3. Examples Using Concepts

You can try the caDSR APIs to search for caDSR data by entering a URL in the address bar of a browser and passing parameters in that URL. This page provides examples to get you started.

A URL in caDSR II format returns **HTML**, **XML**, or **JSON**. Using the API, you can allow an application to connect to caDSR and search the database. The [c aDSR II Domain Class Browser](#) page is a web browser interface that allows you to test the caDSR II API.

You can display any of these formats (HTML, XML, or JSON) in an Internet browser by changing the parameter (*GetHTML*, *GetXML*, or *GetJSON*).

> ⓘ **Multiple AND IN Note**
>
> You cannot enter multiple `"and"` or `"in"` values for search criteria when using the REST (XML-HTTP) API.

If you have trouble using any URL on this page in your Internet browser, copy and paste it into a Google Chrome browser before contacting Application Support (NCIAppSupport@mail.nih.gov).

This page includes the following topics.

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About Concepts

The meaning of content in the caDSR Repository is based on linkages to concept from curated concept systems. Mostly, NCI prefers the use of the NCI Thesaurus (NCIt) for these annotations due to the breadth of concepts in NCIt, the ability to get new concepts added to meet the needs of NCI clinical trials.

Concepts can be linked directly to the following types of Administered Items:

- Property
- Object Class
- Value Meaning
- Value Domain

These items are used in the construction of CDEs based on the ISO/IEC 11179 Metamodel for data specification. The structure of these linkages are as follows:

- A Data Element is composed of a Data Element Concept (DEC) and a Value Domain (VD).
- A DEC is composed of an Object Class and a Property.
- A VD can be enumerated or enumerated. When enumerated it is composed of one or more sets/pairs of Permissible Values (PV) and Value Meanings (VM).

Since Concept linkages can be found in the Property, Object Class, or Value Meanings, it is possible to retrieve all caDSR content based on Concept information, most typically one of the following:

- The concept unique identifier, which is stored in the **Concept Preferred Name**, or
- The Concept Name, stored in the **Concept Long Name**.

To find any content in caDSR based on a related concept, it is necessary to find the concept of interest and navigate the path to all its related caDSR items.

- Concept>>getComponentConceptCollection>>where PrimaryFlag = Yes>> getConceptDerivationRule >> Once the ConceptDerivationRule has been retrieved, you can get the ObjectClassCollection, PropertyCollection, ValueMeaningCollection. There could be more than one of any of these collections.

NOTE: A deeper level query could query to find the caDSR item related to the directly annotated item. For example from a Value Meaning it is possible to find out what Value Domains the VM is included and then retrieve all the Data Elements that use the VD. Refer to [1. Examples for Data Elements](#).