DATABASE MANAGEMENT SYSTEM PROJECT REPORT – UE19CS301

ASSIGNMENT 2

COURIER MANAGEMENT SYSTEM

Date: 26-10-2021

Team details:

Team number 4	
Names	SRN
Ruchita V R	PES1UG19CS397
Rajeshwari R	PES1UG19CS375
Ramya C	PES1UG19CS379

Relational schema

User (username, **userID**, userphone#, useremail, useraddr loginId references login, roleID references to role)

Login(**loginid**, loginroleID, loginusername, userpassword userID references to user, roleiD references to role)

Roles(**roleID**, rolename, roledescription roleID references to roles, userID references user, loginID references login)

Customer(fname, mname, lname, **customer_ID**, customer_mobile, customer_email, customer_address, customer_password deliverycusID references customer)

Courier (**courierID**, couriertype, courier_description)

Delivery (deliverycusID, **deliveryID**, delivery_description, delivery_date, delivery_type deliveryID references customer)

Permission (**permissionID**, permissionRoleID, permissionmodule, permissionname)

Manager (manager_name, manager_addr, manager_phone#, manager_email, **managerID**)

Data model used: Relational DBMS (RDBMS)

Implementation method used: PostgreSQL

Relational database (RDBMS)

A relational database consists of appropriately arranged tables from which data can be administrated and operated in various different ways without having to rearrange the entity set of database tables. One of the major benefits of using relational database is that it simply allows the user to classify the data into different categories and store them efficiently.

Reasons for using RDBMS as the data model.

- RDBMS is the most simple model as it does not require any complex structuring or querying processes.
- In RDBMS, there can be multiple tables related to one another with the use of primary key and foreign key concepts.
- Data can be easily accessed.
- Data integrity.
- Highly secured.
- Feasible for future modifications.

Postgresql

PostgreSQL is an enterprise-class open source database management system. It supports both SQL and JSON for relational and non-relational queries for extensibility and SQL compliance. PostgreSQL supports advanced data types and performance optimization features, which are only available in expensive commercial databases, like Oracle and SQL Server. It is also known as Postgres.

Reasons for using postgresql:

- **Performance** - PostgreSQL tries to hold the most frequently accessed data in memory to make performance improvements based on how your queries are performed and the configuration that you give it.
- **Extensibility** - Supported by a wide array of extensions plus multiple SQL and NoSQL data models
- **Scalability** - Multiple technical options for operating PostgreSQL at scale
- **Community driven** – Multiple companies and individuals contribute to the project and drive innovation
- **High Speed** - Permissive license and broadly availability make it straightforward to install and test
- **ACID and transaction** - PostgreSQL support ACID(Atomicity, Consistency, Isolation, Durability).
- **Diverse community -** One of the characteristics of PostgreSQL is that there are a wide variety of communities. Regarding PostgreSQL as Open Source DBMS, users themselves can develop modules and propose the module to the community.

Members' Contributions:

Name	**Contribution**	**Time spent (in hours)**
Ruchita	Report, relational schema, create.sql	4
Rajeshwari	Create.sql, relational schema	4
Ramya	Insert.sql, relational schema	4