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 healthcare applications. CSNOtk provides a simple use suite of tools for SNOMED CT database integration, term/state/semantic tag-based search, and 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 synonyms, fully specified names, and different types of relationship 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 professionals* 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 v7.5

Release Date: November 30, 2022

- Optimization of Lucene index creation time for SNOMED CT international edition file
- Introduced a Validate API to validate the identifier
- Included preferred term data in parent and children API's JSON object
- Other bugs & improvements

Bug & Improvements Fixes

- CSNOLib: Migration of log4j version from 2.16 to 2.17
- CSNOLib: New *validate* API to validate the identifier
- CSNOLib: Handled null pointer exception while indexing SNOMED CT to ICD 10

Mapping

- CSNOLib: Return limit restriction on semantic tag index
- CSNOLib: Included preferred term data in parent and children API's JSON object
- CSNOLib: All descendant API shows the wrong descendent count after optimizing the index creation
- CSNOLib: Improved the regular expression ".*der2_cRefset_(.*)" vulnerable to polynomial runtime due to backtracking
- CSNOServ: Improvements in CSS files
- CSNOServ: Updated Readme.txt file
- CSNOCtrl: Updated *csnoctrl* files for removing syntax error
- CSNOFinder: Duplicate concepts are shown in the *children's* section

Configuration Notes

- To import national extensions, first import SNOMED CT International release files to create the database as extensions have a dependency upon international release.
- A fresh installation of the 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 a free and open-source software downloadable package from C-DAC's Portal (http://www.cdac.in) under Apache License v2.0.

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

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