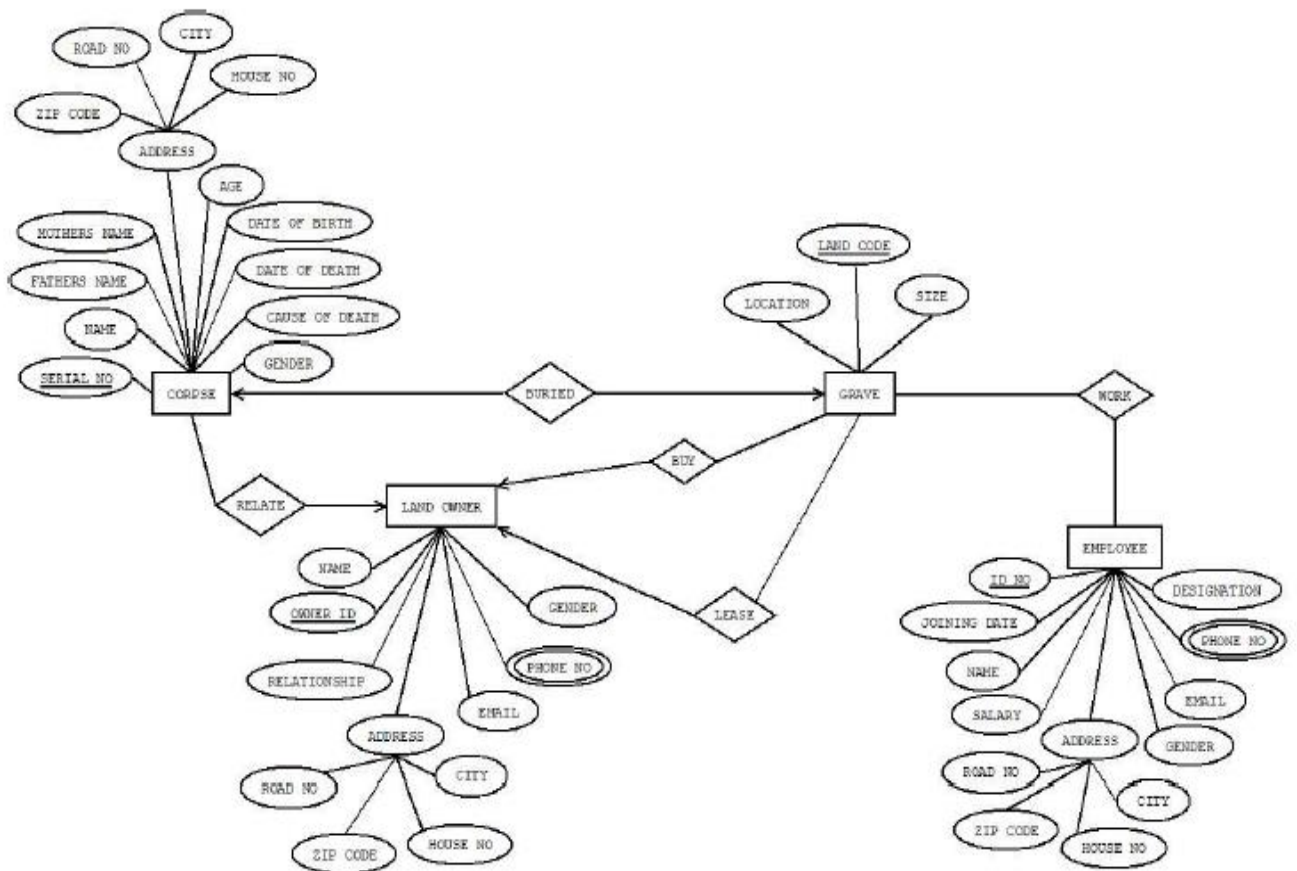


<u>NAME</u>	<u>ID</u>	<u>STUDENT SIGN</u>
<u>FAWJIA,JEBA</u>	<u>19-39815-1</u>	<u>JEBA FAWJIA</u>

### Advance Database Management System Prerequisites IV

1. Normalize the ER Diagram given below up to 3<sup>rd</sup> 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):

### **BURIED**

#### **UNF**

BURIED(SERIAL\_NO,NAME,FATHERS\_NAME,MOTHERS\_NAME,AGE,DATE OF BIRTH,DATE OF DEATH,CAUSE OF DEATH,GENDER,ADDRESS,ZIP\_CODE,ROAD\_NO,CITY,HOUSE\_NO,LOCATION,LAND\_CODE,SIZE)

#### **1NF**

There is no multivalued attribute. Relation already in 1NF.

