Project Report

Building a database driven website for a health insurance company

For "Database Systems Course"

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1-OVERVIEW:

The main purpose of this project is to Provide Health insurance to customers and their dependents by Purchasing a suitable plan.

System Overview	Details
System name	HAYAH Health Insurance
System type	Web Application
Operational status	Finished
Database Name	Health_insurance_Company

2-System Description:

The website provides easy links for easy browsing in the site. A Customer with minimum knowledge of web browsing can access the site very easily. Due to of features, the Admins should be able to understand the provided facilities.

The system allows users to register with their National ID name, date of birth, residence address. After registering Customer can purchase plans for himself and his dependents, website should provide management facilities like Adding new hospitals and associating them with a plan type or more, adding new customer, Adding a dependent for a customer.

The developed website provides the following facilities to the Admins:

•view a list of customers.

• view the list of claims filed by a customer They should have an option to view either all claims or only unresolved claims.

• pick a claim to view its details.

• mark an unresolved claim as resolved.

The developed website provides the following facilities to the Customers:

• purchase a plan and add beneficiary of that plan.

• Purchase different plans but each body can only benefit from one plan

• file an insurance claim

• view hospitals available under there purchased plans.

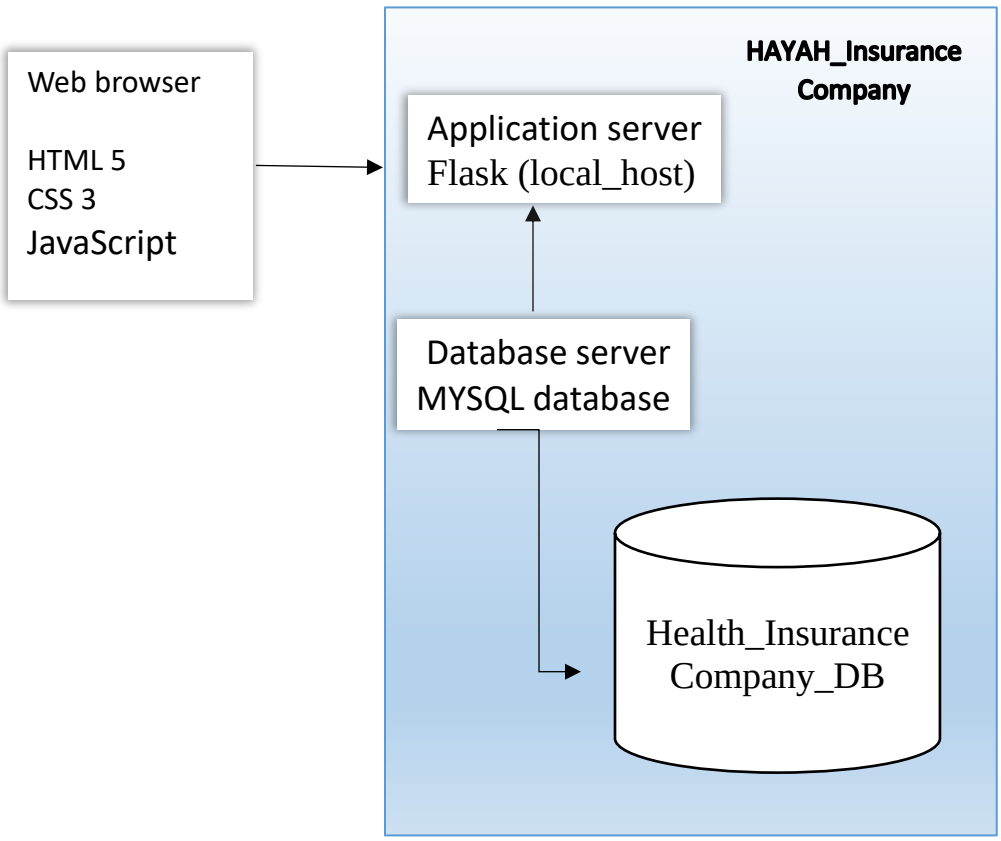
•Choose which Hospital of the selected plan to make the claim

•Add dependents to his profile

•view his profile details

3-System Architecture:

The system has been developed as a web application. Customer side is written in CSS3, html5 and JavaScript which are generated using PyCharm and VS Code. Admin part runs in a web browser and communicates with the database which was developed using MySQL. The figure below shows the architecture of HAYAH application.

