

## The Design & Implementation of a Personal Health Management (PHM) Database Application

1. Names and unity ids of team members:

Sr. No.	Name	Unity ID
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2. List of Entity and Relationship Types

➤ Entities:

Patient will have ISA to Well and Sick.

**Person:** (SSN, Name, Address, Dobirth, Gender)

**Sick:** (SSN, NoOfDisease)

**Well:** (SSN)

**Doctor:** (DoctorID, dname)

**Health Supporter** (SSN, H\_SSN, Hname, h\_special) .....(weak entity)

--Health supporter will be dependent on Well/Sick patient and here H\_SSN is foreign key from SSN of Person entity and Hname is name of health supporter and h\_special will be attribute of specialization of particular HS e.g. Physiologist, Ophthalmologist, General etc. Type will record primary/Secondary Health supporter roles.

**Health Observations** (SSN, ObsID, Height, Weight, BP) .....(weak entity)

--Health Observation will be dependent on Well/Sick and ObsID will be locally unique identifier for each observation. Health Observation can be general or disease specific so we have ISA to following diseases.

Sub entities of Health Observations:

**HIV:** (SSN, ObsID, HIVtype, Temperature)

**Cancer:** (SSN, ObsID, stage, ctype, NoOfTumours)

**COPD:** (SSN, ObsID, ...) ...disease specific

**TB:** (..) ...disease specific

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➤ Relationships:

**BINARY relations ->**

AssociatedWithW: (SSN, DOA, type, H\_SSN, Hname) ....relation between Well and Health supporter

AssociatedWithS: (SSN, DOA, type, H\_SSN, Hname) ....relation between Sick and Health supporter

WRecords: (SSN, WDate, ObsID, Height, Weight, BP) ....relation between Well and Health Observations

SRecords: (SSN, SDate, ObsID, Height, Weight, BP) ....relation between Sick and Health Observations

**TERNARY Relations ->**

There will recommends relation for every disease, Doctor and Health Supporter entities.

**Recommends** for HIV: (DoctorID, dname, H\_SSN, Hname, Date of Reco, comment, SSN, ObsID, HIVtype, temperature)

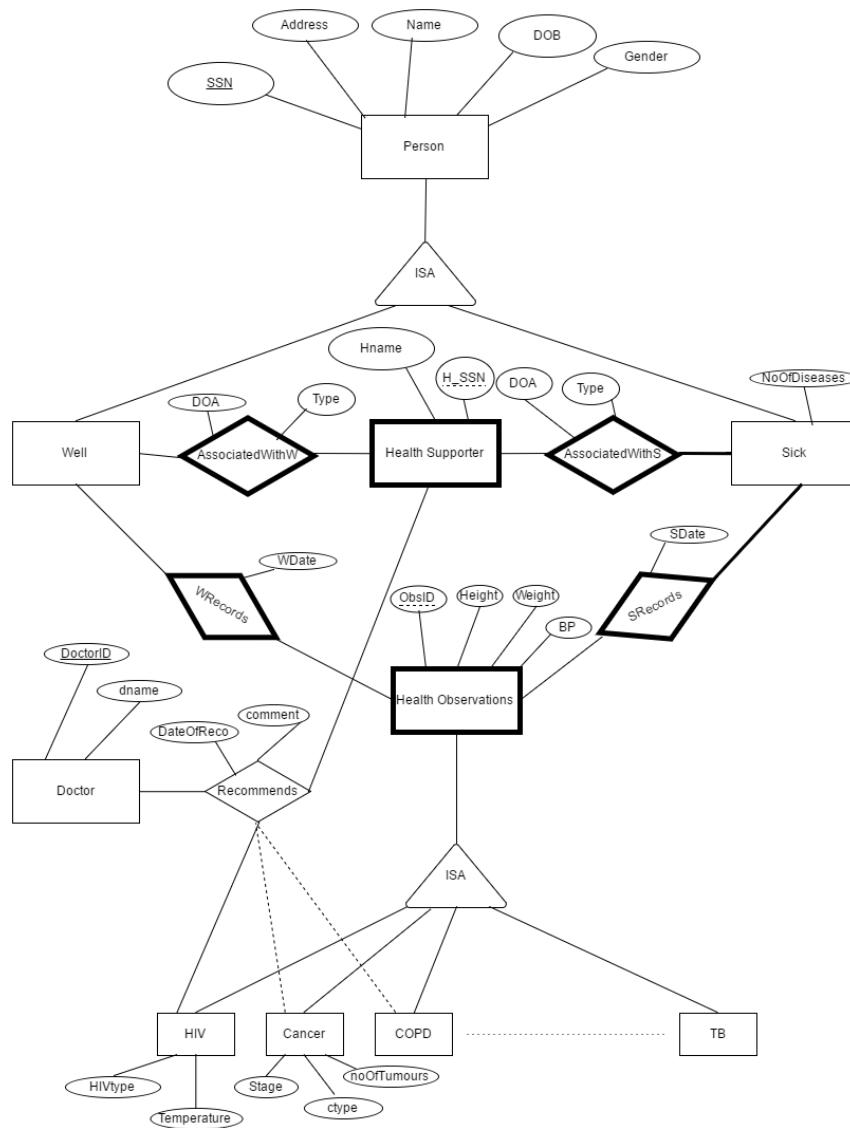
**Recommends** for Cancer: (DoctorID, dname, H\_SSN, Hname, Date of Reco, comment, SSN, ObsID, stage, ctype, NoOfTumours)

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For every disease.

➤ **ER Diagram :**



3. A statement acknowledgment: We have asked questions to clarify ambiguities if any in description.
4. Appendix:
  - SSN: Social Security Number
  - H\_SSN: SSN of health supporter
  - Type: Role of Health supporter