

- 1) All amoxicillin medications that were given orally with a dose > 200 mg.

```
amoxy_list = select med from med in vEMR.Medication where  
(med.Concept.concept_code = 'C0002645' and med.Concept.vocabulary_code =  
'UMLS' and med.route_code = 'mouth/throat' and med.dose_quantity.pq_value >  
200 and med.dose_quantity.unit = 'mg');
```

Virtual Vocabulary

- Has following concepts

Cough is an instance of Concept that has the following attribute values:

concept_code = C0002645

vocabulary_code = UMLS

HDL_Cholesterol is an instance of Concept that has the following attribute values:

concept_code = C0023822

vocabulary_code = UMLS

Virtual EMR

- Has these classes:
 - PatientData
 - Observation
 - Medications
- Observation has at least these attributes:
 - Concept (a complex object that has at least two attributes: concept_code and vocabulary_code)
 - Start time and end time
- Medication has at least these attributes:
 - Concept code (DSG002 and subconcepts)
 - Start time and end time startTime, endTime)
 - Dose (dose_quantity is a complex object that has at least the following two attributes: pq_value and unit)
 - Frequency
 - Route (route_code)

- 2) The last HDL_Cholesterol value that was taken no more than 12 hours ago.

```
HDL_cholesterol_List = select last obs from obs in vEMR.Observation where  
(obs.Concept.concept_code = 'C0023822' and obs.Concept.vocabulary_code =  
'UMLS' and obs.endTime < (now-12 hours) ) sort by obs.endTime;
```

```
HDL_cholesterol = HDL_cholesterol_List.first();
```