1. SERIAL\_NO,NAME,FATHERS\_NAME,MOTHERS\_NAME,AGE,DATE OF BIRTH,DATE OF DEATH,CAUSE OF DEATH,GENDER,ADDRESS,ZIP\_CODE,ROAD\_NO,CITY,HOUSE\_NO,LOCATION,LAND\_CODE,SIZE

#### **2NF**

1. SERIAL\_NO,NAME,FATHERS\_NAME,MOTHERS\_NAME,AGE,DATE OF BIRTH,DATE OF DEATH,CAUSE OF DEATH,GENDER,ADDRESS,ZIP\_CODE,ROAD\_NO,CITY,HOUSE\_NO

2. LOCATION,LAND\_CODE,SIZE

#### **3NF**

1. SERIAL\_NO,NAME,FATHERS\_NAME,MOTHERS\_NAME,GENDER,ADDRESS

2. ZIP\_CODE,ROAD\_NO,CITY,HOUSE\_NO

3. LOCATION,LAND\_CODE,SIZE

4. AGE,DATE OF BIRTH,DATE OF DEATH,CAUSE OF DEATH

#### **TABLE CREATION**

1. SERIAL\_NO,NAME,FATHERS\_NAME,MOTHERS\_NAME,GENDER,ADDRESS

2. ZIP\_CODE,ROAD\_NO,CITY,HOUSE\_NO,SERIAL\_NO

3. LOCATION,LAND\_CODE,SIZE,SERIAL\_NO

4. AGE,DATE OF BIRTH,DATE OF DEATH,CAUSE OF DEATH,SERIAL\_NO

### **WORK**

#### **UNF**

WORK(LOCATION,LAND\_CODE,SIZE,ID\_NO,JOINING\_DATE,NAME,SALARY,GENDER,EMAIL,DESIGNATION,PHONE\_NO, ADDRESS,ZIP\_CODE,ROAD\_NO,CITY,HOUSE\_NO)

### 1NF

PHONE\_NO is a multivalued attribute.

1. LOCATION, LAND\_CODE, SIZE, ID\_NO, JOINING\_DATE, NAME, SALARY, GENDER, EMAIL, DESIGNATON, PHONE\_NO, ADDRESS, ZIP\_CODE, ROAD\_NO, CITY, HOUSE\_NO

### 2NF

1. ID\_NO, JOINING\_DATE, NAME, SALARY, GENDER, EMAIL, DESIGNATON, PHONE\_NO, ADDRESS, ZIP\_CODE, ROAD\_NO, CITY, HOUSE\_NO
2. LOCATION, LAND\_CODE, SIZE

### 3NF

1. ID\_NO, JOINING\_DATE, NAME, SALARY, GENDER, EMAIL, DESIGNATON, PHONE\_NO, ADDRESS
2. ZIP\_CODE, ROAD\_NO, CITY, HOUSE\_NO
3. LOCATION, LAND\_CODE, SIZE

### TABLE CREATION

1. ID\_NO, JOINING\_DATE, NAME, SALARY, GENDER, EMAIL, DESIGNATON, PHONE\_NO, ADDRESS
2. ZIP\_CODE, ROAD\_NO, CITY, HOUSE\_NO, A\_ID
3. LOCATION, LAND\_CODE, SIZE, A\_ID
4. ID\_NO, LAND\_CODE

### RELATE

### UNF

RELATE(SERIAL\_NO, NAME, FATHERS\_NAME, MOTHERS\_NAME, AGE, DATE OF BIRTH, DATE OF DEATH, CAUSE OF DEATH, GENDER, ADDRESS, ZIP\_CODE, ROAD\_NO, CITY, HOUSE\_NO, O\_NAME, ORDER\_ID, GENDER, EMAIL, PHONE\_NO, RELATIONSHIP, ADDRESS, ZIP\_CODE, ROAD\_NO, CITY, HOUSE\_NO)

### 1NF

PHONE\_NO is a multivalued attribute.

