

Project Assignment (Part I)

Sistemas de Informação e Base de Dados

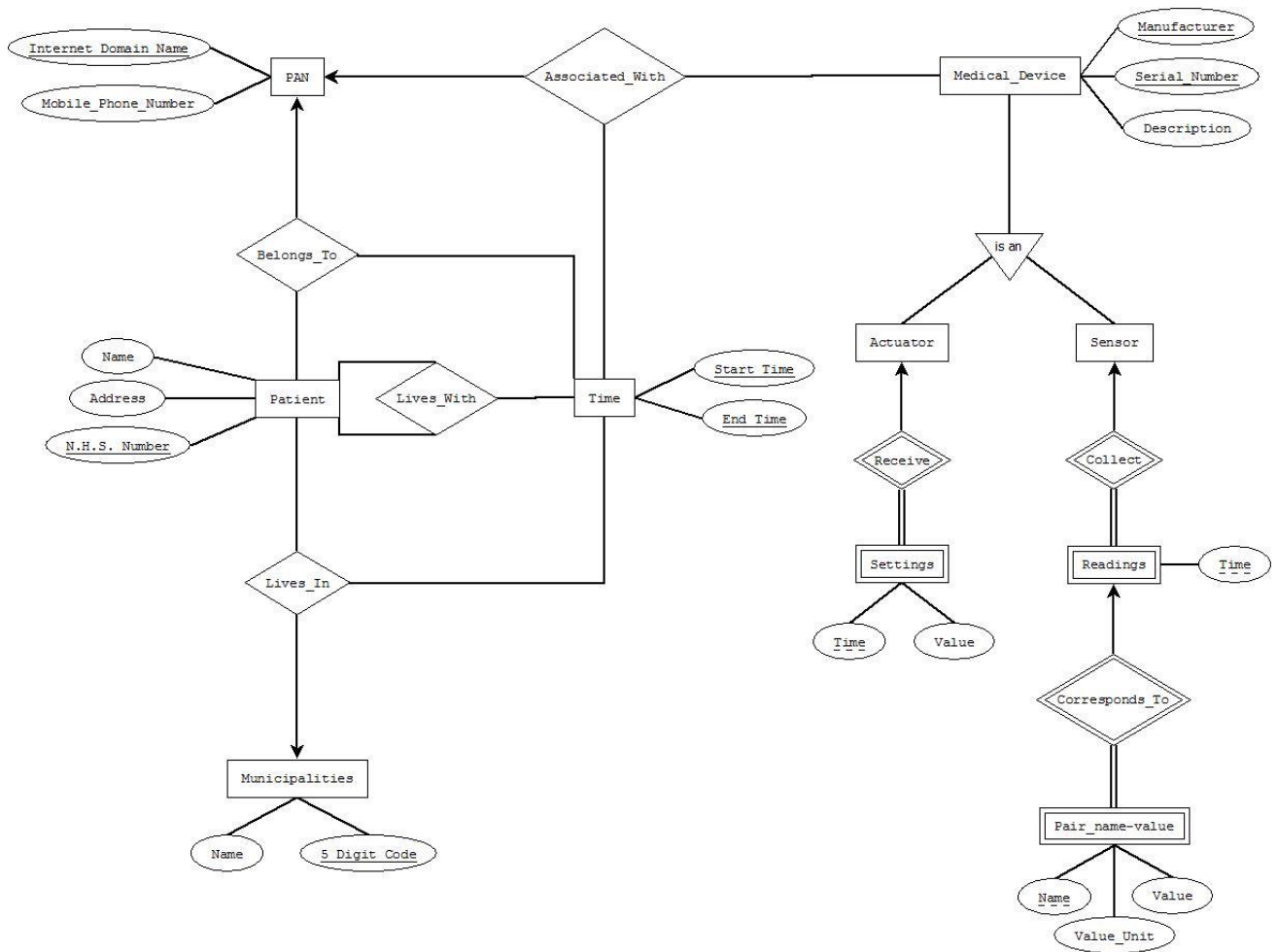
Grupo nº 59

75661 - João Salvado

75724 - Vera Pedras

76090 - Diogo Ferreira

E-R Model



Limitações do modelo E-R:

Apesar de não representado no modelo, a ligação ternária **Belongs_To** entre PAN, Patient e Time tem características específicas. Isto é, para cada Time um PAN apenas está associado a um Patient e um Patient apenas está associado a um PAN.

Relational Model

Strong Entities:

Municipalities (5_Digit_Code, Name)

Patient (N.H.S. Number, Address, Name)

PAN (Interne_Domain_Name, Mobile_Phone_Number)

Time (Start_Time, End_Time)

Medical_Device (Serial_Number, Manufacturer, Description)

Actuator (Serial_Number, Manufacturer)

Serial_Number, Manufacturer: FK (Medical_Device)

Sensor (Serial_Number, Manufacturer)

Serial_Number, Manufacturer: FK (Medical_Device)

Weak Entities:

Settings (Serial_Number, Manufacturer, Time, Value)

Serial_Number, Manufacturer: FK (Actuator)

Readings (Serial_Number, Manufacturer, Time)

Serial_Number, Manufacturer: FK (Sensor)

Pair_name-value (Serial_Number, Manufacturer, Time, Name, Value_Unit, Value)

Serial_Number, Manufacturer, Time: FK (Readings)

Relationships:

Associated_With (Internet_Domain_Name, Serial_Number, Manufacturer, Start_Time, End_Time)

Internet_Domain_Name: FK (PAN)

Serial_Number, Manufacturer: FK (Medical_Device)

Start_Time, End_Time: FK (Time)

Belongs_To (Interne_Domain_Name, N.H.S. Number, Start_Time, End_Time)

Internet_Domain_Name: FK (PAN)

N.H.S._Number: FK (Patient)

Start_Time, End_Time: FK (Time)

Lives_In (N.H.S. Number, 5 Digit Code, Start Time, End Time)

N.H.S._Number: FK (Patient)

5_Digit_Code: FK (Municipalities)

Start_Time, End_Time: FK (Time)

Lives_With (N.H.S. Number1, N.H.S. Number2, Start Time, End Time)

N.H.S._Number1: FK (Patient)

N.H.S._Number2: FK (Patient)

Start_Time, End_Time: FK (Time)