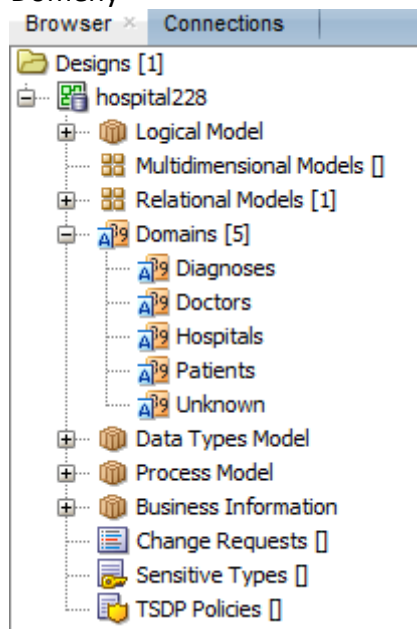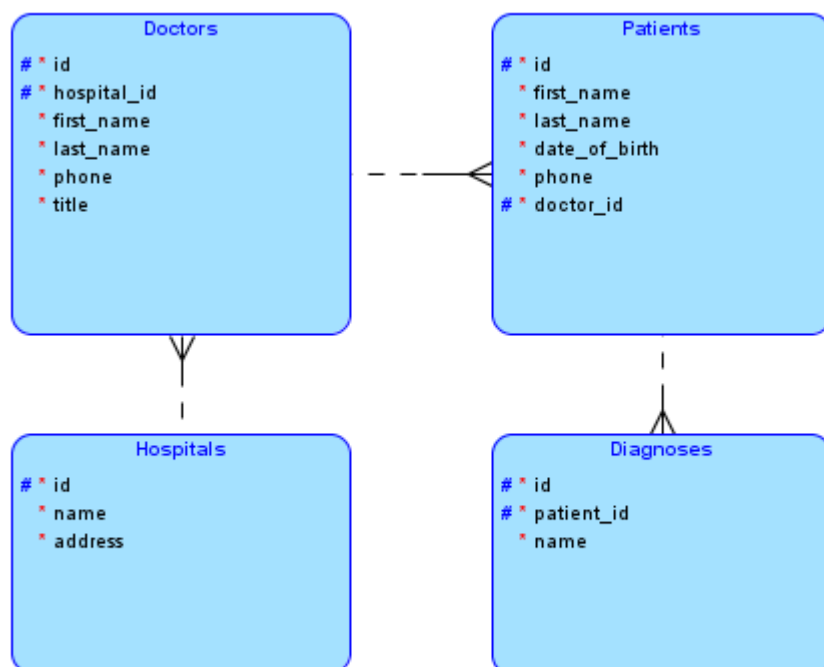# Baza danych szpitala
