

Assignment Instructions

- Project delivery is due to **Thursday Jan 6th 11:59PM**. No deadline extension or exception will be made.
- Programming assignment is a team project. Each team can be **7 or less** members.
- Collaboration outside team members is **strictly prohibited**. Copying parts of solution from another team will lead to getting **zero grade for both teams**. It could also lead to additional penalties in the term work grades.

Project Deliverables

Each team's submission should be a **zip** file with the following

- Database ER diagram as PDF file.
- SQL scripts used to create and/or populate the database tables. This should be a plain text file with **.sql** extension.
- A folder containing all files used to build the web application site (using Python Flask library).
- Project Report (PDF or Word file) which has a write-up documentation for all parts done in the project. It should include any assumptions made and decisions

In addition, the team should be ready to present a demo of their project during the oral exam and answer questions about it.

Grading Criteria

Grading will be done based on:

- Problem understanding and database conceptual design.
- Database implementation.
- Web site programming.
- Project functionality and demo quality.
- Project documentation and oral discussion.

Project Statement

You are asked to build a database driven website for a health insurance company. The database should have details about customers, enrolled hospitals and insurance claims. Insurance company offers 3 types of plans (Basic, Premium, and Golden). Each kind of plans covers a subset of enrolled hospitals. A hospital could be available under more than one plan. A customer can purchase more than one plan for himself and his/her dependents. However, no individual (a customer / dependent) could be a beneficiary of more than one plan. Customer can file insurance claims of medical expenses. A claim is associated with a purchased plan. Information about the claim should include the claim beneficiary, the health care provider (i.e. hospital), the amount of expense and a description for the expense details.

For simplicity, don't implement authentication (i.e. user login) or authorization (what actions are available only for a customer and what actions are available only for the company administrator). Although in a real-world application they are important, we ignore them to simplify the project implementation.

Your website should offer the following functionalities:

- Adding new hospital details and associating it with a plan type.
- Adding new customer.
- Adding a dependent for a customer.
- Customers can purchase a plan and add beneficiary of that plan.
- Customers can view hospitals available under there purchased plans.
- Customers can file an insurance claim.
- Admin can view a list of customers.
- Admin can view the list of claims filed by a customer They should have an option to view either all claims or only unresolved claims.
- Admin can pick a claim to view its details.
- They can also mark an unresolved claim as resolved.