DBMS PROJECT REPORT 4
TITLE: Apartment management system
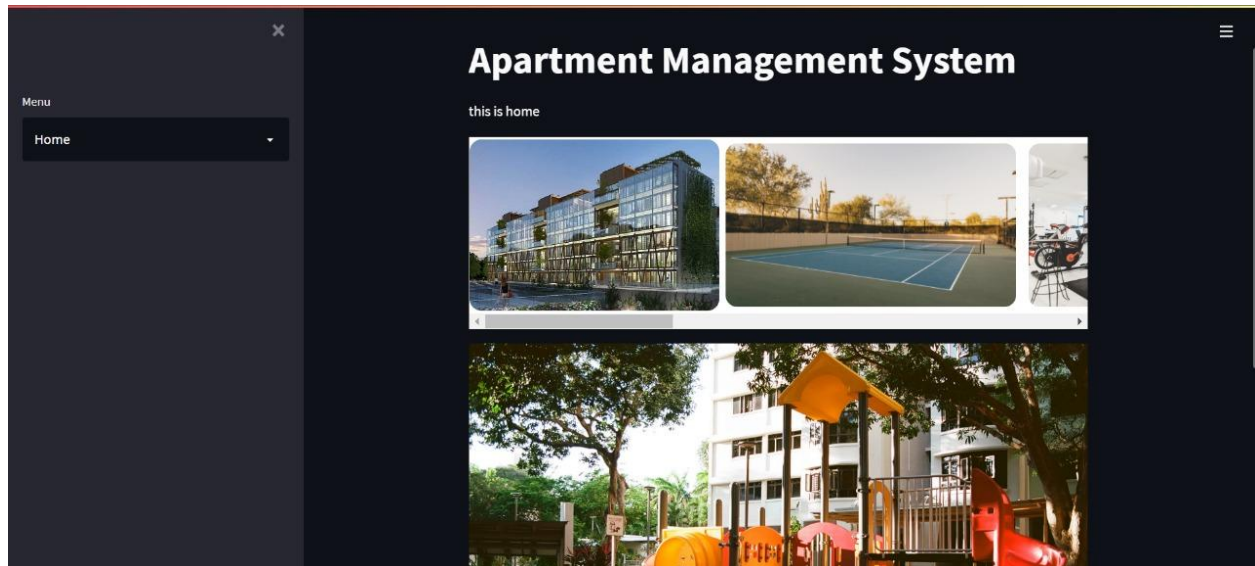
Team members: Section 'A'

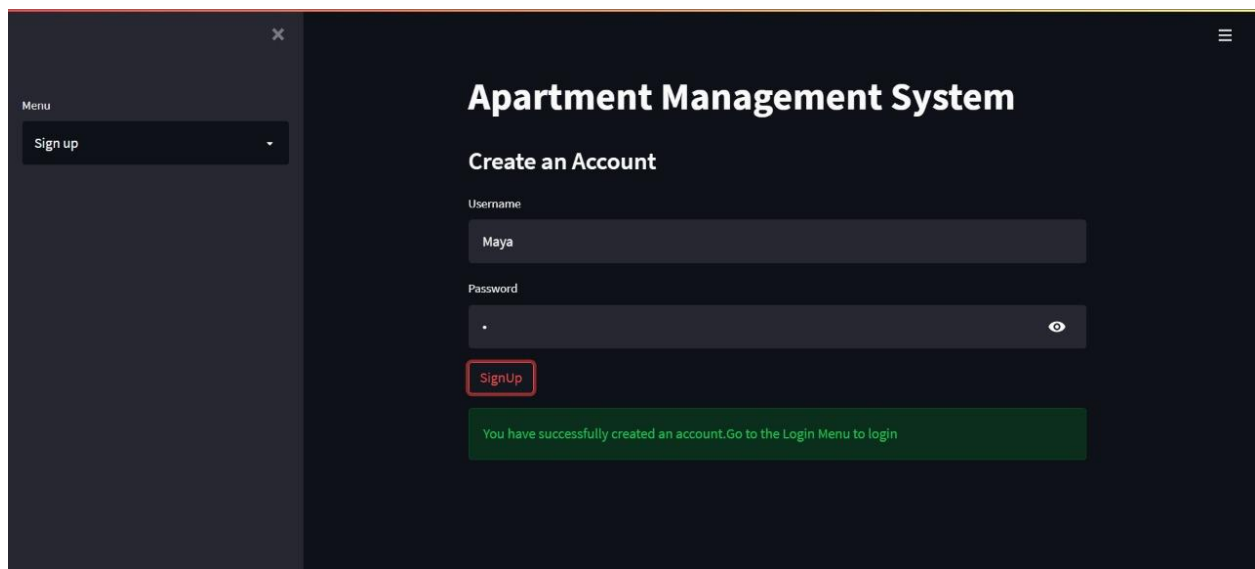| SRN	NAME
PES1UG19CS015	Abhijnya Bhat
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Dependencies installed
1. **streamlit** : Streamlit is an open source app. It turns data scripts into shareable web apps. It is written in Python and no HTML knowledge is needed. "pip install streamlit" is used to download the streamlit application. Less code needed to create complex programming.

