**INFO 5707: Term Project Proposal**

**Group:** 14

**Team Members:**

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**Title:** Discovery Park Online Apartment Rental Management System

**Objective & Scope:**

The purpose of Discovery Park online apartment leasing platform, is to streamline the entire rental process. It’s an enterprise-level database as it covers many aspects of management like leasing, maintenance, communication between property landlords, tenants and managers. This database primarily targets real estate and rental leasing industry. Data about rental agreements, maintenance requests, payments, tenant applications, and property listings will all be stored, managed, and retrieved by the system. This database is responsible for the tasks like allowing property listing, maintenance, applications, agreements, and payments, which is an automated system to effectively process rent payments.

**User requirements:**

This database DP Online Apartment Rental Management system helps in reporting and tracking on unpaid invoices and occupancy rates. All the data collected like listing, applications and payments from a web application or via API are backed up by this database. Database is supported by multi language and for multi currencies as well. Role based access & field level restrictions can be enabled for this database. Also, it is supported for multiple users with different roles like landowner, tenants and managers to access or manage depending on their privileges assigned at the simultaneously. Users are assigned with privileges according to their roles as mentioned below

1. Landowners and Property Owners:

* Manage, add, and update real estate listings with pictures, details, and rental conditions.
* View and accept or reject applications from tenants.
* Pay attention to lease agreements and rent payments.

1. Tenants:

* Look up and sort available apartments by amenities, cost, and location.
* Upload the necessary files and submit rental applications.
* Rental Payments and booking a service request.

1. Property Administrators/Managers:

* Manage rental contracts, contract renewals, and lease expirations
* Add, update or delete rental documents.
* Distribute and monitor maintenance requests.
* User entry /data entry, updating or deletion be done.
* Generate report on historic data on revenue, occupancy rates, and unpaid invoices.

**Choice of DBMS:**

PostgreSQL is selected for the Discovery Park Online Apartment Rental Management database to achieve all the above requirements because of its complex data relationships, role-based security, multi user access also because strong ACID compliance and it is better in handling concurrency. Also considering security as priority Postgres is better because of its RBAC, field and row level security.