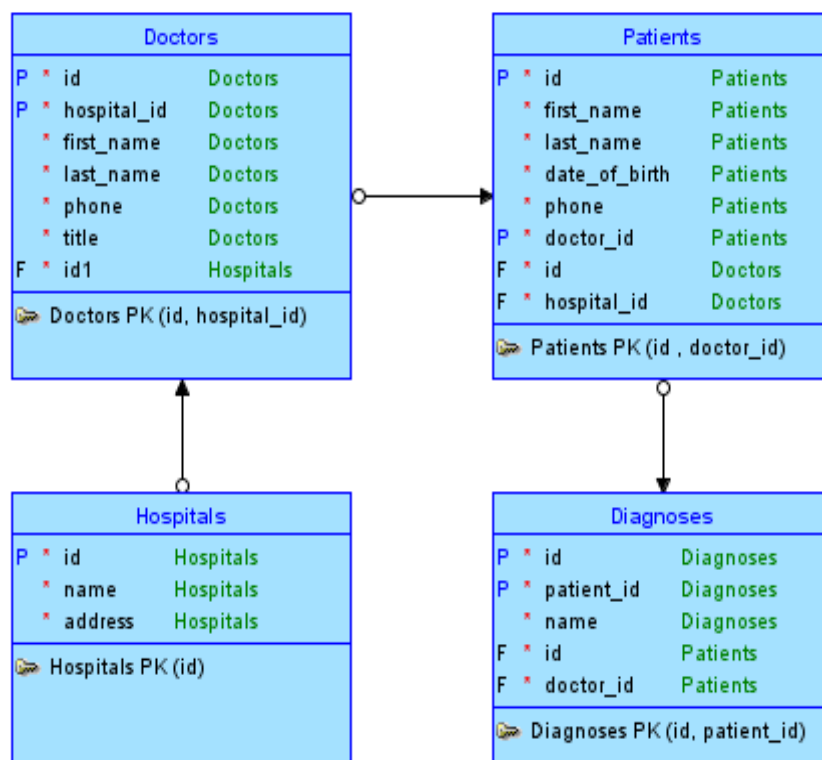
1. Domeny
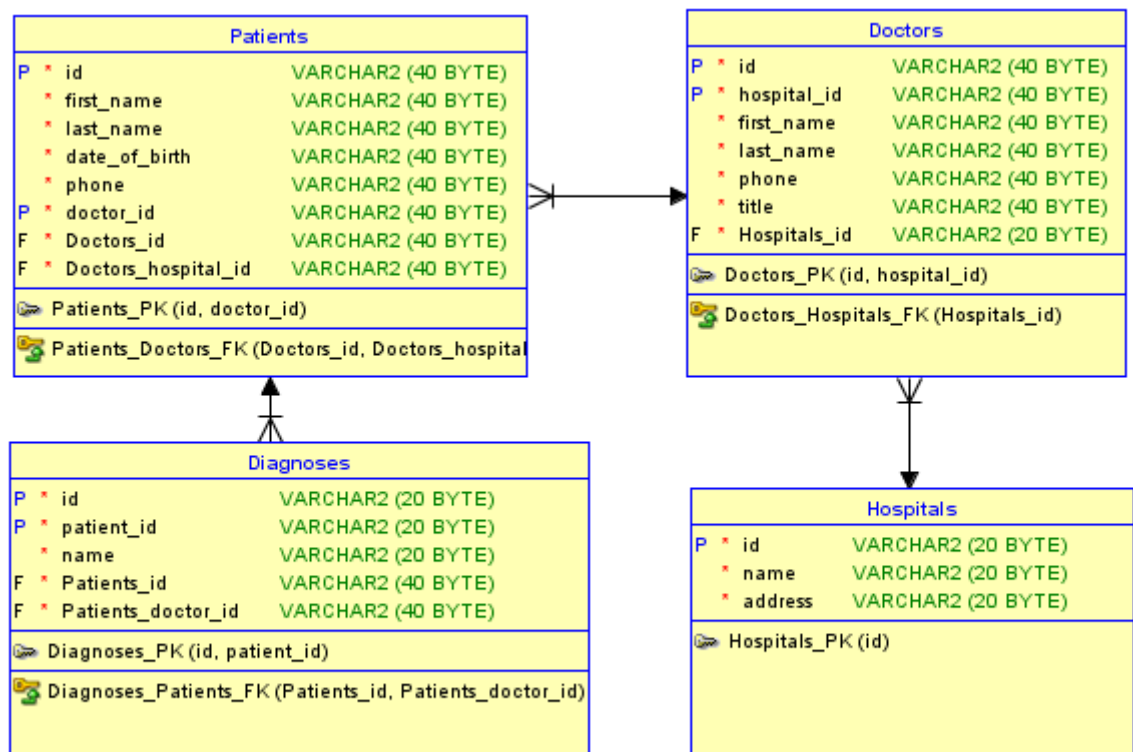