2. **psycopg2** : Psycopg2 is used to interact with the psql database created. It converts Python variables to SQL values using their types. It is installed using the command "psycopg2-binary==x.x.x". We have used this to connect the frontend to the backend.

Screenshots of frontend and commands executed on frontend

1. Creating records:

2. Login :

3. Updating records:

Apartment Management System

Logged In as Maya

Select Task

Add pet

Enter pet name

Enter pet type

Add

	Name	Type
	empty	

Apartment Management System

Logged In as Maya

Select Task

Add pet

Enter pet name

Bobo

Enter pet type

Dog

Add

	Name	Type
0	Bobo	Dog

Apartment Management System

Logged In as Maya

Select Task

Add Guest

Enter Guest name

Susie

Enter Guest phone number

6003872356

Add

	Name	Phone
0	Jnana	8643513421
1	Susie	6003872356

4. Displaying:

Apartment Management System

Amenities that we have to offer:

	Indoor
0	Club House
1	Play Ground
2	Gym
3	Tennis Court
4	Squash Court

	Outdoor
0	Swimming Pool
1	Play Ground
2	Gym
3	Badminton Court
4	Football Ground

Menu

Facilities

Apartment Management System

Shoutout to our Maintenance Staff

	Name	Role	Contact
0	Simran	housekeeping	9999999999
1	Ritu	housekeeping	7234567890
2	Raju	gardener	8245783691
3	Sooraj	security	8456123789
4	Narendar	security	9856321475
5	Nisha	electrician	7412583695
6	Sandeep	plumber	9856321473
7	Amarjeeth	garbage collector	8456123790
8	Rithika	security	7412583692
9	Prathap	housekeeping	7481592635

Made with ♡

Abhijnya

Anagha

Aanchal

Menu

About

5. Deleting:

Changes that lead to:

   1. **Schema changes:**

     As updating the tables through Streamlit required that the attributes be of type varchar, we had to delete the guest_id attribute from the Guests table as it was of type integer and converting it to a varchar would be futile.

   2. **Constraint changes:**

     As the flat_no along with the guest_id formed the primary key, we had to change this to flat_no + gueswt_name as we deleted the guest_id attribute

   3. **DBMS migration:**

     The benefit of DBMS migration is that it helps data to move from an inappropriate DBMS to a more suitable DBMS. It helps to unify disparate data in the database. Unlike SQL databases which have a fixed schema, NoSQL databases have a dynamic schema. NoSQL databases typically provide some form of writing documents in bulk.

With the existing design of your database, if you have to migrate to any No-SQL variety, then which one will be your choice? Why?: Given the option of migrating to a No-SQL variety, we would choose MongoDB. Its flexible schema makes it easy to evolve and store data in a way that is easy for programmers to work with. It is built to scale-up quickly and supports a lot of extra features. Streamlit, the frontend software, also has an option to integrate with mongodb, thus making the migration much simpler. Rather than storing data in tables, MongoDB stores its data in collections of BSON (Binary JSON) documents. MongoDB can manage structured and unstructured data. That allows you to build your application without needing to first define the schema. PostgreSQL is a relational database management system (RDBMS). In an RDBMS, data is stored in tables, and the schema of the database must be defined on creation. While it is

possible to alter tables after their creation as an application's needs change, this process can be complicated and error-prone.

Contributions
Total time spent : 17 hours

NAME	CONTRIBUTIONS
Abhijnya Bhat	Building frontend and backend - 7 hrs
Anagha H M	Building frontend and backend - 7 hrs
Anchal Sharma	Report compilation - 3 hrs