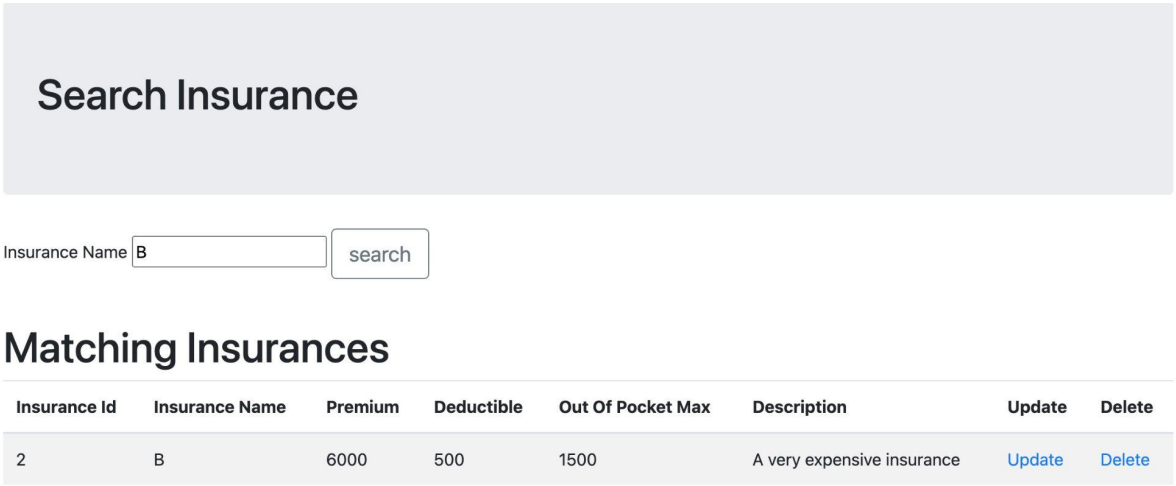
Business Cases: Maintain Insurance Records

- Feature 1: Display all insurance products



The insurance database feature allows users to view all available insurance products in a single location. This includes the name, description, premium, and out-of-pocket expenses for each product. This feature is designed to provide users with a comprehensive overview of their options, allowing them to easily compare and contrast different insurance products to find the one that best fits their needs.

- Feature 2: search and filter insurance



Additionally, the database can be easily searched and filtered, making it easy for users to find specific insurance products that meet their criteria. Overall, the insurance database is a valuable tool for helping users make informed decisions about their insurance coverage.