2. Encje oraz związki między nimi

3. Schemat w notacji Bachmana

Doctors

P	*	id	Doctors
P	*	hospital_id	Doctors
	*	first_name	Doctors
	*	last_name	Doctors
	*	phone	Doctors
	*	title	Doctors
F	*	id1	Hospitals

Doctors PK (id, hospital_id)

Patients

P	*	id	Patients
	*	first_name	Patients
	*	last_name	Patients
	*	date_of_birth	Patients
	*	phone	Patients
P	*	doctor_id	Patients
F	*	id	Doctors
F	*	hospital_id	Doctors

Patients PK (id , doctor_id)

Hospitals

P	*	id	Hospitals
	*	name	Hospitals
	*	address	Hospitals

Hospitals PK (id)

Diagnoses

P	*	id	Diagnoses
P	*	patient_id	Diagnoses
	*	name	Diagnoses
F	*	id	Patients
F	*	doctor_id	Patients

Diagnoses PK (id, patient_id)

4. Model relacyjny

Patients

P	*	id	VARCHAR2 (40 BYTE)
	*	first_name	VARCHAR2 (40 BYTE)
	*	last_name	VARCHAR2 (40 BYTE)
	*	date_of_birth	VARCHAR2 (40 BYTE)
	*	phone	VARCHAR2 (40 BYTE)
P	*	doctor_id	VARCHAR2 (40 BYTE)
F	*	Doctors_id	VARCHAR2 (40 BYTE)
F	*	Doctors_hospital_id	VARCHAR2 (40 BYTE)

Patients_PK (id, doctor_id)

Patients_Doctors_FK (Doctors_id, Doctors_hospital

Doctors

P	*	id	VARCHAR2 (40 BYTE)
P	*	hospital_id	VARCHAR2 (40 BYTE)
	*	first_name	VARCHAR2 (40 BYTE)
	*	last_name	VARCHAR2 (40 BYTE)
	*	phone	VARCHAR2 (40 BYTE)
	*	title	VARCHAR2 (40 BYTE)
F	*	Hospitals_id	VARCHAR2 (20 BYTE)

Doctors_PK (id, hospital_id)

Doctors_Hospitals_FK (Hospitals_id)

Diagnoses

P	*	id	VARCHAR2 (20 BYTE)
P	*	patient_id	VARCHAR2 (20 BYTE)
	*	name	VARCHAR2 (20 BYTE)
F	*	Patients_id	VARCHAR2 (40 BYTE)
F	*	Patients_doctor_id	VARCHAR2 (40 BYTE)

Diagnoses_PK (id, patient_id)

Diagnoses_Patients_FK (Patients_id, Patients_doctor_id)

Hospitals

P	*	id	VARCHAR2 (20 BYTE)
	*	name	VARCHAR2 (20 BYTE)
	*	address	VARCHAR2 (20 BYTE)

Hospitals_PK (id)

Modele fizyczne

Model fizyczny (tabela Diagnoses)

```
228
  Tables [4]
    Diagnoses
      id
      patient_id
      name
      Patients_id
      Patients_doctor_id
      Primary Keys [1]
        Diagnoses_PK
          id
          patient_id
      Unique Constraints []
      Indexes []
      Foreign Keys [1]
        Diagnoses.Diagnoses_Patients_FK
```
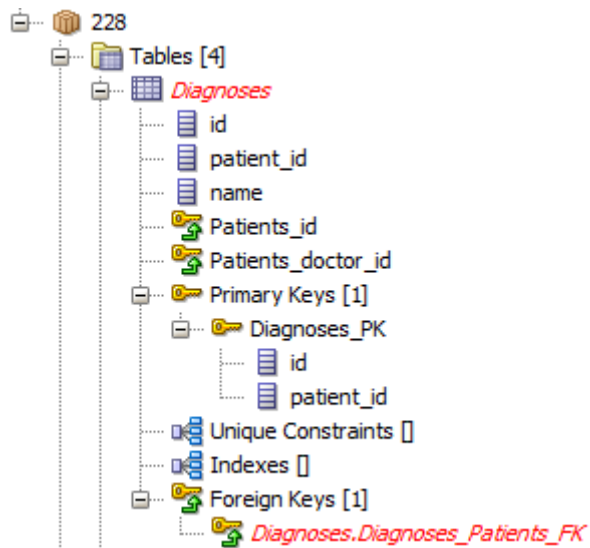
Model fizyczny (tabela Doctors)

```
Doctors
  id
  hospital_id
  first_name
  last_name
  phone
  title
  Hospitals_id
  Primary Keys [1]
    Doctors_PK
      id
      hospital_id
  Unique Constraints []
  Indexes []
  Foreign Keys [1]
    Doctors.Doctors_Hospitals_FK
```
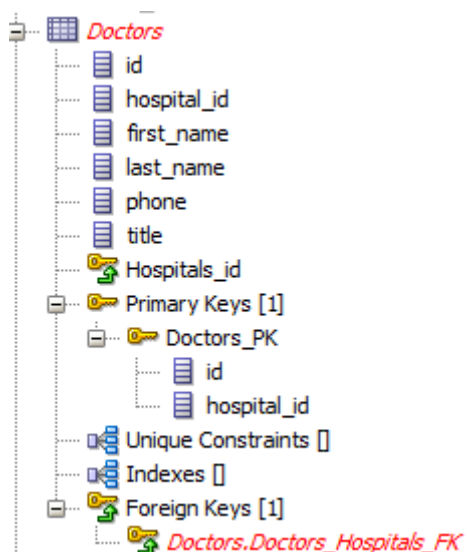
Model fizyczny (tabela Hospitals)

```
Hospitals
    id
    name
    address
    Primary Keys [1]
        Hospitals_PK
            id
    Unique Constraints []
    Indexes []
    Foreign Keys []
```
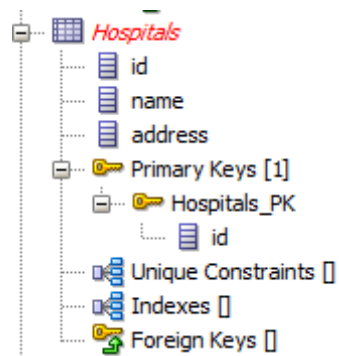
Model fizyczny (tabela Patients)

```
Patients
    id
    first_name
    last_name
    date_of_birth
    phone
    doctor_id
    Doctors_id
    Doctors_hospital_id
    Primary Keys [1]
        Patients_PK
            id
            doctor_id
    Unique Constraints []
    Indexes []
    Foreign Keys [1]
        Patients.Patients_Doctors_FK
```

