

Schema documentation for CDE_schema.xsd

june 3, 2020

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| | |
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Schema(s)

Main schema CDE_schema.xsd

Element(s)

Element data_element_set

| | |
|----------|--|
| Diagram | |
| Model | id , name , description , version , (url index_codes modality biological_sex age_range authors (event*) specialty) , elements |
| Instance | <pre> <data_element_set> <id>{1,1}</id> <name>{1,1}</name> <description>{1,1}</description> <version>{1,1}</version> <url>{1,1}</url> <index_codes>{1,1}</index_codes> <modality>{1,1}</modality> <biological_sex>{1,1}</biological_sex> <age_range>{1,1}</age_range> <authors>{1,1}</authors> <event>{0,unbounded}</event> <specialty>{1,1}</specialty> <elements>{1,1}</elements> </data_element_set> </pre> |

Element data_element_set / id

| | |
|-------------|--|
| Annotations | Each set has a unique identifier of the format "RDES[0-9]+" (e.g., "RDES42") and a textual name. |
|-------------|--|

| | |
|---------|--------------------------|
| Diagram | |
| Type | restriction of xs:string |
| Facets | pattern RDES\d+ |

Element name

| | |
|---------|---|
| Diagram | |
| Type | xs:string |
| Used by | Elements data_element_set, element, organization, person, specialty, value_set/value, version |

Element description

| | |
|---------|--------------------------|
| Diagram | |
| Type | xs:string |
| Used by | Element data_element_set |

Element version

| | |
|----------|--|
| Diagram | |
| Used by | Elements data_element_set, element |
| Model | name , date , status |
| Instance | <pre> <version> <name>{1,1}</name> <date>{1,1}</date> <status>{1,1}</status> </version> </pre> |

Element date

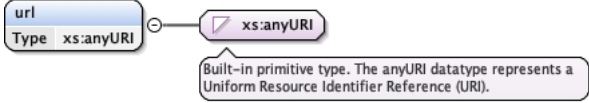
| | |
|---------|----------------------------|
| Diagram | |
| Type | xs:date |
| Used by | Element Group status_attrs |

Element status


| | |
|---------|-------------------------|
| Diagram | |
| Type | restriction of xs:token |

| | | |
|---------|---------------|--------------|
| Facets | enumeration | proposed |
| | enumeration | published |
| | enumeration | retired |
| Used by | Element Group | status_attrs |

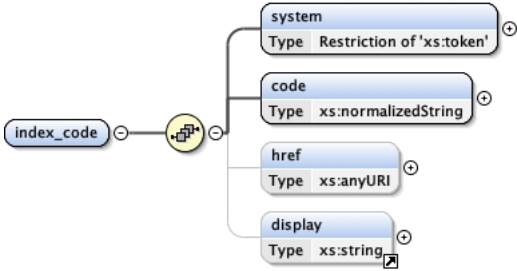
Element data_element_set / url

| | |
|---------|---|
| Diagram |  |
| Type | xs:anyURI |


Element index_codes

| | |
|----------|--|
| Diagram |  |
| Used by | Elements data_element_set, element, value_set/value |
| Model | index_code+ |
| Instance | <pre><index_codes> <index_code>{1,unbounded}</index_code> </index_codes></pre> |

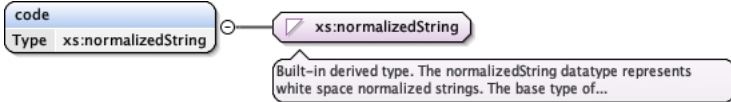
Element index_code

| | |
|----------|---|
| Diagram |  |
| Used by | Element index_codes |
| Model | system , code , href{0,1} , display{0,1} |
| Instance | <pre><index_code> <system>{1,1}</system> <code>{1,1}</code> <href>{0,1}</href> <display>{0,1}</display> </index_code></pre> |

