Sistemas de Informação e Bases de Dados
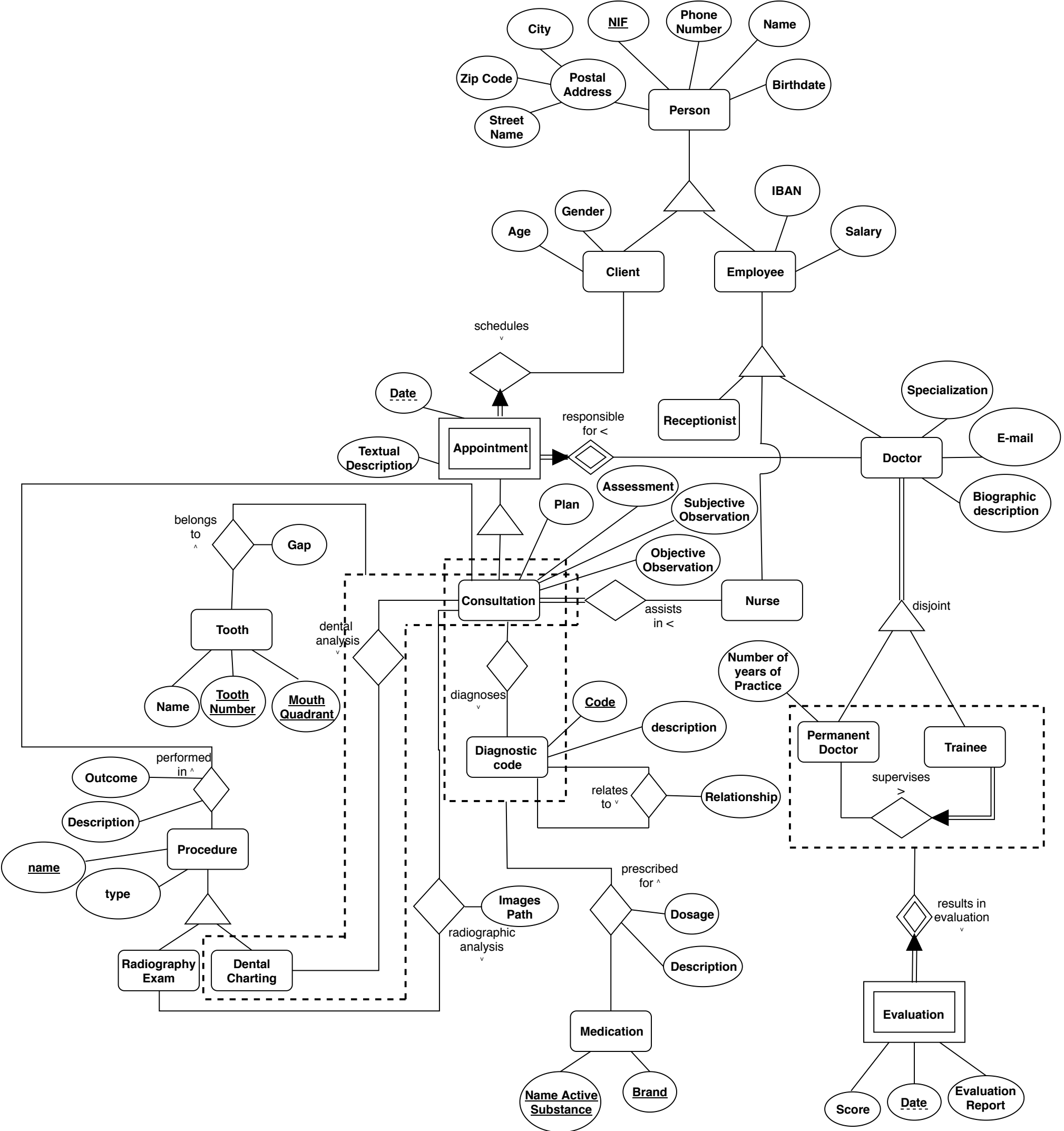
Assignment 1 - Database Modeling

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Person

- City
- NIF
- Phone Number
- Name
- Zip Code
- Postal Address
- Birthdate
- Street Name