1. SERIAL\_NO, NAME, FATHERS\_NAME, MOTHERS\_NAME, AGE, DATE OF BIRTH, DATE OF DEATH, CAUSE OF DEATH, GENDER, ADDRESS, ZIP\_CODE, ROAD\_NO, CITY, HOUSE\_NO, O\_NAME, ORDER\_ID, GENDER, EMAIL, PHONE\_NO, RELATIONSHIP, ADDRESS, ZIP\_CODE, ROAD\_NO, CITY, HOUSE\_NO

### 2NF

1. SERIAL\_NO, NAME, FATHERS\_NAME, MOTHERS\_NAME, AGE, DATE OF BIRTH, DATE OF DEATH, CAUSE OF DEATH, GENDER, ADDRESS, ZIP\_CODE, ROAD\_NO, CITY, HOUSE\_NO
2. O\_NAME, ORDER\_ID, GENDER, EMAIL, PHONE\_NO, RELATIONSHIP

### 3NF

1. SERIAL\_NO,NAME,FATHERS\_NAME,MOTHERS\_NAME,GENDER,ADDRESS
2. O\_NAME,ORDER\_ID,GENDER,EMAIL,PHONE\_NO,RELATIONSHIP
- 3.ZIP\_CODE,ROAD\_NO,CITY,HOUSE\_NO
4. AGE,DATE OF BIRTH,DATE OF DEATH,CAUSE OF DEATH

### TABLE CREATION

1. SERIAL\_NO,NAME,FATHERS\_NAME,MOTHERS\_NAME,GENDER,ADDRESS
2. O\_NAME,ORDER\_ID,GENDER,EMAIL,PHONE\_NO,RELATIONSHIP,SERIAL\_NO,A\_ID
3. ZIP\_CODE,ROAD\_NO,CITY,HOUSE\_NO,A\_ID.
4. AGE,DATE OF BIRTH,DATE OF DEATH,CAUSE OF DEATH, A\_ID.

### BUY

### UNF

BUY(O\_NAME ,ORDER\_ID,GENDER,EMAIL,PHONE\_NO,RELATIONSHIP,  
ADDRESS,ZIP\_CODE,ROAD\_NO,CITY,HOUSE\_NO, LOCATION,LAND\_CODE,SIZE)

### 1NF

PHONE\_NO is a multivalued attribute.

1. O\_NAME ,ORDER\_ID,GENDER,EMAIL,PHONE\_NO,RELATIONSHIP,  
ADDRESS,ZIP\_CODE,ROAD\_NO,CITY,HOUSE\_NO, LOCATION,LAND\_CODE,SIZE

### 2NF

1. O\_NAME ,ORDER\_ID,GENDER,EMAIL,PHONE\_NO,RELATIONSHIP,  
ADDRESS,ZIP\_CODE,ROAD\_NO,CITY,HOUSE\_NO
2. LOCATION,LAND\_CODE,SIZE

### 3NF

1. O\_NAME ,ORDER\_ID,GENDER,EMAIL,PHONE\_NO,RELATIONSHIP, ADDRESS
2. LOCATION,LAND\_CODE,SIZE
3. ZIP\_CODE,ROAD\_NO,CITY,HOUSE\_NO

### TABLE CREATION

1. O\_NAME ,ORDER\_ID,GENDER,EMAIL,PHONE\_NO,RELATIONSHIP, ADDRESS
2. , LOCATION,LAND\_CODE,SIZE,ORDER\_ID,A\_ID

3. ZIP\_CODE,ROAD\_NO,CITY,HOUSE\_NO,A\_ID

### LEASE

### UNF

LEASE(O\_NAME ,ORDER\_ID,GENDER,EMAIL,PHONE\_NO,RELATIONSHIP,  
ADDRESS,ZIP\_CODE,ROAD\_NO,CITY,HOUSE\_NO, , LOCATION,LAND\_CODE,SIZE)

### 1NF

PHONE\_NO is a multivalued attribute.

1. O\_NAME ,ORDER\_ID,GENDER,EMAIL,PHONE\_NO,RELATIONSHIP,  
ADDRESS,ZIP\_CODE,ROAD\_NO,CITY,HOUSE\_NO, LOCATION,LAND\_CODE,SIZE

