Name	ID	STUDENT SIGN
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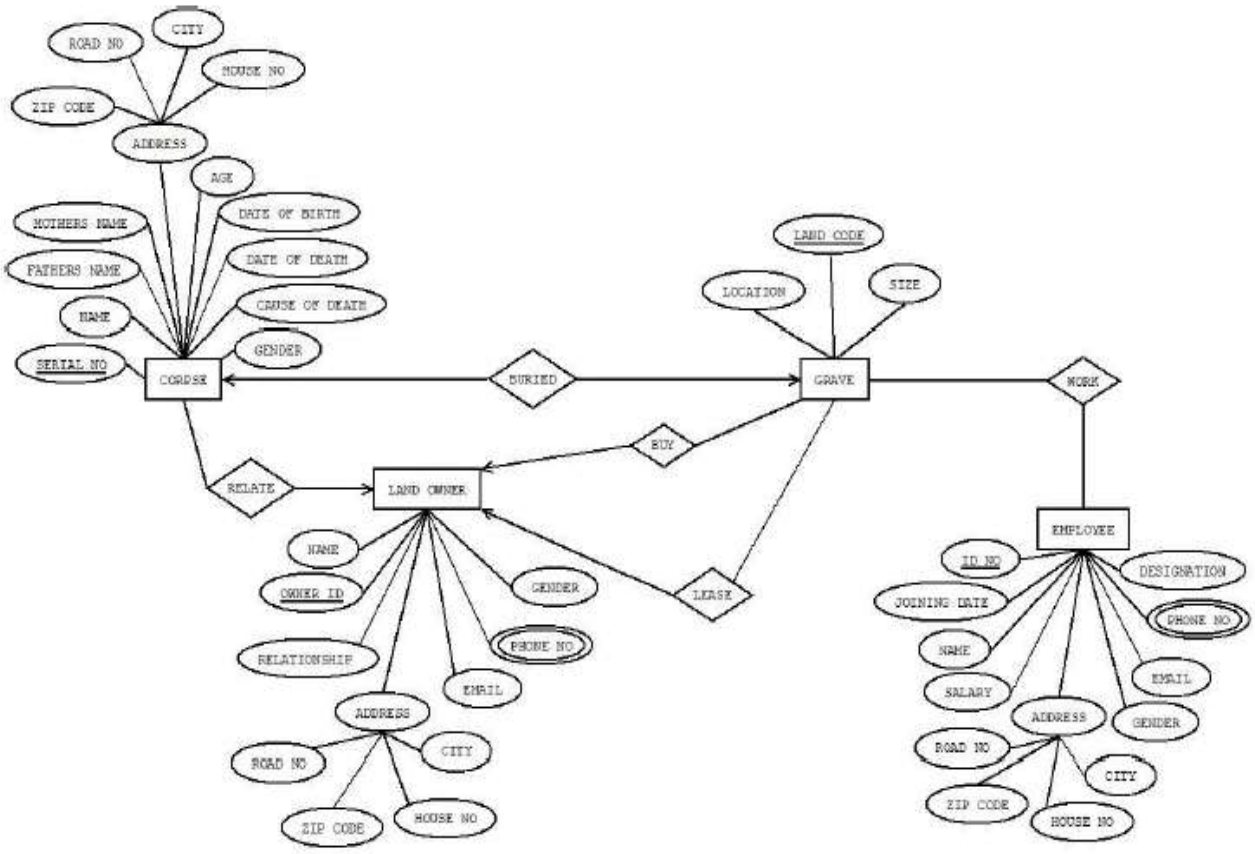
Class Test 04

1. Normalize the ER Diagram given below up to 3rd Normal Form and finalize the tables that needs to be created. Then (in Oracle using SQL) write down the queries that are required to create all the tables with necessary constraints. Also insert at least 3 rows of data in each created table.



Answer Box (Normalization steps in detail as shown in Normalization Tutorial Slide + all the queries required to create the tables and insert data after Normalization):

Relate:

UNF:

Relate(l_name, owner_id, relationship, email, phone_no, gender, serial_no, name, father_name, mother_name, age, dob, dod, cause_of_deate, gender, zip_code, road_no, city, house_no, c_name)

1NF:

Phone number is a multi-valued attribute.

