

3.2.1.4. Order Items for Search and Data Entry

The criteria for a successful implementation of SNOMED CT includes the customization of SNOMED CT to meet user needs. The order in which SNOMED CT components are displayed is often important for data entry and searching. This topic is further explored in the [SNOMED CT Search and Data Entry Guide](#). In general, rational ordering of selectable items depends on the nature of the application and its operating environment. The table below shows examples of ordering data entry items and search results rationally.

Table 3.2.1.4-1: Examples of rational ordering

Approach	Description	Example Uses	Reference Set
Sequential ordering	Annotating each subset member with an integer, which specify the consecutive order of the members. Two subset members do not have the same number assigned to them.	Displaying descriptions sequentially according to their specified order.	Ordered component reference set
Prioritization	Annotating each subset member with a an integer, which specify a priority order. Two or more subset members may have the same number assigned to them.	<div>Showing concepts with a high priority before their siblings using hierarchical display results.</div> <ul style="list-style-type: none">• Display search results in priority order<ul style="list-style-type: none">◦ Results with same rank ordered by shortest or closest match• Displaying a rank indicator in search result list <div>Initially listing concepts and associated descriptions with a priority above a specified threshold and requiring additional steps to access those assigned a lower priority.</div> <ul style="list-style-type: none">• Initial search is conducted on components with highest priority• Allow search to be extended to lower priorities<ul style="list-style-type: none">◦ If no high priority matches◦ If user requests more matches	Ordered component reference set

Sequential Ordering

Displaying items for data entry in a rational way typically involves organizing the values in a selection list in an order that is logical for the end users. As illustrated in the figure below, an [ordered reference set](#) can be used to specify the order in which SNOMED CT components should be displayed.

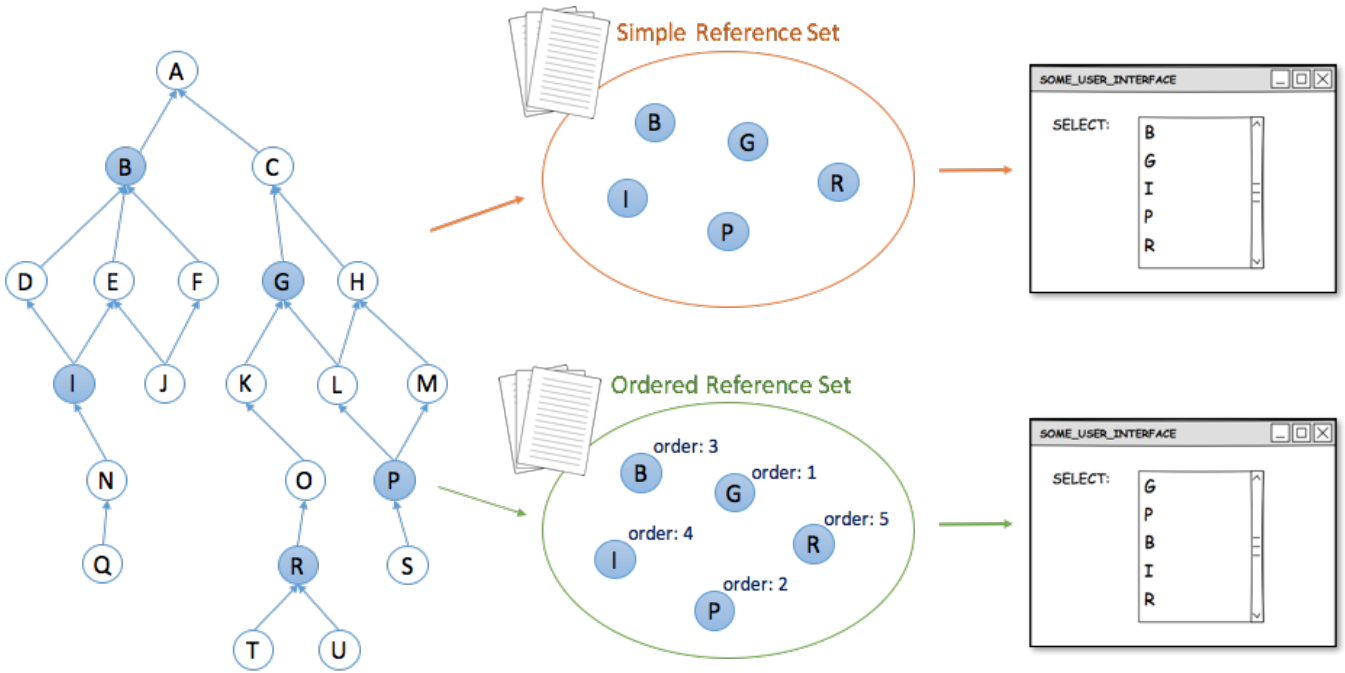


Figure 3.2.1.4-1: Example of how an ordered reference set can be used to order items in a drop down list

Examples of presenting concepts (or descriptions) in an order that is rational or helpful for a particular purpose include:

- Displaying numbered body parts, such as fingers, cranial nerves or vertebrae, in numeric order
- Displaying ordinal values, such as frequencies, severities or stages, from lowest to highest

The table below shows how the order of cranial nerves can be specified in an [ordered component reference set](#). The **order** attribute is used to indicate the sequential order of each subset member.