Kod SQL

```sql
-- Generated by Oracle SQL Developer Data Modeler 4.1.5.907
--   at:        2017-05-17 21:58:51 MSK
--   site:      Oracle Database 11g
--   type:      Oracle Database 11g

CREATE TABLE Patients
     (
        id VARCHAR2 (40) NOT NULL,
        first_name VARCHAR2 (40) NOT NULL,
        last_name VARCHAR2 (40) NOT NULL,
        date_of_birth VARCHAR2 (40) NOT NULL,
        phone VARCHAR2 (40) NOT NULL


     )
     LOGGING;
     ALTER TABLE Patients ADD CONSTRAINT Patients_PK PRIMARY KEY (id,
doctor_id);

CREATE TABLE Doctors
     (
        id VARCHAR2 (40) NOT NULL,
        hospital_id VARCHAR2 (40) NOT NULL,
        last_name VARCHAR2 (40) NOT NULL,
        title VARCHAR2 (40) NOT NULL,
        phone VARCHAR2 (40) NOT NULL
     )
     LOGGING;
     ALTER TABLE Doctors ADD CONSTRAINT Doctors_PK PRIMARY KEY (id,
hospital_id);

CREATE TABLE Diagnoses
     (
        id VARCHAR2 (20) NOT NULL,
        patient_id VARCHAR2 (20) NOT NULL,
        name VARCHAR2 (20) NOT NULL
     )
     LOGGING;
     ALTER TABLE Diagnoses ADD CONSTRAINT Diagnoses_PK PRIMARY KEY (id,
patient_id);

CREATE TABLE Hospitals
     (
        id VARCHAR2 (20) NOT NULL,
        address VARCHAR2 (20) NOT NULL,
        name VARCHAR2 (20) NOT NULL
     )
     LOGGING;
     ALTER TABLE Hospitals ADD CONSTRAINT Hospitals_PK PRIMARY KEY (id);

ALTER TABLE Patients ADD CONSTRAINT Patients_Doctors_FK FOREIGN KEY (
Doctors_hospital_id ) REFERENCES Doctors ( doctor_id ) NOT DEFERRABLE ;

ALTER TABLE Doctors ADD CONSTRAINT Doctors_Hospitals_FK FOREIGN KEY
(Hospitals_id ) REFERENCES Hospitals ( hospital_id ) NOT DEFERRABLE ;

ALTER TABLE Diagnoses ADD CONSTRAINT Diagnoses_Patients_FK FOREIGN KEY
(Patients_doctor_id ) REFERENCES Hospitals ( doctor_id ) NOT DEFERRABLE ;
```