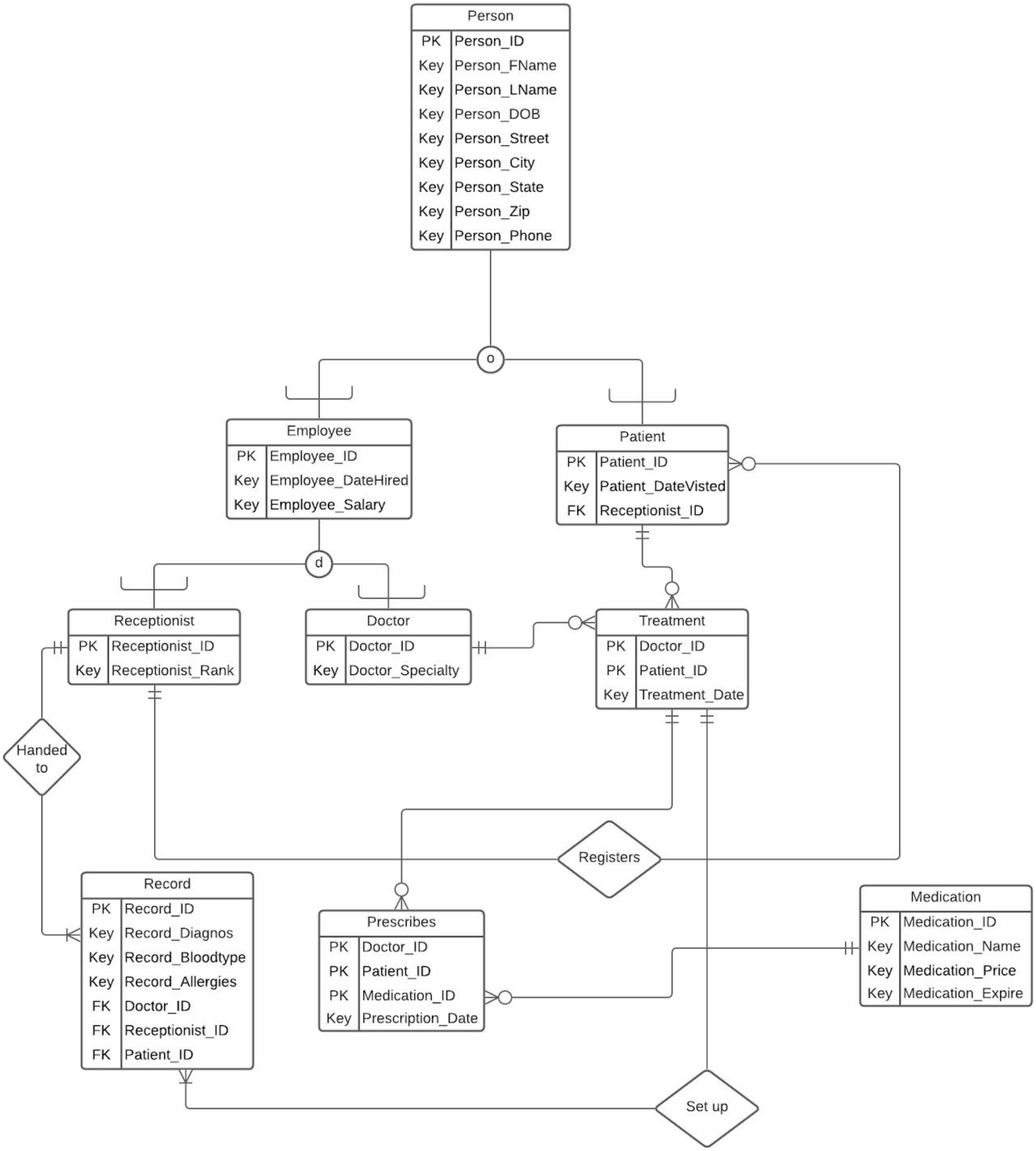


Person	
PK	Person_ID
Key	Person_FName
Key	Person_LName
Key	Person_DOB
Key	Person_Street
Key	Person_City
Key	Person_State
Key	Person_Zip
Key	Person_Phone