- Feature 3: Update insurance

Update Insurance

Policy Id 2

New Insurance Description

update Back

Successfully updated 2

Update Insurance

Policy Id 2

New Insurance Description out of stock

update Back

Search Insurance

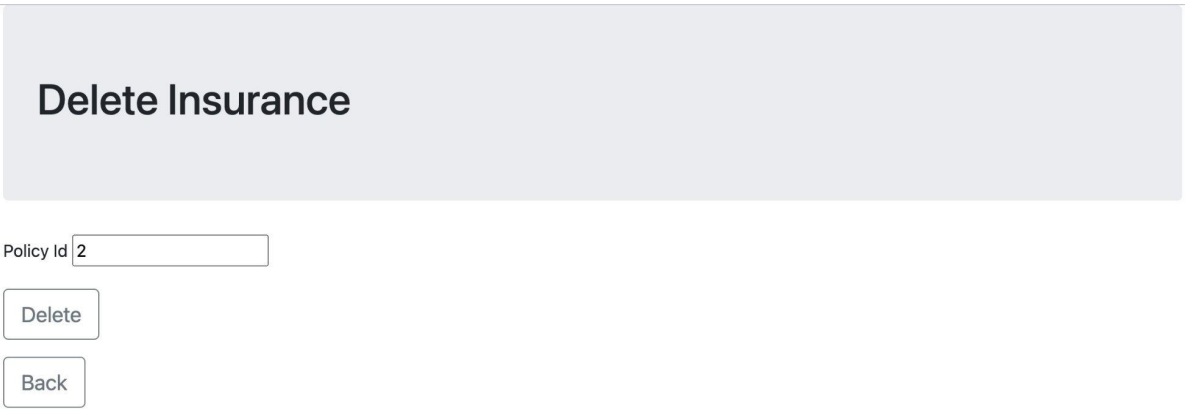
Insurance Name search

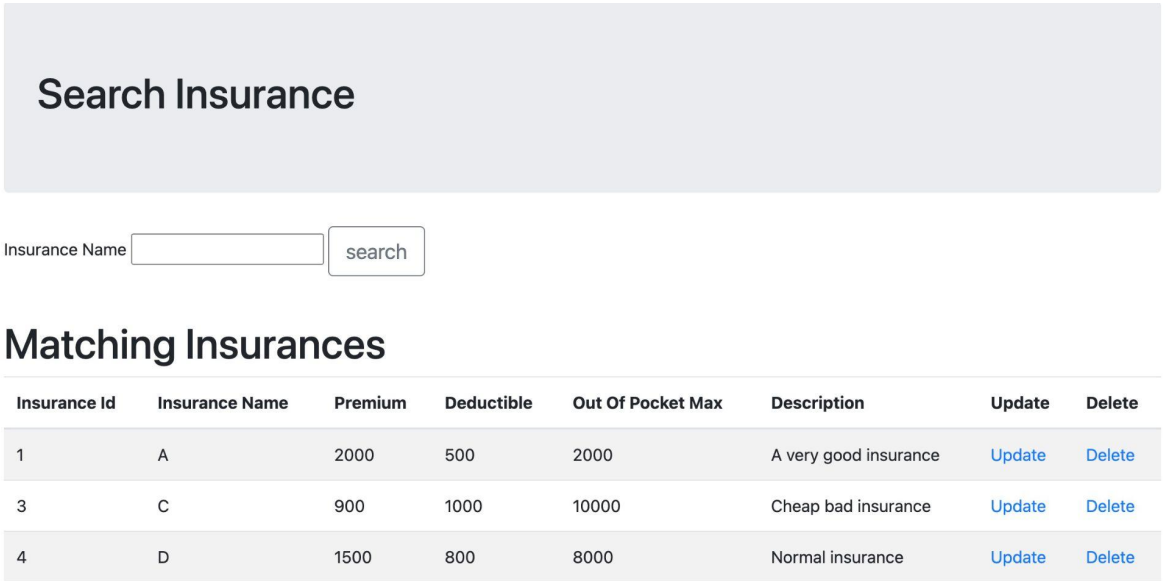
Matching Insurances

Insurance Id	Insurance Name	Premium	Deductible	Out Of Pocket Max	Description	Update	Delete
1	A	2000	500	2000	A very good insurance	Update	Delete
2	B	6000	500	1500	out of stock	Update	Delete
3	C	900	1000	10000	Cheap bad insurance	Update	Delete
4	D	1500	800	8000	Normal insurance	Update	Delete

In addition to providing users with the ability to view insurance products, the insurance database feature also allows users to update insurance information as needed. This includes updating information about existing insurance policies, such as changing the premium or adjusting the coverage levels. It also allows users to add new insurance products to their account, making it easy for them to expand their coverage as needed. The update feature is designed to be user-friendly and easy to use, allowing users to quickly and easily make changes to their insurance information as needed. This ensures that the insurance database always contains accurate and up-to-date information, making it a valuable resource for both users and insurance providers.

- Feature 4: Delete insurance





In addition to being able to update insurance information, the insurance database feature also allows users to delete insurance policies as needed. This can be useful for users who no longer need a particular insurance policy or who want to cancel their coverage for any reason. To delete an insurance policy, users simply need to access the policy within the database and select the option to delete it. Once a policy has been deleted, it will no longer be visible in the database, and the user will no longer be responsible for paying premiums or meeting any other obligations associated with that policy. Overall, the ability to delete insurance policies is a useful feature that allows users to easily manage their insurance coverage and ensure that they only have the policies they need.

Machine Learning Model Application from Part 3

The insurance database feature includes a built-in premium calculation tool that takes into account some factors when determining the cost of an insurance policy. One of these factors is the presence of chronic diseases, which can significantly impact an individual's health and the likelihood of them needing medical treatment. To account for this, the premium calculation tool uses a prediction model specifically designed to evaluate the potential impact of chronic diseases on an individual's health and the resulting cost of their insurance policy.

When calculating the premium for an insurance policy, the tool first gathers information about the individual's current health and any chronic diseases they may have. It then uses this information to generate a prediction about the individual's future health needs and the likelihood of them requiring medical treatment. Based on this prediction, the tool adjusts the premium for the insurance policy to reflect the increased risk associated with chronic diseases.

Overall, this feature helps to ensure that insurance premiums are accurately and fairly calculated, taking into account the unique health needs of each individual. It helps to ensure that individuals with chronic diseases can still access the insurance coverage they need, while also protecting insurance providers from the higher costs associated with providing coverage for individuals with these conditions.

Business Cases: Customer Purchase Insurance

- Feature 1: View customer’s profile

This is customer 2's profile

PolicyId	PolicyName	Drop
3	C	Drop
4	D	Drop

Register More

The customer profile view should display the insurance policy that the customer currently has. This information is important for the customer to have a clear understanding of the coverage they have and for customer service representatives to easily access when assisting the customer with any inquiries or issues. The policy information should include the policy id and policy name. This information should be clearly and prominently displayed in the customer profile view to ensure that it is easily accessible and understood by the customer.

- Feature 2: Update customer’s profile

Register for a Insurance

Customer Id 2

Policy Id 3

submit

The customer profile view should also allow for the updating of the customer's information, including the ability to add or update the insurance policy associated with the customer. This can be done by including a "register more" button within the customer profile view. When clicked, this button should bring the user to a form where they can input the relevant information for the insurance policy they wish to add to the customer's profile. Once the form is completed and submitted, the insurance policy should be added to the customer's profile and displayed within the customer profile view for easy access and reference. It is important to ensure that this process is straightforward and easy to use for both customers and customer service representatives.

- Feature 3: Drop the policy

Successfully dropped Insurance

back

This is customer 2's profile

PolicyId	PolicyName	Drop
4	D	Drop

Register More

It also allows for the removal of policies from a customer's profile. This could occur if a customer cancels a policy or if a policy expires and is not renewed. To facilitate the removal of insurance policies from a customer's profile, click "drop" button within the customer profile view. When clicked, this button should bring up a confirmation prompt to ensure that the user intends to remove the policy from the customer's profile. If the user confirms the removal, the policy should be removed from the customer's profile and no longer displayed within the view.