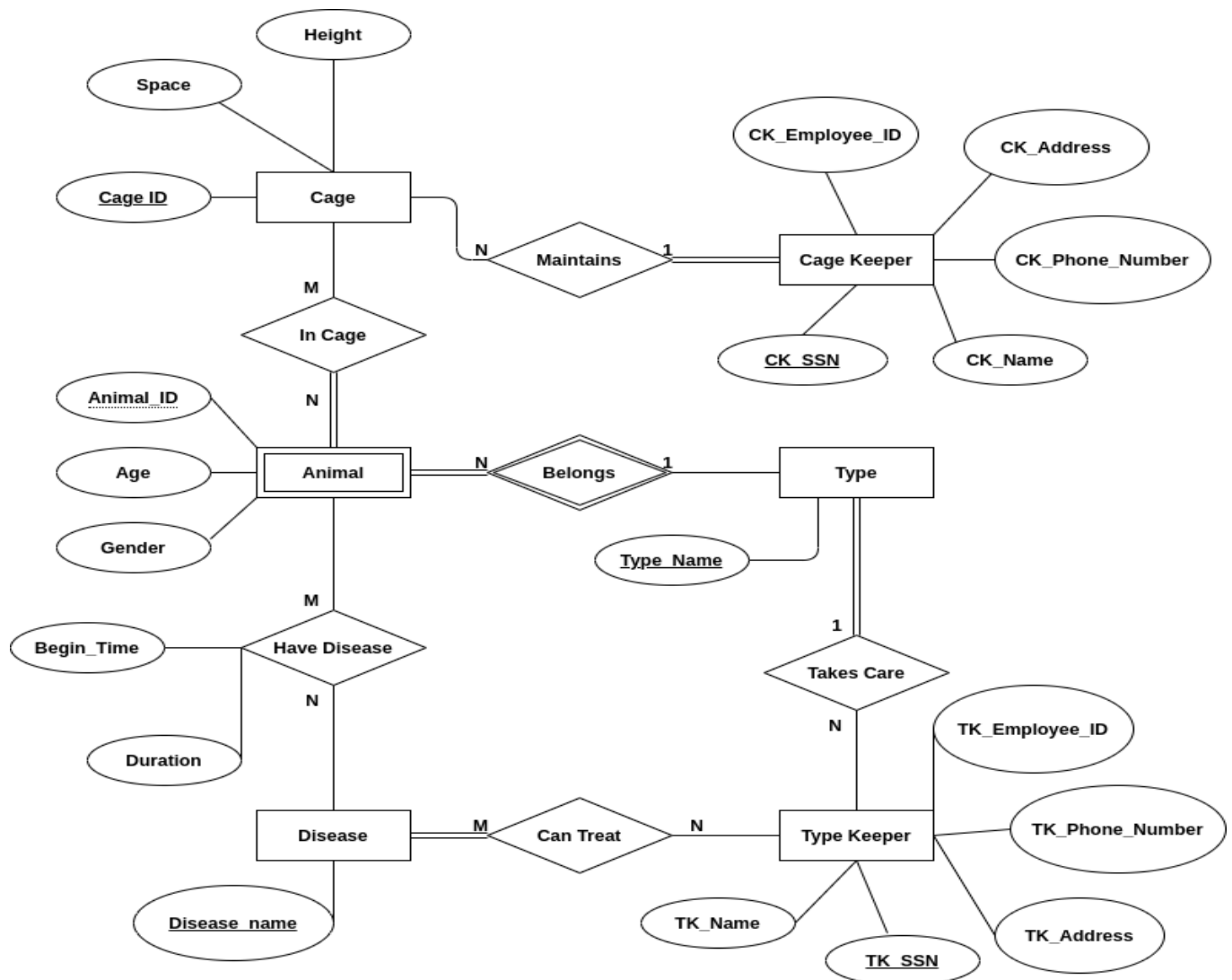# DBMS Lab Week 3

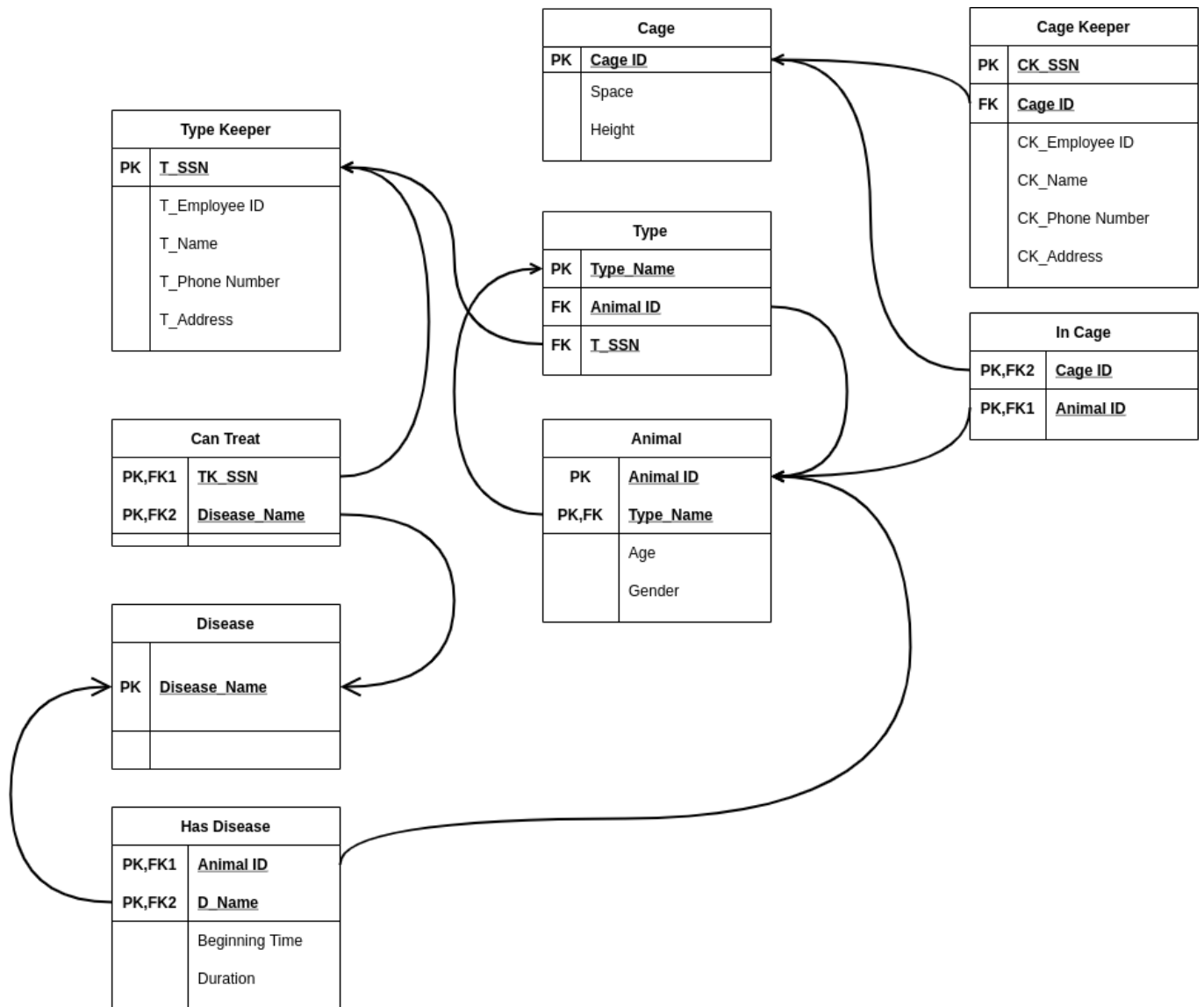**Name** : **Abhishek Aditya BS**
SRN : **PES1UG19CS019**
Section : **A**

Q1. Draw the ER Diagram for the following

The Bannerghatta Biological Zoo has many types of animals. Every type has a unique name. Every animal of the same type has a unique animal ID. Animals in two types may have the same animal ID. Animals also have age and gender. Animals may have diseases. The beginning time and the duration of a disease need to be recorded. A disease has a unique name. A type keeper takes care of only one type of animal. Every type may have many type keepers. A type keeper may or may not be familiar with diseases. But every disease must be handled by at least one type keeper. Type keepers have name, employee ID, ssn, address and phone number. All animals are in cages. Some cages may be empty. Every cage has a cage ID, space and height. A cage keeper may take care of many cages. Every non-empty cage must have at least one cage keeper. Empty cages don't need any cage keepers. Cage keepers have name, employee ID, ssn, address and phone number.

