

5.2.20 Ordered Reference Set

Deprecation Notice

The Ordered Reference Set pattern is now deprecated as it has been replaced with two reference set types each of which is specific to one of the two distinct use cases supported by the Ordered Reference set pattern.

The recommended Reference sets to address the purposes identified below are now:

- [5.2.2 Ordered Component Reference Set](#)
 - This allows an ordered or prioritized list of components to be represented.
 - It omits the **linkedTold** field in the pattern shown below as this is not required to address this use case.
- [5.2.6 Ordered Association Reference Set](#)
 - This enables representation of alternative navigation hierarchies (in which child concepts are ordered) and also also supports representation of groups of ordered components.
 - The **linkedTold** field in the pattern shown below is replaced by the `targetComponentId` (this name is used to align with the [5.2.5 Association Reference Set](#) (used from unordered associations).

Deprecation does not prevent continued use of an existing reference set pattern. However it does indicate that a different solution is now specified and recommended to meet the requirements for this pattern

Purpose

An [447258008 |Ordered type reference set](#) allows a collection of [components](#) to be defined with a specified given a priority ordering. This type of [reference set](#) can also be used to specify ordered associations between different [components](#). These can be used to specify several interrelated subsets of components and to define alternative hierarchies for navigation and selection of [concepts](#) or [descriptions](#).

Data structure

An [Ordered reference set](#) is an [Integer Component reference set](#) is used to represent ordered lists and alternative hierarchies. Its structure is shown in the following table.

Table 5.2.20-4: Ordered reference set - Data structure

| Field | Data type | Purpose |
|------------------------------------|-----------|--|
| <code>id</code> | UUID | A 128 bit unsigned Integer , uniquely identifying this reference set member . Different versions of a reference set member share the same <code>id</code> but have different effectiveTime . This allows a reference set member to be modified or made active (i.e. removed from the active set) at a specified time. |
| <code>effectiveTime</code> | Time | The inclusive date or time at which this version of the identified reference set member became the current version. The current version of this reference set member at time <i>T</i> is the version with the most recent effectiveTime prior to or equal to time <i>T</i> . |
| <code>active</code> | Boolean | The state of the identified reference set member as at the specified effectiveTime . If <code>active</code> = 1 (true) the reference set member is part of the current version of the set, if <code>active</code> = 0 (false) the reference set member is not part of the current version of the set. |
| <code>moduleId</code> | SCTID | Identifies the SNOMED CT module that contains this reference set member as at the specified effectiveTime . The value must be a subtype of 900000000000443000 Module (core metadata concept) within the metadata hierarchy . |
| <code>refsetId</code> | SCTID | Identifies the reference set to which this reference set member belongs. In this case, set to a subtype of 447258008 Ordered type reference set |
| <code>referencedComponentId</code> | SCTID | The identifier of a SNOMED CT component that is included in the ordered list of alternative hierarchy. |

| | | |
|------------|---------|---|
| order | Integer | <p>Specifies the sort order of the list. The list is ordered by applying an ascending sort of the order value.</p> <p>The value of order =1 represents the highest priority. A value of '0' is not allowed. Duplicate values are permitted and the sort order between two members with the same order value is not defined.</p> <p>If the linkedTold value is not 0, sorting occurs within subgroups that share the same linkedTold.</p> <p>Note: The name "order" is a reserved word in some database environments. Please consider this when using this column.</p> |
| linkedTold | SCTID | <p>The identifier of a SNOMED CT component that acts as a grouper or hierarchy node, collecting together a subgroup from within the list.</p> <p>This field either enables reference set member linked into a number of subgroups. These subgroups can be nested allowing representation of alternative hierarchies.</p> <p>To link members into a subgroup, all components in the same subgroup should reference the same component. This can either be a component that represents the name of that subgroup or the first member of the subgroup. In the latter case, the first row of each subgroup will contain the same identifier in referencedComponentId and linkedTold and with order =1.</p> <p>To link a number of children concepts to a single parent concept, one member record should exist per child, with the referencedComponentId field referencing the parent and this field referencing the child concept. The order field is then used to order the children concepts under the parent concept.</p> <p>For ordered lists that do not require grouping or hierarchical arrangement the value of linkedTold should be the digit zero (0).</p> |

Metadata

The following metadata in the "Foundation metadata **concept**" hierarchy supports this **reference set**

Table 5.2.20-4: Ordered References Sets in the Metadata Hierarchy

| Field | Data type | Purpose | Mutable | Part of Primary Key |
|-----------------------|-----------|--|---------|------------------------------------|
| id | UID | <p>A 128 bit unsigned Integer, uniquely identifying this reference set member.</p> <p>Different versions of a reference set member share the same id but have different effectiveTime. This allows a reference set member to be modified or made inactive (i.e. removed from the active set) at a specified time.</p> | NO | YES (Full /Snaps hot) |
| effectiveTime | Time | <p>The inclusive date or time at which this version of the identified reference set member became the current version.</p> <p>Note: In distribution files the effectiveTime should follow the short ISO date format (<i>YYYYMMDD</i>) and should not include the hours, minutes, seconds or timezone indicator.</p> <p>The current version of this reference set member at time <i>T</i> is the version with the most recent effectiveTime prior to or equal to time <i>T</i>.</p> | YES | YES (Full) Optional (Snaps hot) |
| active | Boolean | <p>The state of the identified reference set member as at the specified effectiveTime .</p> <p>If active = 1 (true) the reference set member is part of the current version of the set, if active = 0 (false) the reference set member is not part of the current version of the set.</p> | YES | NO |
| moduleId | SCTID | <p>Identifies the SNOMED CT module that contains this reference set member as at the specified effectiveTime .</p> <p>The value must be a subtype of 900000000000443000 Module (core metadata concept) within the metadata hierarchy.</p> | YES | NO |
| refsetId | SCTID | <p>Identifies the reference set to which this reference set member belongs.</p> <p>In this case, a subtype descendant of: 447258008 Ordered type reference set </p> | NO | NO |
| referencedComponentId | SCTID | <p>A reference to the SNOMED CT component to be included in the reference set. The component that is placed in order by this reference set row.</p> | NO | NO |
| order | Integer | <p>Specifies the sort order of the list. The list is ordered by applying an ascending sort of the order value.</p> <p>The value of order =1 represents the highest priority. A value of '0' is not allowed. Duplicate values are permitted and the sort order between two members with the same order value is not defined.</p> <p>If the linkedTold value is not 0, sorting occurs within subgroups that share the same linkedTold.</p> <p>Note: The name "order" is a reserved word in some database environments. Please consider this when using this column.</p> | YES | NO |