Client
- Age
- Gender

Employee
- IBAN
- Salary

schedules ∨

Appointment
- Date
- Textual Description

responsible for <

Receptionist

Doctor
- Specialization
- E-mail
- Biographic description

belongs to ^
- Gap

Tooth
- Name
- Tooth Number
- Mouth Quadrant

dental analysis ∨

Consultation
- Plan
- Assessment
- Subjective Observation
- Objective Observation

Nurse

assists in <

diagnoses ∨

Diagnostic code
- Code
- description

relates to ∨
- Relationship

disjoint

- Number of years of Practice

Permanent Doctor

Trainee

supervises >

performed in ^
- Outcome
- Description

Procedure
- name
- type

Radiography Exam

Dental Charting

radiographic analysis ∨
- Images Path

prescribed for ^
- Dosage
- Description

Medication
- Name Active Substance
- Brand

results in evaluation ∨

Evaluation
- Score
- Date
- Evaluation Report

IC-1:Score should be a value in the range 1-5

Relationship Model

Person (<u>NIF</u>, Phone Number, Name, Birthdate, Postal Address.City, Postal Address.Zip Code, Postal Address.Street Name)

Employee (<u>NIF</u>, IBAN, salary)

    NIF: FK (Person)

Client (<u>NIF</u>, Age, Gender)

    NIF: FK (Person)

Doctor (<u>NIF</u>, Specialization, E-mail, Biographic description)

    NIF: FK (Employee)

    IC-1: NIF must appear in eitheir *Trainee* or *Permanente Doctor*, but not both

Receptionist (<u>NIF</u>)

    NIF: FK (Employee)

Nurse (<u>NIF</u>)

    NIF: FK (Employee)

Permanent Doctor (<u>NIF</u>, Number of years of practise)

    NIF: FK (Doctor)

Trainee (<u>NIF</u>, pNIF)

    NIF: FK (Doctor)

    pNIF: FK (Permanent Doctor)

Appointment (<u>Date</u>, <u>dNIF</u>, Textual Description, cNIF)

    dNIF: FK (Doctor)

    cNIF: FK (Client)

Consultation (<u>Date</u>, <u>dNIF</u>, Assessment, Plan, Objective Observation, Subjective Observation)

    Date, dNIF: FK (Appointment)

    IC-2: Every *(date, dNIF)* in *Consultation* must be in *assists in*

Procedure (type, <u>name</u>)

Diagnostic Code (<u>Code</u>, description)

Radiography Exam (<u>name</u>)

    name: FK (Procedure)

Dental Charting (<u>name</u>)

name: FK (Procedure)

Tooth (<u>Tooth number</u>, Name, <u>Mouth Quadrant</u>)

Assists in (<u>Date</u>, <u>cNif</u>, <u>nNif</u>)

      Date, cNIF: FK (Consultation)

      nNif: FK (Nurse)

Performed in (<u>name</u>, <u>Date</u>, <u>NIF</u>, Outcome, Description)

      name: FK (Procedure)

      Date, NIF: FK (Consultation)

Diagnoses (<u>Date</u>, <u>NIF</u>, <u>Code</u>)

      Date, NIF: FK (Consultation)

      Code: FK (Diagnostic code)

Medication (<u>Name Active Substance</u>, <u>Brand</u>)

Prescribed for (<u>Date</u>, <u>NIF</u>, <u>Code</u>, <u>Name Active Substance</u>, <u>Brand</u>, Dosage, Description)

      Date, NIF, Code: FK (Diagnoses)

      Name Active Substance, Brand: FK (Medication)

Relates to (<u>Code1</u>, <u>Code2</u>, Relationship)

      Code1: FK (Diagnostic code)

      Code2: FK (Diagnostic code)

Evaluation (<u>Date</u>, Evaluation Report, Score, <u>tNIF</u>)

      tNIF: FK (Trainee)

      IC-3: *Score* should be a value in range 1-5

Dental Analysis (<u>name</u>, <u>date</u>, <u>dNIF)</u>

      name: FK (Dental Charting)

      date, dNIF: FK (Consultation)

Radiographic Analysis (<u>name</u>, <u>date</u>, <u>dNIF</u>, Images Path)

      name: FK (Radiography Exam)

      date, dNIF: FK (Consultation)

Belongs to (<u>Tooth Number</u>, <u>Mouth Quadrant</u>, <u>name</u>, <u>date</u>, <u>dNIF</u>, Gap)

      Tooth Number, Mouth Quadrant: FK (Tooth)

      name, date, dNIF: FK (Dental Analysis)