Q2. Convert the ER diagram of zoo into Relational table

Cage

PK	Cage ID
	Space
	Height

Cage Keeper

PK	CK_SSN
FK	Cage ID
	CK_Employee ID
	CK_Name
	CK_Phone Number
	CK_Address

Type Keeper

PK	T_SSN
	T_Employee ID
	T_Name
	T_Phone Number
	T_Address

Type

PK	Type_Name
FK	Animal ID
FK	T_SSN

In Cage

PK,FK2	Cage ID
PK,FK1	Animal ID

Can Treat

PK,FK1	TK_SSN
PK,FK2	Disease_Name

Animal

PK	Animal ID
PK,FK	Type_Name
	Age
	Gender

Disease

PK	Disease_Name

Has Disease

PK,FK1	Animal ID
PK,FK2	D_Name
	Beginning Time
	Duration

Q3. Write create statements for following considering constraints appropriately. Insert 5 values suitably

Doctor(d_id,d_name,d_phone)
Patient(p_id,p_name,diagnosis,age)
Medicine(med_id,med_name)
Prescription(p_id,d_id,med_id)
Bed(B_id,ward_no)
Bed_Patient(p_id,b_id,in_date,out_date)

3a. Create Database

```
create database dbname ;
\c dbname
```

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

3b. Create table and add constraints

```
create table table_name(att  data type,att data type );
alter table table_name add constraint pk primary key (attr);
alter table table_name add constraint fk foreign key (attr)references
base_tablename(attr);
```

```
abhishek_aditya_bs=# create table doctor(d_id int,d_name char(30),d_phone varchar(30));
CREATE TABLE
abhishek_aditya_bs=# alter table doctor add constraint doctor_pk primary key(d_id);
ALTER TABLE
abhishek_aditya_bs=#
```

```
abhishek_aditya_bs=# create table patient(p_id int,p_name char(30),diagnosis varchar(30),age int);
CREATE TABLE
abhishek_aditya_bs=# alter table patient add constraint patient_pk primary key(p_id);
ALTER TABLE
abhishek_aditya_bs=#
```

```
abhishek_aditya_bs=# create table medicine(med_id int,med_name varchar(30));
CREATE TABLE
abhishek_aditya_bs=# alter table medicine add constraint medicine_pk primary key(med_id);
ALTER TABLE
abhishek_aditya_bs=#
```

```
abhishek_aditya_bs=# create table prescription(p_id int,d_id int,med_id int);
CREATE TABLE
```

```
abhishek_aditya_bs=# alter table prescription add constraint pres_p_id_fk foreign key (p_id) references patient(p_id);
ALTER TABLE
abhishek_aditya_bs=# alter table prescription add constraint pres_d_id_fk foreign key (d_id) references doctor(d_id);
ALTER TABLE
abhishek_aditya_bs=# alter table prescription add constraint pres_med_id_fk foreign key (med_id) references medicine(med_id);
ALTER TABLE
abhishek_aditya_bs=#
```

```
abhishek_aditya_bs=# create table bed(b_id int,ward_no varchar(30));
CREATE TABLE
abhishek_aditya_bs=# alter table bed add constraint bed_pk primary key(b_id);
ALTER TABLE
abhishek_aditya_bs=#
```

```
abhishek_aditya_bs=# create table bed_patient(p_id int,b_id int,in_date date,out_date date);
CREATE TABLE
abhishek_aditya_bs=# alter table bed_patient add constraint bedpatient_p_id_fk foreign key (p_id) references patient(p_id);
ALTER TABLE
abhishek_aditya_bs=# alter table bed_patient add constraint bedpatient_b_id_fk foreign key (b_id) references bed(b_id);
ALTER TABLE
abhishek_aditya_bs=#
```