### 2NF

1. O\_NAME ,ORDER\_ID,GENDER,EMAIL,PHONE\_NO,RELATIONSHIP,  
ADDRESS,ZIP\_CODE,ROAD\_NO,CITY,HOUSE\_NO

2. , LOCATION,LAND\_CODE,SIZE

### 3NF

1. O\_NAME ,ORDER\_ID,GENDER,EMAIL,PHONE\_NO,RELATIONSHIP, ADDRESS

2. , LOCATION,LAND\_CODE,SIZE

3. ZIP\_CODE,ROAD\_NO,CITY,HOUSE\_NO

### TABLE CREATION

1. O\_NAME ,ORDER\_ID,GENDER,EMAIL,PHONE\_NO,RELATIONSHIP, ADDRESS

2. , LOCATION,LAND\_CODE,SIZE,A\_ID,ORDER\_ID

3. ZIP\_CODE,ROAD\_NO,CITY,HOUSE\_NO,A\_ID

### FINAL TABLES

1. SERIAL\_NO,NAME,FATHERS\_NAME,MOTHERS\_NAME,GENDER,ADDRESS

2. ZIP\_CODE,ROAD\_NO,CITY,HOUSE\_NO,SERIAL\_NO

3. LOCATION,LAND\_CODE,SIZE,SERIAL\_NO

4. AGE,DATE OF BIRTH,DATE OF DEATH,CAUSE OF DEATH,SERIAL\_NO

5. ID\_NO,JOINING\_DATE,NAME,SALARY,GENDER ,EMAIL,DESIGNATON,PHONE\_NO, ADDRESS

6.ID\_NO, LAND\_CODE

7. O\_NAME,ORDER\_ID,GENDER,EMAIL,PHONE\_NO,RELATIONSHIP,SERIAL\_NO,A\_ID

8. O\_NAME ,ORDER\_ID,GENDER,EMAIL,PHONE\_NO,RELATIONSHIP, ADDRESS

9. , LOCATION,LAND\_CODE,SIZE,ORDER\_ID,A\_ID

#### TABLE CREATION FOR ALL FINAL TABLES

```
create table CORPSE( SERIAL_NO int, constraint spk primary key(SERIAL_NO), NAME varchar(20),  
FATHERS_NAME varchar(20), MOTHERS_NAME varchar(23),GENDER varchar(28),ADDRESS  
varchar(28));
```

```
insert into CORPSE values (1,'RAHIM','MONIR','BEGUM','MALE','DHAKA');
```

```
insert into CORPSE values (2,'Karim','RAHIM','RINA','MALE','DHAKA');
```

```
insert into CORPSE values (3,'Prioty','K','TINA','FEMALE','MIROUR');
```

```
SELECT* FROM CORPSE;
```

```
create table LOCATION( ZIP_CODE int, constraint lpk primary key(ZIP_CODE), ROAD_NO int, CITY  
varchar(20), HOUSE_NO int,SERIAL_NO int,constraint fk FOREIGN KEY(SERIAL_NO) references  
CORPSE(SERIAL_NO) );
```

```
insert into LOCATION values (3,2,'DHAKA',1,1);
```

```
insert into LOCATION values (5,1,'DHAKA',6,2);
```

```
insert into LOCATION values (2,3,'MIROUR',8,3);
```

```
SELECT* FROM LOCATION;
```

```
create table LAND( LAND_CODE int, constraint Mpk primary key(LAND_CODE), LOCATION  
varchar(20), SIZE int,SERIAL_NO int,constraint Efk FOREIGN KEY(SERIAL_NO) references  
CORPSE(SERIAL_NO) );
```

```
insert into LAND values (11,'DHAKA',1,1);
```

```
insert into LAND values (13,'MIRPUR',5,2);
```

```
insert into LAND values (12,'DINAJPUR',2,3);SELECT* FROM LAND;
```

```
create table A_ID( LAND_CODE int, ID_NO int,constraint Rpk primary key(ID_NO));
```

```
insert into A_ID values (11,12);
```

```
insert into A_ID values (13,15);
```

```
insert into A_ID values (14,17);SELECT*FROM A_ID;
```

```
create table BIRTH_DEATH( AGE date,DATE OF BIRTH date,DATE OF DEATH date,CAUSE OF DEATH  
varchar(34),SERIAL_NO int,_constraint ffk FOREIGN KEY(SERIAL_NO) references CORPSE(SERIAL_NO) );
```

```
insert into BIRTH_DEATH values (14,12,23,'poisoning',1);
```

```
insert into BIRTH_DEATH values (1,13,22,'DEASEAS',2);
```

```
create table ID( ID_NO int, constraint Rpk primary key(ID_NO),JOINING_DATE date,NAME  
varchar(23),SALARY int,GENDER varchar(22) ,EMAIL varchar(23),DESIGNATON varchar(34),PHONE_NO  
int, ADDRESS varchar(12));
```

```
insert into ID values (1,23,'R',2300,'MALE','y@gmail.com','manager',24323463,'dhaka');
```

```
create table order_ID(O_NAME varchar(23),ORDER_ID int,GENDER varchar(23),EMAIL  
varchar(23),PHONE_NO int,RELATIONSHIP varchar(23),SERIAL_NO int,A_ID int);
```

```
insert into order_ID values ('r',1,'R','y@gmail.com',24323463,'s',1,'1');
```