1. owner_name, owner_id, relationship, email, phone_no, gender, serial_no, name,

father_name, mother_name, age, dob, dod, cause_of_deate, gender, zip_code, road_no,

city, house_no, c_name

2NF:

1. Owner_id, owner_name, relationship, email, phone_no, gender, serial_no, zip_code,

road_no, city, house_no, zip_code, road_no, city, house_no

2. Serial_no, name, father_name, mother_name, age, dob, dod, cause_of_deate, gender,

zip_code, road_no, city, house_no, c_name, zip_code, road_no, city, house_no, c_name

3NF:

1. Serial_no, owner_name, relationship, email, phone_no, gender, zip_code

2. Serial_no, name, father_name, mother_name, age, dob, dod, cause_of_deate, gender,

zip_code

3. zip_code, road_no, city, house_no, c_name

Table Creation:

1. owner_id, owner_name, relationship, email, phone_no, gender, zip_code

2. Serial_no, name, father_name, mother_name, age, dob, dod, cause_of_deate, gender,

zip_code, owner_id

3. zip_code, road_no, city, house_no, c_name

Buried:

UNF:

Buried(Serial_no, name, father_name, mother_name, age, dob, dod, cause_of_deate, gender, zip_code, road_no, city, house_no, c_name, zip_code, road_no, city, house_no, c_name, location, land_code, size)

1NF

There is no multi valued attribute. Relation already in 1NF

2NF

1. **Serial_no**, name, father_name, mother_name, age, dob, dod, cause_of_deate, gender, zip_code, road_no, city, house_no, c_name, zip_code, road_no, city, house_no, c_name

2. Land_code, location, size

3NF

1. **Serial_no**, name, father_name, mother_name, age, dob, dod, cause_of_deate, gender, zip_code, land_code

2. zip_code, road_no, city, house_no, c_name

3. Land_code, location, size

Work:

UNF:

work(Land_code, location, size, id_no, join_date, name, salary, designation, phone_num, email, gender, road_no, zip_code, house_no, city)

1NF:

Phone number is a multi valued attribute.

1. Land_code, location, size, id_no, join_date, name, salary, designation, phone_num, email, gender, road_no, zip_code, house_no, city

2NF

1. id_no, join_date, name, salary, designation, phone_num, email, gender, road_no, zip_code, house_no, city

2. Land_code, location, size

3NF

1. id_no, join_date, name, salary, designation, phone_num, email, gender

2. road_no, zip_code, house_no, city

3. Land_code, location, size

Table creation:

1. id_no, join_date, name, salary, designation, phone_num, email, gender, zip_code, land_ocde

2. road_no, zip_code, house_no, city

3. Land_code, location, size

Buy:

UNF:

Buy(Owner_id, owner_name, relationship, email, phone_no, gender, serial_no, zip_code, road_no, city, house_no, zip_code, road_no, city, house_no, Land_code, location, size)

1NF:

Phone number is a multi valued attribute.

1. Owner_id, owner_name, relationship, email, phone_no, gender, serial_no, zip_code, road_no, city, house_no, zip_code, road_no, city, house_no, Land_code, location, size

2NF:

1. Owner_id, owner_name, relationship, email, phone_no, gender, serial_no, zip_code,

road_no, city, house_no, zip_code, road_no, city, house_no

2. Land_code, location, size

3NF:

1. owner_id, owner_name, relationship, email, phone_no, gender, zip_code, land_code

2. Land_code, location, size

3. zip_code, road_no, city, house_no,

Final Table:

1. Serial_no, name, father_name, mother_name, age, dob, dod, cause_of_deate, gender,

zip_code, owner_id, land_code

2. owner_id, owner_name, relationship, email, gender, zip_code, land_code, num_id

3. id_no, join_date, name, salary, designation, phone_num, email, gender, zip_code,

