

Toolkit for Integration of SNOMED CT® (CSNOtk) – Release Note

About CSNOtk

C-DAC's Toolkit for SNOMED CT (CSNOtk) is a specially designed toolkit for easy access and integration of SNOMED CT in health care applications. CSNOtk provides a simple use suite of tools for SNOMED CT database integration, term/state/semantic tag-based search as well as ready-to-use jQuery-based custom control for SNOMED CT UI enablement. This toolkit enables clinicians and researchers to find out relevant SNOMED CT codes with their synonyms, fully specified names, and different types of relationships between concepts. The salient features of the CSNOtk include:

- Easy to use Object-Oriented API for search, suggest, lookup, and explore
- Simple map and SNOMED CT to ICD-10 Mapping API
- Facility to access Drug Information Service Bundle (DISB) APIs
- Facility for import and search from the reference sets
- Support for national extension(s)
- Easy to use embed jQuery based custom controls
- Apache Lucene engine based full-text search
- Ready to use SNOMED CT web service
- Automates database and Lucene index creation from the SNOMED CT release files
- Feature-rich SNOMED CT browser
- Easy to setup components using the installer package

The developed CSNOtk can help *Original Equipment Manufacturers (OEM)* involved in the manufacturing of medical and pro-medical devices, *Independent Software Vendors (ISV)* building applications used in medical and healthcare domains, and *Software Vendors* that make applications or systems that require supporting medical informatics and IT standards. *Health Informatics Professional* studying or doing research in the area of medical data capture, storage, transmission, visualization, etc. will also need the CSNOtk to interact with medical systems. Moreover, due to the online search service and the CSNOtk, *Doctors, and Clinicians* will find it easy to use SNOMED CT in their practice.

What's new in CSNOtk v7.0

Release Date: July 16, 2021

- Upgraded to support to Apache Lucene v8.7.0
- Supports the Concrete Domains (an enhancement to SNOMED CT's logic features providing flexibility to express numeric values) for July 2021 onwards international and national releases with the backward support to older versions of SNOMED CT release packages.
- Search API enhanced to support exclusion parameter for parent concept and all its decedents
- CSNOFinder enhanced to support filtering inactive terms

- Other bugs & improvements

Bug & Improvements Fixes

- CSNOLib: Upgrade lucene version 4.7.1 to 8.7.0
- CSNOLib: Add support for the concrete-domain relationship
- CSNOLib: Create an index for relationship type instead of maintaining Enums
- CSNOLib: ICDMap API throws NPE if IndexReader got close runtime
- CSNOLib: Change *getConcept()* code for relationshiptype
- CSNOServ: Query Parse Error on All Concepts by attribute URL click
- CSNOCtrl: Remove refset ID from Language dropdown of CSNOCtrl Demonstration page
- CSNOFinder: Correct list and count of members present in the refset imported
- CSNOFinder: Inferred relationship not displayed correctly for the clinical drug after concrete domain changes

Configuration Notes

- To import national extension, first import SNOMED CT International release files to create the database as extensions have a dependency upon international release.
- A fresh installation of SNOMED CT database, Lucene index creation, CSNOLib, and other required components for using the latest released version. Follow README provided for each component.

Availability

The CSNOtk is available as a downloadable package from C-DAC's Portal (<http://www.cdac.in>) under Apache License v2.0 as free and open-source software.

Users are advised to obtain a suitable license to use SNOMED CT codes in their software and work from National Resource Centre for EHR Standards (NRCeS), India for development & deployment within India. Information is available at <https://www.nrces.in/standards/snomed-ct>. In any other use case please refer to Affiliate Licensing related information at <http://www.snomed.org/snomed-ct/get-snomed-ct>

For any information regarding CSNOtk, please write to C-DAC at sdk-eng@cdac.in