Employee	
PK	Employee_ID
Key	Employee_DateHired
Key	Employee_Salary

Patient	
PK	Patient_ID
Key	Patient_DateVisted
FK	Receptionist_ID

Receptionist	
PK	Receptionist_ID
Key	Receptionist_Rank

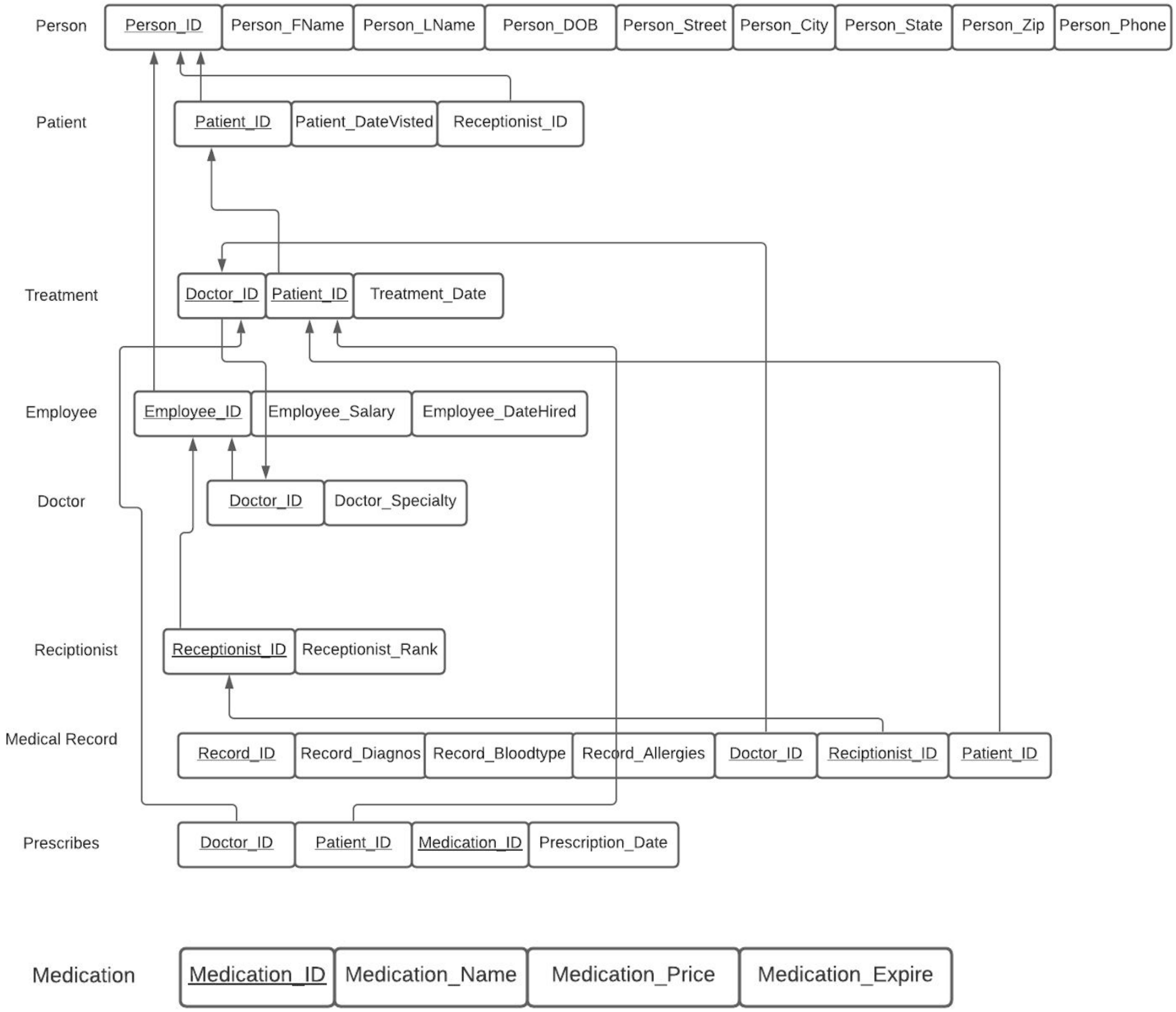
Doctor	
PK	Doctor_ID
Key	Doctor_Specialty