land_code, num_id

4. zip_code, road_no, city, house_no,

5. Land_code, location, size

6. Num_id, phone_no

1. CREATE TABLE Corpse (

Serial_no int NOT NULL PRIMARY KEY,

c_name varchar(255) NOT NULL,

c_age int NOT NULL,

father_name varchar(255),

mother_name varchar(255),

```
dob varchar(255),

dod varchar(255) NOT NULL,

cause_of_deate varchar(255) NOT NULL,

gender varchar(255),

zip_code int NOT NULL,

land_code int,

owner_id int

);


INSERT INTO Corpse (Serial_no, c_name, c_age, father_name, mother_name, dob, dod,

cause_of_deate, gender, zip_code, land_code, owner_id)

VALUES (1, Nayem, 27, 'Fahim', 'Laila', '10-20-1999', '10-20-2022', 'Corona', 'Male', 1,

1, 1);

INSERT INTO Corpse (Serial_no, c_name, c_age, father_name, mother_name, dob, dod, cause_of_deate, gender, zip_code, land_code, owner_id) VALUES (2, 'Bulbul', 27, 'Latu', 'Lukky', '10-20-1999', '10-20-2022', 'Corona', 'Male', 2, 2, 2);

INSERT INTO Corpse (Serial_no, c_name, c_age, father_name, mother_name, dob, dod,

cause_of_deate, gender, zip_code, land_code, owner_id)

VALUES (3, 'Ish', 27, 'RAZIB', ‘Rokeya', '10-20-1999', '10-20-2022', 'Corona', 'Female', 3,

3, 3);
```

2. CREATE TABLE Owner(

owner_id int NOT NULL PRIMARY KEY,

owner_name varchar(255) NOT NULL,

relationship varchar(255),

email varchar(255),

gender varchar(255),

zip_code int, land_code int,

num_id int

);

INSERT INTO Owner(owner_id, owner_name, relationship, email, gender, zip_code,

land_code, num_id)

VALUES(1, 'Sayem', 'Borther', 'sayemm@some.com', 'Male', 1, 1, 1)

INSERT INTO Owner(owner_id, owner_name, relationship, email, gender, zip_code,

land_code, num_id)

VALUES(2, 'Sakib', 'Father', 'sakib@some.com', 'Male', 2, 2, 2)

INSERT INTO Owner(owner_id, owner_name, relationship, email, gender, zip_code,

land_code, num_id)

VALUES(3, 'Shamim', 'Father', 'shamim@some.com', 'Male', 3, 3, 3)

3. CREATE TABLE Employee(

emp_id int NOT NULL PRIMARY KEY,

join_date varchar(255) NOT NULL,

emp_name varchar(255) NOT NULL,

salary int,

designation varchar(255),

email varchar(255),

gender varchar(),

zip_code int,

land_code int,

num_id int

);

INSERT INTO Employee(emp_id, join_date, emp_name, salary, designation, email,

gender, zip_code, land_code, num_id)

VALUES(1, '1-1-2012', 'Sakib', 20000, '202', 'sakuib@some.com', 'Male', 1, 1, 1)

INSERT INTO Employee(emp_id, join_date, emp_name, salary, designation, email,

gender, zip_code, land_code, num_id)

VALUES(1, '1-1-2012', 'Arif', 20000, '202', 'arif@some.com', 'Male', 1, 1, 1)

INSERT INTO Employee(emp_id, join_date, emp_name, salary, designation, email,

gender, zip_code, land_code, num_id)

VALUES(1, '1-1-2012', 'Manik', 20000, '202', 'manik@some.com', 'Male', 3, 1, 2)

4. CREATE TABLE Address (

zip_code int NOT NULL PRIMARY KEY, road_no INT, city VARCHAR(255),

house_no INT

)

INSERT INTO(zip_code, road_no, city, house_no)

VALUES(1, 1, 'Dhaka', 1)

INSERT INTO(zip_code, road_no, city, house_no)

VALUES(2, 1, 'Dhaka', 2)

INSERT INTO(zip_code, road_no, city, house_no)

VALUES(3, 1, 'Gazipur', 4)

5. CREATE TABLE Grave(

land_code int NOT NULL PRIMARY KEY,

location VARCHAR(255),

size varchar(255)

)

INSERT INTO Grave(Land_code, location, size)

VALUES(1, 'Gazipur', '3/3')

INSERT INTO Grave(Land_code, location, size)

VALUES(2, 'Tangail', '3/3')

INSERT INTO Grave(Land_code, location, size)

VALUES(3, 'Barisal', '3/3')

6. CREATE TABLE PHONE(

Num_id INT NOT NULL PRIMARY KEY,

phone_no VARCHAR(255)

)

INSERT INTO PHONE(num_id, phone_no)

VALUES(1, '01812345678')

INSERT INTO PHONE(num_id, phone_no)

VALUES(2, '01125836547')

INSERT INTO PHONE(num_id, phone_no)

VALUES(3, '01323456789')