UE19CS304 – DBMS LABORATORY

Week 3: ER Diagram and PostgreSQL
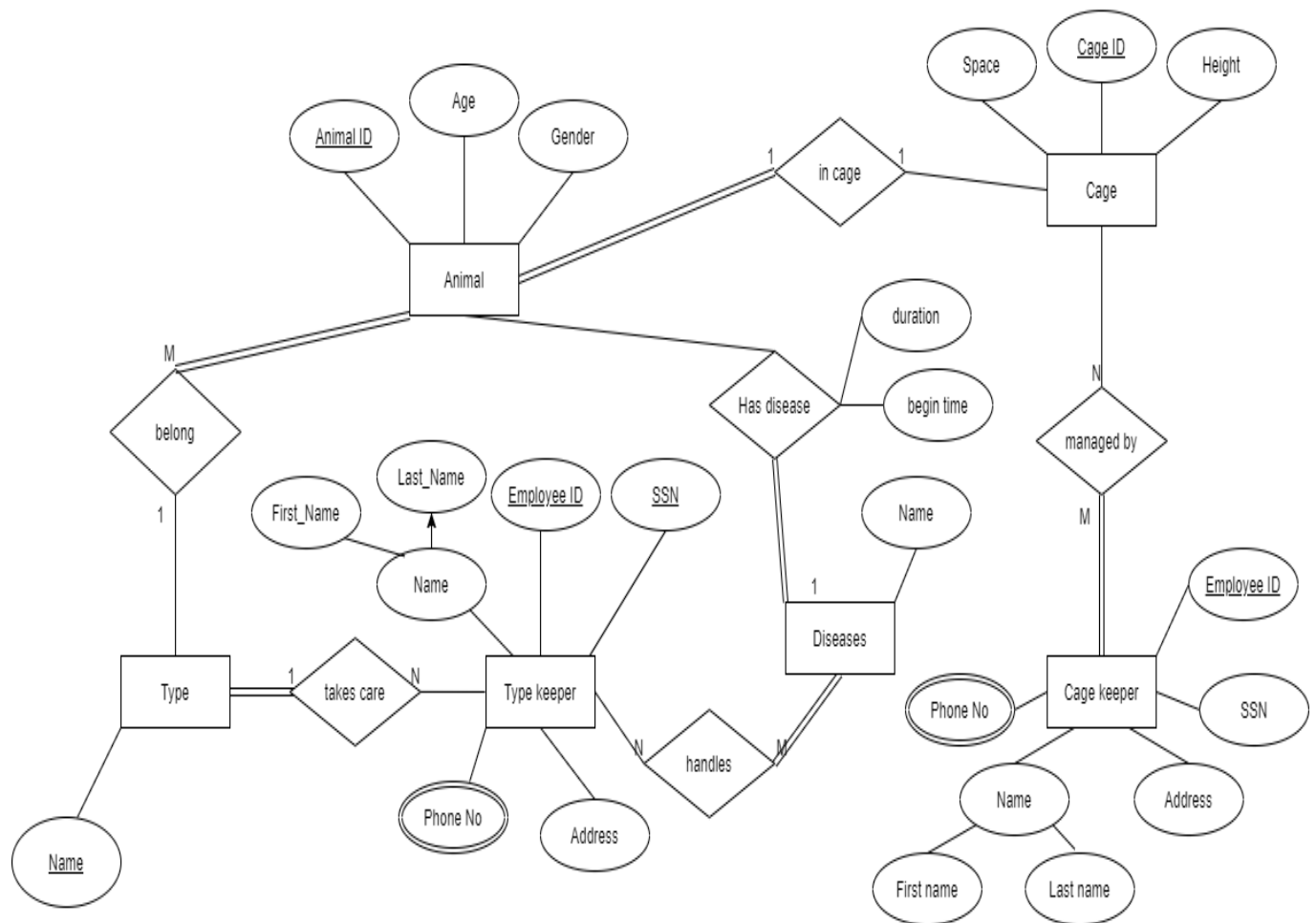
Name: TUSHAR Y S