Treatment	
PK	Doctor_ID
PK	Patient_ID
Key	Treatment_Date

Record	
PK	Record_ID
Key	Record_Diagnos
Key	Record_Bloodtype
Key	Record_Allergies
FK	Doctor_ID
FK	Receptionist_ID
FK	Patient_ID

Prescribes	
PK	Doctor_ID
PK	Patient_ID
PK	Medication_ID
Key	Prescription_Date

Medication	
PK	Medication_ID
Key	Medication_Name
Key	Medication_Price
Key	Medication_Expire



Person	Person_ID	Person_FName	Person_LName	Person_DOB	Person_Street	Person_City	Person_State	Person_Zip	Person_Phone
Patient	Patient_ID	Patient_DateVisted	Receptionist_ID						
Treatment	Doctor_ID	Patient_ID	Treatment_Date						
Employee	Employee_ID	Employee_Salary	Employee_DateHired						
Doctor	Doctor_ID	Doctor_Specialty							
Reciptionist	Receptionist_ID	Receptionist_Rank							
Medical Record	Record_ID	Record_Diagnos	Record_Bloodtype	Record_Allergies	Doctor_ID	Reciptionist_ID	Patient_ID		
Prescribes	Doctor_ID	Patient_ID	Medication_ID	Prescription_Date					
Medication	Medication_ID	Medication_Name	Medication_Price	Medication_Expire					

Queries

1. Retrieve the names of all patients who got treated in the year 2020.
   This query will be flexible to help track patients between the range of specific dates.

```
SELECT CONCAT(p.Person_FName," ",p.Person_LName) as "Patient Names",
Treatment_Date
FROM person p, treatment t, patient pa
WHERE p.Person_ID = pa.Patient_ID
AND pa.Patient_ID = t.Patient_ID
AND t.Treatment_Date BETWEEN "2020-01-01" AND "2020-12-31"
```

---

2. Retrieve the names of patients who received medication that is under $350.
   This query will help track patients that received medication that is in a specific range of price.

```
SELECT DISTINCT CONCAT(p.Person_FName," ",p.Person_LName) as "Patient Names",
CONCAT("$",FORMAT(m.Medication_Price,2)) as "Medication Price"
FROM person p, patient pa, treatment t, prescription pr, medication m
WHERE p.Person_ID = pa.Patient_ID
AND pa.Patient_ID = t.Patient_ID
AND t.Patient_ID = pr.Patient_ID
AND pr.Medication_ID = m.Medication_ID
AND m.Medication_Price <= 350;
```

---

3. Retrieve the names of patients that have an “A” in their blood type.
   This query will help track patients that have a specific letter in their blood type.

```
SELECT DISTINCT CONCAT(Person_FName," ", Person_LName) as "Patient Names",
Record_Bloodtype as "Blood Type"
FROM person p, patient pa, treatment t, record r
WHERE p.Person_ID = pa.Patient_ID
AND pa.Patient_ID = t.Patient_ID
AND t.Patient_ID = r.Patient_ID
AND Record_Bloodtype RLIKE "A"
```

---

4. Retrieves the number of patients that do not have an allergie.
   This query will help track patients with a specific allergie or whether if they do not have one.

```
SELECT DISTINCT CONCAT(Person_FName," ", Person_LName) as "Patient Name",
Record_Allergy as Allergy
FROM person p, patient pa, treatment t, record r
WHERE p.Person_ID = pa.Patient_ID
AND pa.Patient_ID = t.Patient_ID
AND t.Patient_ID = r.Patient_ID
AND Record_Allergy = "none"
```