refsetId	referencedComponentId	order
609999999102 Cranial nerve simple reference set	11522000 Olfactory nerve structure (body structure)	1
609999999102 Cranial nerve simple reference set	18234004 Optic nerve structure (body structure)	2
609999999102 Cranial nerve simple reference set	56193007 Oculomotor nerve structure (body structure)	3
609999999102 Cranial nerve simple reference set	39322007 Trochlear nerve structure (body structure)	4
609999999102 Cranial nerve simple reference set	80622005 Abducens nerve structure (body structure)	5
609999999102 Cranial nerve simple reference set	27612005 Trigeminal nerve structure (body structure)	6
609999999102 Cranial nerve simple reference set	56052001 Facial nerve structure (body structure)	7
609999999102 Cranial nerve simple reference set	8598002 Vestibulocochlear nerve structure (body structure)	8
609999999102 Cranial nerve simple reference set	21161002 Glossopharyngeal nerve structure (body structure)	9
609999999102 Cranial nerve simple reference set	88882009 Vagus nerve structure (body structure)	10
609999999102 Cranial nerve simple reference set	15119000 Accessory nerve structure (body structure)	11
609999999102 Cranial nerve simple reference set	37899009 Hypoglossal nerve structure (body structure)	If there is a need to specify a customized hierarchical structure to support navigation, this can be achieved by specifying an alternative hierarchical view using an ordered association reference set .

Prioritization

Some situations may require a set of subset members to be grouped. For example, a set of concepts may need to be grouped based on how frequently they are used within a particular specialty, department or data entry scenario. In this case, an [ordered association reference set](#) may be used for prioritization, instead of a purely sequential ordering of each member. Prioritization is similar to sequential ordering, but also supports assigning the same rank to multiple components. A common use of prioritization is to support rational ordering of concepts or descriptions for display of data entry items and search results. More advanced uses may also be required, for example where the priority order is used to trigger certain decision support features or data entry options.

referencedComponentId	order
1225002 radiography of humerus	1
1597004 skeletal X-ray of ankle and foot	2
168594001 clavicle X-ray	2
168619004 plain X-ray head of humerus	2
168620005 plain X-ray shaft of humerus	2
168623007 X-ray shaft of radius/ulna	2
168637003 plain X-ray radius	2
168655007 instability views carpus	2
168663008 plain X-ray head of femur	2
168664002 femoral neck X-ray	2
168665001 plain X-ray shaft of femur	2
168669007 patella X-ray	2
241063007 bicipital groove X-ray	2
241066004 ulna groove X-ray	2
241069006 ulna X-ray	1
241071006 scaphoid X-ray	1
241073009 metacarpal X-ray	1
241075002 femur X-ray	1
241076001 tibia and/or fibula X-ray	2
241077005 tibia X-ray	1
241078000 fibula X-ray	1
241079008 metatarsal X-ray	1
241080006 tarsus X-ray	1
268427003 X-ray shaft of tibia/fibula	2
271311001 carpal bones X-ray	2
302402006 radius and/or ulna X-ray	2
37815002 diagnostic radiography of calcaneus	2
40348008 skeletal X-ray of pelvis and hip	2
418687005 fluoroscopy of humerus	2
427961005 x-ray of acetabulum	2
205115004 radiologic examination of femur, anteroposterior and lateral views	2
432552002 computed tomography of clavicle	2
48966008 skeletal X-ray of shoulder and upper limb	2
5433008 skeletal X-ray of lower limb	1
70780000 skeletal X-ray of elbow and forearm	2
72872009 skeletal X-ray of upper limb	1
79082005 diagnostic radiography of fibula, combined AP and lateral	2
82420003 radiologic examination of forearm, anteroposterior and lateral views	2

1) Display most frequently used options first



2) Expand list to show all options



1225002 radiography of humerus
241069006 ulna X-ray
241071006 scaphoid X-ray
241073009 metacarpal X-ray
241075002 femur X-ray
241077005 tibia X-ray
241078000 fibula X-ray
241079008 metatarsal X-ray
241080006 tarsus X-ray
5433008 skeletal X-ray of lower limb
72872009 skeletal X-ray of upper limb

1597004 skeletal X-ray of ankle and foot
168594001 clavicle X-ray
168619004 plain X-ray head of humerus
168620005 plain X-ray shaft of humerus
168623007 X-ray shaft of radius/ulna
168637003 plain X-ray radius
168655007 instability views carpus
168663008 plain X-ray head of femur
168664002 femoral neck X-ray
168665001 plain X-ray shaft of femur
168669007 patella X-ray
241063007 bicipital groove X-ray
241066004 ulna groove X-ray
241076001 tibia and/or fibula X-ray
268427003 X-ray shaft of tibia/fibula
271311001 carpal bones X-ray
302402006 radius and/or ulna X-ray
37815002 diagnostic radiography of calcaneus
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427961005 x-ray of acetabulum
205115004 radiologic examination of femur, anteroposterior and lateral views
432552002 computed tomography of clavicle
48966008 skeletal X-ray of shoulder and upper limb
70780000 skeletal X-ray of elbow and forearm
79082005 diagnostic radiography of fibula, combined AP and lateral
82420003 radiologic examination of forearm, anteroposterior and lateral views

Figure 3.2.1.4-2: Using a priority order to display data entry options