# Virtual declarations

- Virtual EMR declaration:
  - Import virtual EMR declaration
- Variables:
  - v\_cough\_list is a variable of type List (a container)
  - v\_cough is a variable of type Observation
  - v\_acei\_list is variable of type List (a container)
  - v\_acei is a variable of type Medication

## Virtual EMR

- Has these classes:
  - PatientData
    - Observation
    - Medications
- Observation has at least these attributes:
  - Concept code (DSG001 and subconcepts)
  - Start time and end time
- Medication has at least these attributes:
  - Concept code (DSG002 and subconcepts)
  - Start time and end time
  - Dose
  - Frequency
  - Route

# Virtual Vocabulary

- Has following concepts
  - Cough (DSG007) is -a Observation (DSG001)
  - ACE Inhibitor (DSG008) is -a Medication (DSG002)

# Virtual Queries

- v\_cough\_list= select last obs from obs in vEMR.Observation where obs.Concept\_Code = 'DSG007' and obs.EndTime = null sort by obs.StartTime;
- v\_acei\_list = select last ace from ace in vEMR.Medication where ace.Concept\_Code = 'DSG008' sort by ace.StartTime;

## Virtual Expression Language

- v\_cough = v\_cough\_list.first();
- v\_acei = v\_acei\_list.first();
- (v\_cough.StartTime v\_acei.StartTime) < 4 weeks