---

*

5. Retrieve the patients who have received a treatment the same day they visited the hospital.
   This query will help to see whether the hospital treated the patients right away. They might have not treated them right away if it was not an emergency.

```
SELECT CONCAT(Person_FName," ", Person_LName) as "Patient Names",
Treatment_Date, Patient_DateVisted as "Date Visited"
FROM person p, patient pa, treatment t
WHERE p.Person_ID = pa.Patient_ID
AND pa.Patient_ID = t.Patient_ID
AND t.Treatment_Date = pa.Patient_DateVisted
```

---

*

6. Retrieve the names of patients that received medication that starts with the letter “A”.
   This query will help track patients that received medication that starts with a specific letter.

```
SELECT CONCAT (Person_FName," ", Person_LName) as "Patient Names",
Medication_Name
FROM person p, treatment t, patient pa, prescription pr, medication m
WHERE p.Person_ID = pa.Patient_ID
AND pa.Patient_ID = t.Patient_ID
AND t.Patient_ID = pr.Patient_ID
AND pr.Medication_ID = m.Medication_ID
AND m.Medication_Name RLIKE "^A"
```

---

7. Retrieve the last names of all employees with their salary along with an additional column that identifies salary as “excellent” if it is over $100,000, “bad” if it’s less than $40,000, and “moderate” if it’s between $100,000 and $40,000.
   This query will help track the employees’ salaries and see if they are paid reasonably or not.

```
SELECT Person_LName as "Last Names", CONCAT("$", FORMAT(Employee_Salary,2))
as Salary,
IF(e.Employee_Salary < 40000, "bad", IF(e.Employee_Salary >= 100000,
"excellent", "moderate")) as Rating
FROM person p, employee e
WHERE p.Person_ID = e.Employee_ID;
```

---

8. Retrieve the names of the Receptionist with a senior rank that got hired before the year 2010.
   This query will help track an employee with a specific rank that got hired before a specific date.

```
SELECT CONCAT(Person_FName," ", Person_LName) as "Receptionist Names",
Employee_DateHired
FROM person p, employee e, receptionist r
WHERE p.person_ID = e.employee_ID
AND e.employee_ID = r.receptionist_ID
AND Receptionist_Rank = "Senior"
AND Employee_DateHired < "2010-1-1"
```

Parameterized Queries

1. Retrieves the names of people who were born in a certain range of dates within a specific state.
   This query will help track people that were born within a certain date range and within a certain state.

```
SELECT CONCAT(Person_FName," ", Person_LName) as "Names", Person_DOB
FROM person
WHERE Person_DOB BETWEEN var_date1 AND var_date2
AND Person_State = var_state;
```

2. Retrieves the names of medication that was prescribed that has not expired within a specific price range.
   This query will help track the expiration dates of each medication that was prescribed and their price.

```
SELECT Medication_Name, Medication_Expire, Medication_Price
FROM medication
WHERE Medication_Expire <= var_date
AND Medication_Price BETWEEN var_price1 AND var_price2;
```

Trigger

1. When Person_ID is changed in the person table, it will update the Patient_ID in the patient table.
   This trigger helps update the sub entity tables when its parent table is updated.

   ```
   Delimiter //
   CREATE TRIGGER update_Patient_ID
   AFTER UPDATE ON person
   FOR EACH ROW
   BEGIN
   UPDATE patient SET patient.Patient_ID = NEW.Person_ID
   WHERE patient.Patient_ID = OLD.Person_ID;
   END
   ```

2. When Person_ID is changed in the person table, it will update the Employee_ID in the employee table.
   This trigger helps update the sub entity tables when its parent table is updated.

```
Delimiter //
CREATE TRIGGER update_EmployeeID
AFTER UPDATE ON person
FOR EACH ROW
BEGIN
UPDATE employee SET employee.Employee_ID = NEW.Person_ID
WHERE employee.Employee_ID = OLD.Person_ID;
END
```