SRN: PES1UG19CS545 (I section)
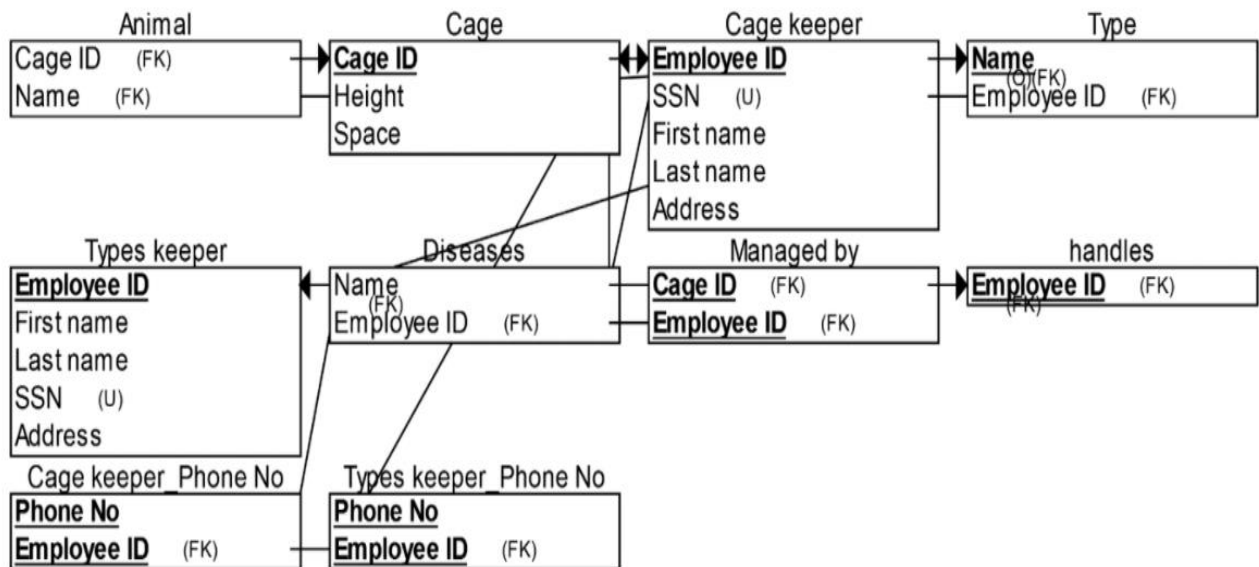
Task1:

- ER (Entity Relationship) Diagram:

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- Relational Table:

Animal
Cage ID	(FK)
Name	(FK)

Cage
Cage ID
Height
Space

Cage keeper
Employee ID	
SSN	(U)
First name	
Last name	
Address	

Type
Name	(U)(FK)
Employee ID	(FK)

Types keeper
Employee ID	
First name	
Last name	
SSN	(U)
Address	

Diseases
Name	(FK)
Employee ID	(FK)

Managed by
Cage ID	(FK)
Employee ID	(FK)

handles
Employee ID	(FK)
	(FK)

Cage keeper_Phone No
Phone No	
Employee ID	(FK)

Types keeper_Phone No
Phone No	
Employee ID	(FK)

Task2: PostgreSQL

- Creating a database called 'tushar18' and connecting to it.

```
postgres=# create database tushar18;
CREATE DATABASE
postgres=# \c tushar18;
You are now connected to database "tushar18" as user "postgres".
tushar18=#
```

- Creating different tables with constraints of primary keys and foreign keys.

```
tushar18=# create table doctor(d_id int,d_name varchar,d_phone int,primary key (d_id));
CREATE TABLE
```

```
tushar18=# create table patient(p_id int, p_name varchar, diagnosis varchar, age int, primary key(p_id));
CREATE TABLE
tushar18=# create table medicine(med_id int, med_name varchar, primary key(med_id));
CREATE TABLE
tushar18=# create table bed(b_id int, ward_no int, primary key(b_id));
CREATE TABLE
tushar18=# create table prescription(p_id int, d_id int, med_id int, primary key(p_id,d_id));
CREATE TABLE
tushar18=# create table bed_patient(p_id int, b_id int, in_date varchar, out_date varchar, primary key(p_id,b_id));
CREATE TABLE
tushar18=#
```

```
tushar18=# alter table prescription add constraint fk0 foreign key(p_id) references patient(p_id);
ALTER TABLE
```

```
tushar18=# alter table prescription add constraint fk1 foreign key(d_id) references doctor(d_id);
ALTER TABLE
tushar18=# alter table bed_patient add constraint fk2 foreign key(p_id) references patient(p_id);
ALTER TABLE
tushar18=# alter table bed_patient add constraint fk3 foreign key(b_id) references bed(b_id);
ALTER TABLE
```

