

# 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.	<a href="#">Ordered component reference set</a>
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"><li>Display search results in priority order<ul style="list-style-type: none"><li>Results with same rank ordered by shortest or closest match</li></ul></li><li>Displaying a rank indicator in search result list</li></ul> <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"><li>Initial search is conducted on components with highest priority</li><li>Allow search to be extended to lower priorities<ul style="list-style-type: none"><li>If no high priority matches</li><li>If user requests more matches</li></ul></li></ul>	<a href="#">Ordered component reference set</a>

## 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.

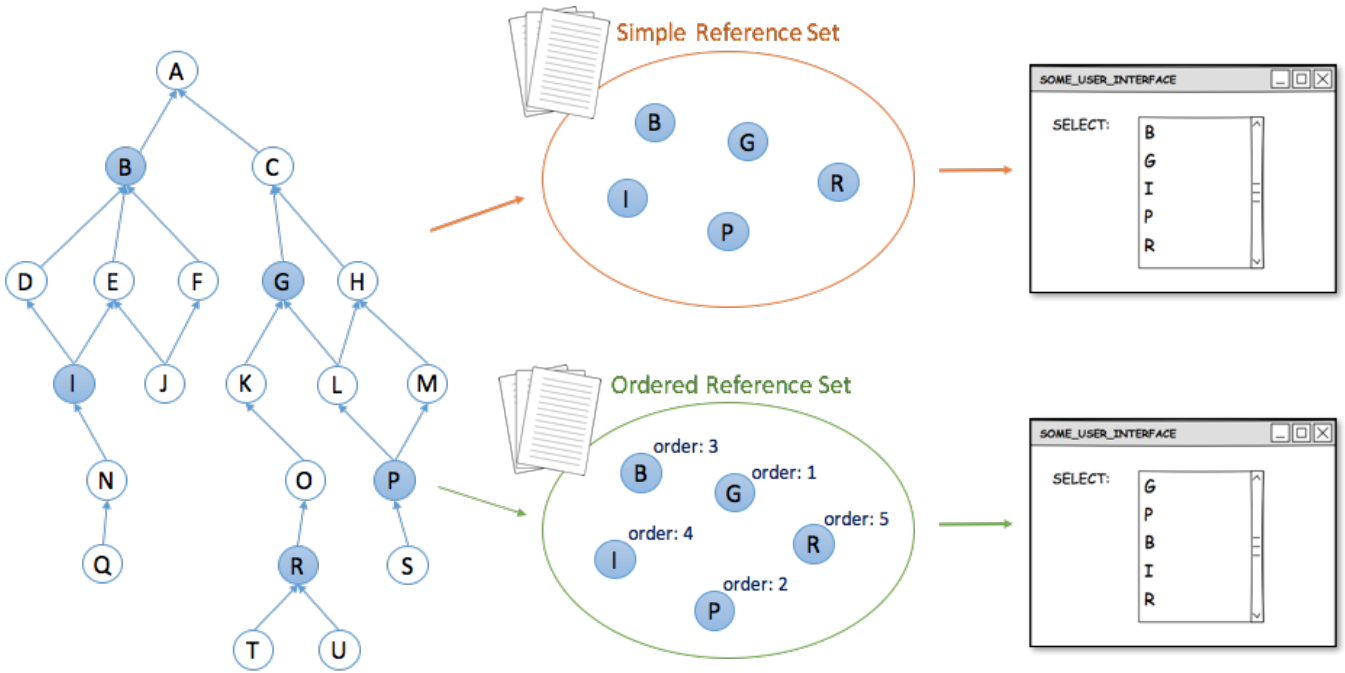


Figure 3.2.1.4-1: Example of how an ordered reference set can be used to order items in a drop down list

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
<a href="#">609999999102</a>   Cranial nerve simple reference set	<a href="#">11522000</a>   Olfactory nerve structure (body structure)	1
<a href="#">609999999102</a>   Cranial nerve simple reference set	<a href="#">18234004</a>   Optic nerve structure (body structure)	2
<a href="#">609999999102</a>   Cranial nerve simple reference set	<a href="#">56193007</a>   Oculomotor nerve structure (body structure)	3
<a href="#">609999999102</a>   Cranial nerve simple reference set	<a href="#">39322007</a>   Trochlear nerve structure (body structure)	4
<a href="#">609999999102</a>   Cranial nerve simple reference set	<a href="#">80622005</a>   Abducens nerve structure (body structure)	5
<a href="#">609999999102</a>   Cranial nerve simple reference set	<a href="#">27612005</a>   Trigeminal nerve structure (body structure)	6
<a href="#">609999999102</a>   Cranial nerve simple reference set	<a href="#">56052001</a>   Facial nerve structure (body structure)	7
<a href="#">609999999102</a>   Cranial nerve simple reference set	<a href="#">8598002</a>   Vestibulocochlear nerve structure (body structure)	8
<a href="#">609999999102</a>   Cranial nerve simple reference set	<a href="#">21161002</a>   Glossopharyngeal nerve structure (body structure)	9
<a href="#">609999999102</a>   Cranial nerve simple reference set	<a href="#">88882009</a>   Vagus nerve structure (body structure)	10
<a href="#">609999999102</a>   Cranial nerve simple reference set	<a href="#">15119000</a>   Accessory nerve structure (body structure)	11
<a href="#">609999999102</a>   Cranial nerve simple reference set	<a href="#">37899009</a>   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 <a href="#">alternative hierarchical view</a> using an <a href="#">ordered association reference set</a> .

## 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
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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
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427961005   x-ray of acetabulum
205115004   radiologic examination of femur, anteroposterior and lateral views
432552002   computed tomography of clavicle
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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