| | | | | |
|------------|-----|---|----|----|
| linkedTold | SC | <p>The identifier of a SNOMED CT component that acts as a grouper or hierarchy node, collecting together a subgroup from within the list.</p> <p>This field either enables reference set member linked into a number of subgroups. These subgroups can be nested allowing representation of alternative hierarchies.</p> <p>To link members into a subgroup, all components in the same subgroup should reference the same component. This can either be a component that represents the name of that subgroup or the first member of the subgroup. In the latter case, the first row of each subgroup will contain the same identifier in referencedComponentId and linkedTold and with order =1.</p> <p>To link a number of children concepts to a single parent concept, one member record should exist per child, with the referencedComponentId field referencing the parent and this field referencing the child concept. The order field is then used to order the children concepts under the parent concept.</p> <p>For ordered lists that do not require grouping or hierarchical arrangement the value of linkedTold should be the digit zero (0).</p> | Y | NO |
| | TID | | ES | |
| | | | | |
| | | | | |

- 900000000000454005 |[Foundation metadata concept](#)
 - 900000000000455006 |[Reference set](#)
 - 447258008 |[Ordered type reference set](#)

Reference Set Descriptor and Example Data

Notes on the tables used to show descriptors and examples

The reference set example tables on this page have been revised as follows to aid clarity and understanding:

- The first four columns which are present in all release files are not shown. The omitted columns ([id](#), [effectiveTime](#), [active](#), [moduleId](#)) are used in the same way in all referenced sets to support identification, versioning and packaging. They do not directly affect the specific features of a particular reference set or reference set type.
- Reference set columns that contain SNOMED CT identifiers are expanded to show details of the concept or description referenced by that identifier. In some cases, the term is shown in the same column using the expression syntax, in other cases an additional column with a name suffix '_term' has been added. In the standard reference set files only the identifier is present in the column and there is no added column for the term. When using reference sets, the term and other details of the component are looked up from the relevant component release files.

Descriptor Template

The tables below show the descriptor that defines the structure of the [447258008 |Ordered type reference set|pattern](#) and an example of descriptor for a [reference set](#) that follows this pattern.

Table 5.2.20-4: Refset Descriptor rows for Ordered Reference Set

| refsetId | referencedComponentId | attributeDescription | attributeType | attributeOrder |
|---|--|--|---|----------------|
| 900000000000456007 Reference set descriptor | 447258008 Ordered type reference set | 449608002 Referenced component | 900000000000460005 Component type | 0 |
| 900000000000456007 Reference set descriptor | 447258008 Ordered type reference set | 447255006 Priority order reference set attribute | 900000000000478000 Unsigned integer | 1 |
| 900000000000456007 Reference set descriptor | 447258008 Ordered type reference set | 447257003 "Linked to" reference set attribute | 900000000000460005 Component type | 2 |

Example Data

Table 5.2.20-4: Sample Content for an Ordered Reference Set

| refsetId | referencedComponentId (Referenced component) | order (Attribute order) | linkedTo ("Linked to" reference set attribute) |
|--|--|-------------------------|---|
| 447570008 SNOMED CT top level navigation hierarchy ordered reference set | 64572001 Disease | 1 | 123946008 Disorder by body site |
| 447570008 SNOMED CT top level navigation hierarchy ordered reference set | 64572001 Disease | 2 | 370117001 Disorder of system |

| | | | |
|---|-------------------|----|--|
| 447570008 SNOMED CT top level navigation hierarchy ordered reference set | 64572001 Disease | 3 | 278919001 Communication disorder |
| 447570008 SNOMED CT top level navigation hierarchy ordered reference set | 64572001 Disease | 4 | 74732009 Mental disorder |
| 447570008 SNOMED CT top level navigation hierarchy ordered reference set | 64572001 Disease | 5 | 39898005 Sleep disorder |
| 447570008 SNOMED CT top level navigation hierarchy ordered reference set | 64572001 Disease | 6 | 370118006 Disorder of pregnancy / labor / delivery / puerperium |
| 447570008 SNOMED CT top level navigation hierarchy ordered reference set | 64572001 Disease | 7 | 370119003 Fetal / neonatal / perinatal disorder |
| 447570008 SNOMED CT top level navigation hierarchy ordered reference set | 64572001 Disease | 8 | 370120009 Endocrine / nutritional / metabolic disorder |
| 447570008 SNOMED CT top level navigation hierarchy ordered reference set | 64572001 Disease | 9 | 370121008 Disorder of blood / lymphatics / immune system |
| 447570008 SNOMED CT top level navigation hierarchy ordered reference set | 64572001 Disease | 10 | 281867008 Multisystem disorder |