- 6 tables are present in 'tushar18' database.

```
tushar18=# \d
            List of relations
 Schema |     Name      | Type  |  Owner
--------+---------------+-------+----------
 public | bed           | table | postgres
 public | bed_patient   | table | postgres
 public | doctor        | table | postgres
 public | medicine      | table | postgres
 public | patient       | table | postgres
 public | prescription  | table | postgres
(6 rows)


tushar18=#
```

```
tushar18=# \d doctor
                 Table "public.doctor"
 Column  |       Type        | Collation | Nullable | Default
---------+-------------------+-----------+----------+---------
 d_id    | integer           |           | not null |
 d_name  | character varying |           |          |
 d_phone | integer           |           |          |
Indexes:
    "doctor_pkey" PRIMARY KEY, btree (d_id)
Referenced by:
    TABLE "prescription" CONSTRAINT "fk1" FOREIGN KEY (d_id) REFERENCES doctor(d_id)
```

```
tushar18=# \d medicine
                 Table "public.medicine"
  Column  |       Type        | Collation | Nullable | Default
----------+-------------------+-----------+----------+---------
 med_id   | integer           |           | not null |
 med_name | character varying |           |          |
Indexes:
    "medicine_pkey" PRIMARY KEY, btree (med_id)


tushar18=# \d patient
                  Table "public.patient"
  Column   |       Type        | Collation | Nullable | Default
-----------+-------------------+-----------+----------+---------
 p_id      | integer           |           | not null |
 p_name    | character varying |           |          |
 diagnosis | character varying |           |          |
 age       | integer           |           |          |
Indexes:
    "patient_pkey" PRIMARY KEY, btree (p_id)
Referenced by:
    TABLE "prescription" CONSTRAINT "fk0" FOREIGN KEY (p_id) REFERENCES patient(p_id)
    TABLE "bed_patient" CONSTRAINT "fk2" FOREIGN KEY (p_id) REFERENCES patient(p_id)


tushar18=# \d prescription
            Table "public.prescription"
 Column | Type    | Collation | Nullable | Default
--------+---------+-----------+----------+---------
 p_id   | integer |           | not null |
 d_id   | integer |           | not null |
 med_id | integer |           |          |
Indexes:
    "prescription_pkey" PRIMARY KEY, btree (p_id, d_id)
Foreign-key constraints:
    "fk0" FOREIGN KEY (p_id) REFERENCES patient(p_id)
    "fk1" FOREIGN KEY (d_id) REFERENCES doctor(d_id)
```

- Inserting 5 values into 'doctor' table:

```
tushar18=# insert into doctor values(001, 'Virat Kohli', 97412);
INSERT 0 1
tushar18=# insert into doctor values(002, 'MS Dhoni', 83214);
INSERT 0 1
tushar18=# insert into doctor values(003, 'KL Rahul', 98456);
INSERT 0 1
tushar18=# insert into doctor values(004, 'Rohit Sharma', 78954);
INSERT 0 1
tushar18=# insert into doctor values(005, 'C Pujara', 88654);
INSERT 0 1
tushar18=#
```

- Inserting 5 values into 'patient' table:

```
tushar18=# insert into patient values(101, 'Joe Root', 'Cold', 30);
INSERT 0 1
tushar18=# insert into patient values(102, 'Tim David', 'Fever', 25);
INSERT 0 1
tushar18=# insert into patient values(103, 'Tom Banton', 'Skin disease', 28);
INSERT 0 1
tushar18=# insert into patient values(104, 'Steve Smith', 'Mental Illness', 30);
INSERT 0 1
tushar18=# insert into patient values(105, 'Kane Williamson', 'Headache', 31);
INSERT 0 1
```

- Inserting 5 values into 'medicine' table:

```
tushar18=# insert into medicine values(21,'Crocin');
INSERT 0 1
tushar18=# insert into medicine values(22,'Dolo650');
INSERT 0 1
tushar18=# insert into medicine values(23,'Covishield');
INSERT 0 1
tushar18=# insert into medicine values(24,'Covaxin');
INSERT 0 1
tushar18=# insert into medicine values(25,'Sputnik');
INSERT 0 1
```

- Inserting 5 values into 'prescription' table:

```
tushar18=# insert into prescription values(101, 01, 21);
INSERT 0 1
tushar18=# insert into prescription values(102, 002, 22);
INSERT 0 1
tushar18=# insert into prescription values(103, 003, 23);
INSERT 0 1
tushar18=# insert into prescription values(104, 004, 24);
INSERT 0 1
tushar18=# insert into prescription values(105, 005, 25);
INSERT 0 1
```

- Inserting 5 values into 'bed' table:

```
tushar18=# insert into bed values(81, 1001);
INSERT 0 1
tushar18=# insert into bed values(82, 1002);
INSERT 0 1
tushar18=# insert into bed values(83, 1003);
INSERT 0 1
tushar18=# insert into bed values(84, 1004);
INSERT 0 1
tushar18=# insert into bed values(85, 1005);
INSERT 0 1
```

- Inserting 5 values into 'bed patient' table:

```
tushar18=# insert into bed_patient values(101, 81, '01/01/2021');
INSERT 0 1
tushar18=# insert into bed_patient values(102, 82, '02/02/2021');
INSERT 0 1
tushar18=# insert into bed_patient values(103, 83, '03/03/2021');
INSERT 0 1
tushar18=# insert into bed_patient values(104, 84, '04/04/2021');
INSERT 0 1
tushar18=# insert into bed_patient values(105, 85, '05/05/2021');
INSERT 0 1
```