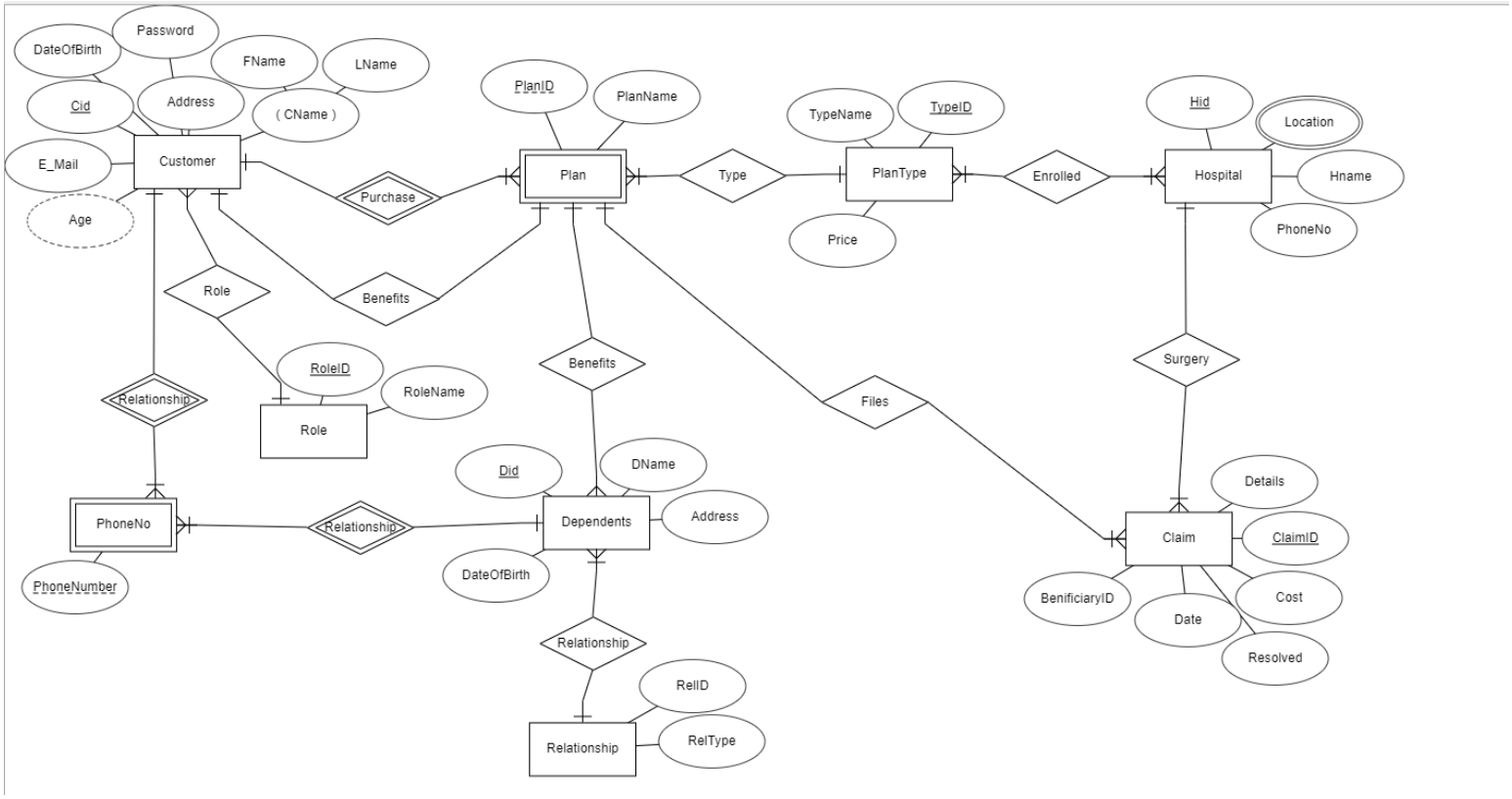


4-System Design :

The purpose of this Part is to show the following type of conceptual/logical diagrams of the proposed project.