3c. Insert Values into the tables created

insert into table table name values(a,a,a,........);

```
abhishek_aditya_bs=# insert into doctor values(1,'Ramesh',988275391);
INSERT 0 1
abhishek_aditya_bs=# insert into doctor values(2,'Suresh',9772986197);
INSERT 0 1
abhishek_aditya_bs=# insert into doctor values(3,'Aditya',8829276539);
INSERT 0 1
abhishek_aditya_bs=# insert into doctor values(4,'Abhishek',7798367820);
INSERT 0 1
abhishek_aditya_bs=# insert into doctor values(5,'vishal',8892287699);
INSERT 0 1
abhishek_aditya_bs=#
```

```
abhishek_aditya_bs=# SELECT * FROM doctor;
 d_id |            d_name            |  d_phone
------+-----------------------------+------------
    1 | Ramesh                      | 988275391
    2 | Suresh                      | 9772986197
    3 | Aditya                      | 8829276539
    4 | Abhishek                    | 7798367820
    5 | vishal                      | 8892287699
(5 rows)
```

```
abhishek_aditya_bs=# insert into patient values(1,'Abhishek','Fracture',20);
INSERT 0 1
abhishek_aditya_bs=# insert into patient values(2,'Supreeth','KidneyFailure',20);
INSERT 0 1
abhishek_aditya_bs=# insert into patient values(3,'Vishal','LungsFailure',20);
INSERT 0 1
abhishek_aditya_bs=# insert into patient values(4,'Aniketh','Lungcancer',20);
INSERT 0 1
abhishek_aditya_bs=# insert into patient values(5,'Aayush','BrainCancer',22);
INSERT 0 1
abhishek_aditya_bs=#
```

```
abhishek_aditya_bs=# SELECT * FROM patient;
 p_id |            p_name            |   diagnosis    | age
------+-----------------------------+----------------+-----
    1 | Abhishek                    | Fracture       |  20
    2 | Supreeth                    | KidneyFailure  |  20
    3 | Vishal                      | LungsFailure   |  20
    4 | Aniketh                     | Lungcancer     |  20
    5 | Aayush                      | BrainCancer    |  22
(5 rows)
```

```
abhishek_aditya_bs=# insert into medicine values(10,'Crocin');
INSERT 0 1
abhishek_aditya_bs=# insert into medicine values(20,'Crociflex5mg');
INSERT 0 1
abhishek_aditya_bs=# insert into medicine values(30,'Thyronor120mg');
INSERT 0 1
abhishek_aditya_bs=# insert into medicine values(40,'Dolo650');
INSERT 0 1
abhishek_aditya_bs=# insert into medicine values(50,'Glycomate');
INSERT 0 1
abhishek_aditya_bs=#
```

```
abhishek_aditya_bs=# SELECT * FROM medicine;
 med_id |    med_name
--------+----------------
     10 | Crocin
     20 | Crociflex5mg
     30 | Thyronor120mg
     40 | Dolo650
     50 | Glycomate
(5 rows)
```

```
abhishek_aditya_bs=# insert into prescription values(1,5,10);
INSERT 0 1
abhishek_aditya_bs=# insert into prescription values(2,4,20);
INSERT 0 1
abhishek_aditya_bs=# insert into prescription values(3,3,30);
INSERT 0 1
abhishek_aditya_bs=# insert into prescription values(4,2,40);
INSERT 0 1
abhishek_aditya_bs=# insert into prescription values(5,1,50);
INSERT 0 1
abhishek_aditya_bs=#
```

```
abhishek_aditya_bs=# SELECT * FROM prescription;
 p_id | d_id | med_id
------+------+--------
    1 |    5 |     10
    2 |    4 |     20
    3 |    3 |     30
    4 |    2 |     40
    5 |    1 |     50
(5 rows)
```

```
abhishek_aditya_bs=# insert into bed values(11,'A1');
INSERT 0 1
abhishek_aditya_bs=# insert into bed values(12,'A2');
INSERT 0 1
abhishek_aditya_bs=# insert into bed values(13,'A3');
INSERT 0 1
abhishek_aditya_bs=# insert into bed values(14,'A4');
INSERT 0 1
abhishek_aditya_bs=# insert into bed values(15,'A5');
INSERT 0 1
abhishek_aditya_bs=#
```

```
abhishek_aditya_bs=# SELECT * FROM bed;
 b_id | ward_no
------+---------
   11 | A1
   12 | A2
   13 | A3
   14 | A4
   15 | A5
(5 rows)
```

```
abhishek_aditya_bs=# insert into bed_patient values(1,15,'1996-12-02','1996-12-21');
INSERT 0 1
abhishek_aditya_bs=# insert into bed_patient values(2,14,'1997-03-03','1997-03-10');
INSERT 0 1
abhishek_aditya_bs=# insert into bed_patient values(3,13,'2000-04-14','2000-04-19');
INSERT 0 1
abhishek_aditya_bs=# insert into bed_patient values(4,12,'2001-09-23','2001-09-27');
INSERT 0 1
abhishek_aditya_bs=# insert into bed_patient values(5,11,'2002-11-19','2002-11-25');
INSERT 0 1
abhishek_aditya_bs=#
```

```
abhishek_aditya_bs=# SELECT * FROM bed_patient;
 p_id | b_id |  in_date   |  out_date
------+------+------------+------------
    1 |   15 | 1996-12-02 | 1996-12-21
    2 |   14 | 1997-03-03 | 1997-03-10
    3 |   13 | 2000-04-14 | 2000-04-19
    4 |   12 | 2001-09-23 | 2001-09-27
    5 |   11 | 2002-11-19 | 2002-11-25
(5 rows)
```