

Let U be the set of user selected symptoms. Let $D = \bigcup_{i \in \mathbb{N}}^{length(D)} Di$, where D is the set of matched disorders from boqa. Find a set of symptoms S_i associated with every D_i and let $S = \bigcup_{i \in \mathbb{N}}^{length(D)} S_i$. Define,

$A(s)$: a set of ancestor symptoms of symptom s

Then any s is more specific than $A(s)$. Any s symptom **is** any $a \in A(s)$; however $\forall a \in A(s)$ is not necessarily s .

1. if $\exists x \in D$ such that x is equal to $s \in S_i$, then x is an exact match to s .
2. Let $A(s)$ for some $s \in S_i$ for some i . If $\forall u \in U$ such that $u \in A(s)$, then u is an ancestor of the symptom s . x is a fuzzy match
3. Let $A(u)$ for some $u \in U$, If $\exists s \in S_i$ for some i such that $s \in A(u)$. Therefore u implies s and therefore u is an exact match.
4. Otherwise there is no match

1.