Create a database of a housing society based on the following description:

Royal Pearl Housing Complex has 3 buildings. Building-1 has 24 apartments, building-2 has 32 apartments and building-3 has 16 apartments. Each building has an unique license no., a secretary, a phone number, and no. of floors. Every apartment has an apt\_no, owner\_id, floor, type, and carpet\_area. There are only 3 types of apartments: 2-bhk, 3-bhk, and 4-bhk. Residents live in the apartments. The database should store every resident's adhar\_id, f\_name, l\_name, dob, sex, ph\_no and email. Information of guests’ name and  ph\_no present at a particular instance must be stored. Which guest came to meet which resident, entry date  and exit date should be recorded too. Every building has at least 1 watchman, their personal information should be stored.

-- Create the Building table

CREATE TABLE Buildings (building\_id INT PRIMARY KEY, license\_no VARCHAR(20) UNIQUE, secretary VARCHAR(15), phone\_number VARCHAR(15), num\_floors INT);

INSERT INTO buildings VALUES (&building\_id, '&license\_no', '&secretary', '&phone\_number', &num\_floors);

Enter value for building\_id: 202401

Enter value for license\_no: 402901

Enter value for secretary: ram

Enter value for phone\_number: 123456789

Enter value for num\_floors: 5

-- Create the Resident table

CREATE TABLE Residents (owner\_id INT PRIMARY KEY, adhar\_id VARCHAR(15), f\_name VARCHAR(15), l\_name VARCHAR(15), dob DATE, sex CHAR(5), ph\_no VARCHAR(15), email VARCHAR(20));

INSERT INTO residents VALUES (&owner\_id, '&adhar\_id', '&f\_name', '&l\_name', '&dob', '&sex', '&ph\_no', '&email');

Enter value for owner\_id: 202301

Enter value for adhar\_id: 302901

Enter value for f\_name: jayanta

Enter value for l\_name: mondal

Enter value for dob: 07-jan-1998

Enter value for sex: male

Enter value for ph\_no: 987654321

Enter value for email: jay@gmail.com

-- Create the Guest table

CREATE TABLE Guests (guest\_id INT PRIMARY KEY, resident\_id INT, guest\_name VARCHAR(15), guest\_ph\_no VARCHAR(15), entry\_date DATE, exit\_date DATE, FOREIGN KEY (resident\_id) REFERENCES Residents(owner\_id));

INSERT INTO guests VALUES (&guest\_id, &resident\_id, '&guest\_name', '&guest\_ph\_no', '&entry\_date', '&exit\_date');

Enter value for guest\_id: 202201

Enter value for resident\_id: 202901

Enter value for guest\_name: shyam

Enter value for guest\_ph\_no: 543216789

Enter value for entry\_date: 15-FEB-2024

Enter value for exit\_date: 19-FEB-2024

-- Create the Watchman table

CREATE TABLE Watchmen (watchman\_id INT PRIMARY KEY, building\_id INT, name VARCHAR(15), dob DATE, sex CHAR(5), ph\_no VARCHAR(15), email VARCHAR(20), FOREIGN KEY (building\_id) REFERENCES Buildings(building\_id));

-- Create the Apartment table

CREATE TABLE Apartments (apt\_id INT PRIMARY KEY, building\_id INT, apt\_no INT, owner\_id INT, floor INT, type VARCHAR(10), carpet\_area DECIMAL(10, 2), FOREIGN KEY (building\_id) REFERENCES Buildings(building\_id), FOREIGN KEY (owner\_id) REFERENCES Residents(owner\_id));

Write SQL statements for the following:

1. What is the name of the watchman, guarding Jayanta Mondal’s apartment?

è SELECT A.BUILDING\_ID AS BUILDING,A.APT\_NO AS APARTMENT,A.OWNER\_ID AS OWNER,W.NAME,R.F\_NAME || ' ' || R.L\_NAME AS NAME FROM APARTMENTS A,WATCHMEN W,RESIDENTS R WHERE A.BUILDING\_ID=W.BUILDING\_ID AND A.OWNER\_ID = R.OWNER\_ID AND R.F\_NAME = 'JAYANTA' AND R.L\_NAME = 'MONDAL';

1. Project the names of all the male guests present at apartment no. A-08 in building no.2 ?

è SELECT A.APT\_ID, A.BUILDING\_ID , G.GUEST\_NAME,G.SEX FROM APARTMENTS A, GUESTS G WHERE A.BUILDING\_ID = 02 AND A.APT\_ID = ‘A-08’ AND G.SEX = ‘MALE’;

1. Print the name and phone number of all who own 4-bhk apartments.

è SELECT R.F\_NAME || ' ' || R.L\_NAME AS NAME, R.PH\_NO AS PHONE, A.TYPE AS APT\_TYPE FROM RESIDENTS R, APARTMENTS A WHERE R.OWNER\_ID = A.OWNER\_ID AND A.TYPE = '4-BHK';

1. How many people live in each building?

è SELECT b.building\_id, COUNT(r.owner\_id) AS num\_residents FROM Buildings b LEFT JOIN Apartments a ON b.building\_id = a.building\_id LEFT JOIN Residents r ON a.owner\_id = r.owner\_I GROUP BY b.building\_id;

1. Find the average carpet\_area according to apartment types in building-2.

è SELECT A.TYPE, AVG(A.CARPET\_AREA) AS AVG\_CARPET\_AREA FROM APARTMENTS A JOIN BUILDINGS B ON A.BUILDING\_ID = B.BUILDING\_ID WHERE B.BUILDING\_ID = 2 GROUP BY A.TYPE;

Jayanta Mondal

apartment no. A-08 in building no.2

4-bhk apartments