1- The ER-Diagram :

a type of flowchart that illustrates how “entities” such a relate to each other within the system:



Some illustration regarding the ERD:

- Customer can purchase more than one plan but benefit from one plan so there is two relationships between customer-plan.
- Role relation has two tuples first one is normal customer and the second one is admin so we can differentiate between customers and admins when logging in.

- ‘PlanType’ and ‘Relationship’ were made into separate relations as a type of normalization and to make it easier to connect a specific plan type to its hospitals.
- Customer can file a claim through the purchased plan so that he may access the available hospitals included in his plan.
- Beneficiary in Claim relation is an attribute used to discriminate between claims made by customer for himself or his dependent.

2- Database Schema:

The skeleton structure that represents the logical view of the entire database. includes descriptions of the database structure, data types, and the constraints on the database.

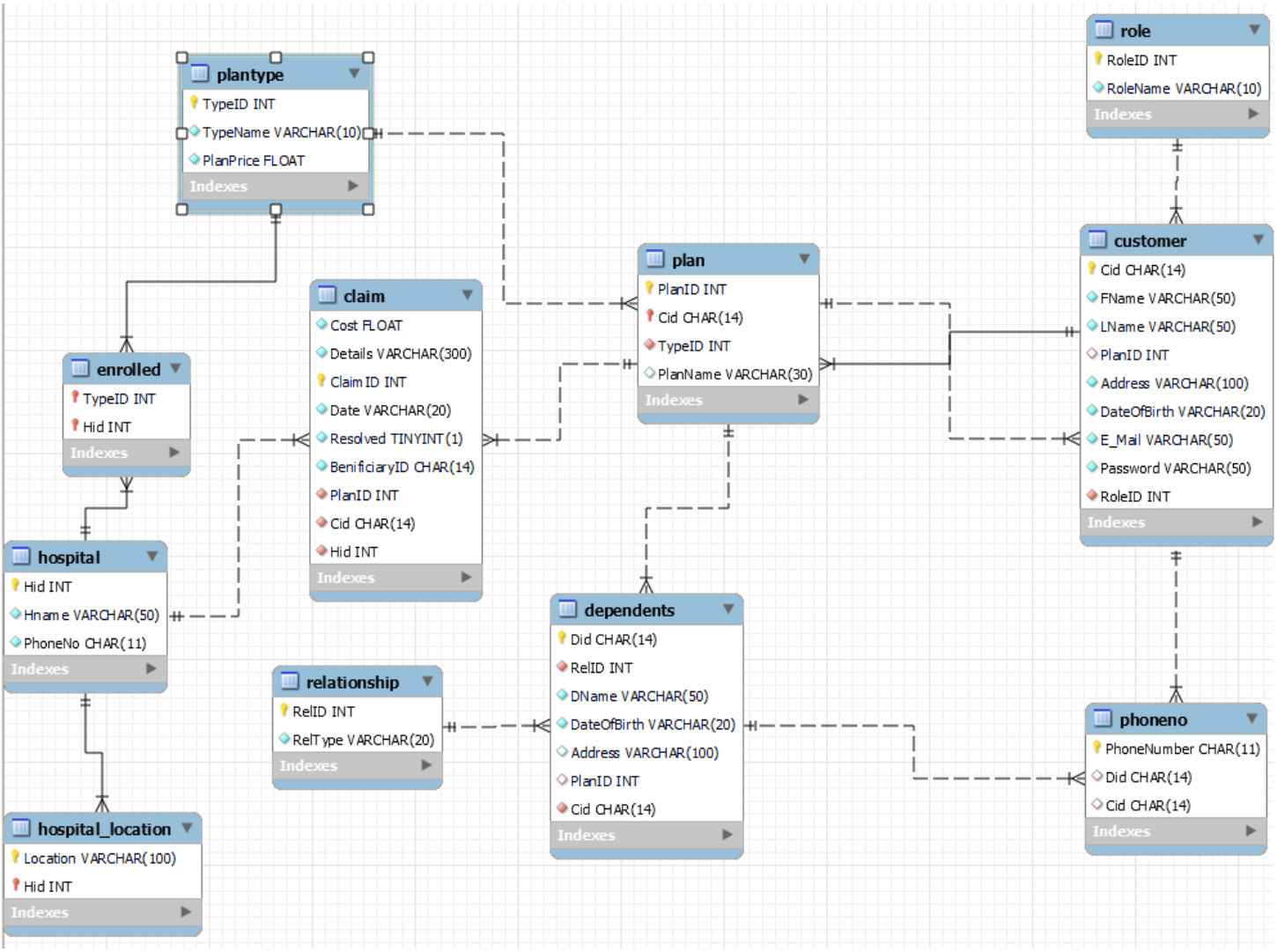


Table Name: Claim

Column	Type	Nullable	Indexes
Cost	float	NO	
Details	varchar(300)	NO	
ClaimID	int	NO	PRIMARY
Date	varchar(20)	NO	
Resloved	tinyint(1)	NO	
BenificiaryID	int	NO	
PlanID	int	NO	PlanID
Cid	char(14)	NO	PlanID
Hid	int	NO	Hid

Table Name: Customer

Field	Type	Null	Key	Default	Extra
Cid	char(14)	NO	PRI	NULL	
FName	varchar(50)	NO		NULL	
LName	varchar(50)	NO		NULL	
PlanID	int	YES	UNI	NULL	
Address	varchar(100)	NO		NULL	
DateOfBirth	varchar(20)	NO		NULL	
E_Mail	varchar(50)	NO	UNI	NULL	
Password	varchar(50)	NO		NULL	
RoleID	int	NO	MUL	1	

Table Name: dependents

Column	Type	Nullable	Indexes
Did	char(14)	NO	PRIMARY
RelID	int	NO	RelID
DName	varchar(50)	NO	
DateOfBirth	varchar(20)	NO	
Address	varchar(100)	YES	
PlanID	int	YES	PlanID
Cid	char(14)	NO	PlanID

Table Name: enrolled

Column	Type	Nullable	Indexes
TypeID	int	NO	PRIMARY
Hid	int	NO	PRIMARY, Hid

Table Name: Hospital

Column	Type	Nullable	Indexes
Hid	int	NO	PRIMARY
Hname	varchar(50)	NO	Hname
PhoneNo	char(11)	NO	Hname

Table Name: hospital_location

Column	Type	Nullable	Indexes
Location	varchar(100)	NO	PRIMARY
Hid	int	NO	PRIMARY, Hid

Table Name: phoneNo

Column	Type	Nullable	Indexes
PhoneNumber	char(11)	NO	PRIMARY
Did	char(14)	YES	Did
Cid	char(14)	YES	Cid

Table Name: plan

Column	Type	Nullable	Indexes
PlanID	int	NO	PRIMARY
Cid	char(14)	NO	PRIMARY, Cid
TypeID	int	NO	TypeID
PlanName	varchar(30)	YES	

Table Name: planType

Column	Type	Nullable	Indexes
TypeID	int	NO	PRIMARY
TypeName	varchar(10)	NO	
PlanPrice	float	NO	

Table Name: relationship

Column	Type	Nullable	Indexes
RelID	int	NO	PRIMARY
RelType	varchar(20)	NO	

Table Name: role

Column	Type	Nullable	Indexes
RoleID	int	NO	PRIMARY
RoleName	varchar(10)	NO	