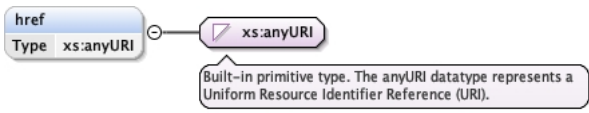
Element index_code / system

| | | | | | | | |
|-------------|---|-------------|--------|-------------|----------|-------------|-------|
| Diagram |  | | | | | | |
| Type | restriction of xs:token | | | | | | |
| Facets | <table> <tr> <td>enumeration</td> <td>RADLEX</td> </tr> <tr> <td>enumeration</td> <td>SNOMEDCT</td> </tr> <tr> <td>enumeration</td> <td>LOINC</td> </tr> </table> | enumeration | RADLEX | enumeration | SNOMEDCT | enumeration | LOINC |
| enumeration | RADLEX | | | | | | |
| enumeration | SNOMEDCT | | | | | | |
| enumeration | LOINC | | | | | | |

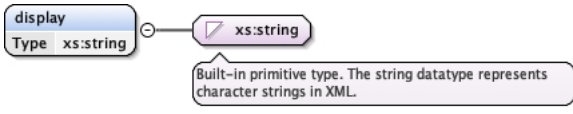
Element index_code / code

| | |
|---------|--|
| Diagram |  |
| Type | xs:normalizedString |

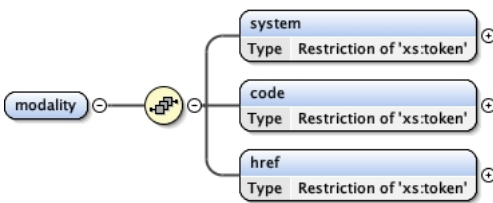
Element `index_code` / `href`

| | |
|---------|---|
| Diagram |  |
| Type | xs:anyURI |

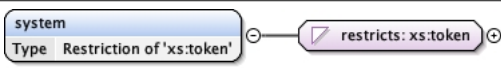
Element `display`

| | |
|---------|---|
| Diagram |  |
| Type | xs:string |
| Used by | Element <code>index_code</code> |

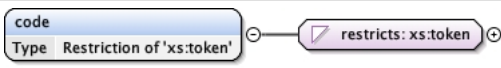
Element `modality`

| | |
|----------|--|
| Diagram |  |
| Used by | Elements <code>data_element_set</code> , <code>element</code> |
| Model | <code>system</code> , <code>code</code> , <code>href</code> |
| Instance | <pre> <modality> <system>{1,1}</system> <code>{1,1}</code> <href>{1,1}</href> </modality> </pre> |

Element `modality` / `system`

| | |
|---------|---|
| Diagram |  |
| Type | restriction of xs.token |
| Facets | enumeration <code>DICOM</code> |

Element `modality` / `code`

| | | | | | | | | | | | | | | | | | | | | | | | |
|-------------|--|-------------|----|-------------|----|-------------|----|-------------|------|-------------|----|-------------|----|-------------|----|-------------|----|-------------|----|-------------|----|-------------|----|
| Diagram |  | | | | | | | | | | | | | | | | | | | | | | |
| Type | restriction of xs.token | | | | | | | | | | | | | | | | | | | | | | |
| Facets | <table border="1"> <tr><td>enumeration</td><td>CR</td></tr> <tr><td>enumeration</td><td>CT</td></tr> <tr><td>enumeration</td><td>DX</td></tr> <tr><td>enumeration</td><td>IVUS</td></tr> <tr><td>enumeration</td><td>MG</td></tr> <tr><td>enumeration</td><td>MR</td></tr> <tr><td>enumeration</td><td>NM</td></tr> <tr><td>enumeration</td><td>PT</td></tr> <tr><td>enumeration</td><td>RF</td></tr> <tr><td>enumeration</td><td>RG</td></tr> <tr><td>enumeration</td><td>US</td></tr> </table> | enumeration | CR | enumeration | CT | enumeration | DX | enumeration | IVUS | enumeration | MG | enumeration | MR | enumeration | NM | enumeration | PT | enumeration | RF | enumeration | RG | enumeration | US |
| enumeration | CR | | | | | | | | | | | | | | | | | | | | | | |
| enumeration | CT | | | | | | | | | | | | | | | | | | | | | | |
| enumeration | DX | | | | | | | | | | | | | | | | | | | | | | |
| enumeration | IVUS | | | | | | | | | | | | | | | | | | | | | | |
| enumeration | MG | | | | | | | | | | | | | | | | | | | | | | |
| enumeration | MR | | | | | | | | | | | | | | | | | | | | | | |
| enumeration | NM | | | | | | | | | | | | | | | | | | | | | | |
| enumeration | PT | | | | | | | | | | | | | | | | | | | | | | |
| enumeration | RF | | | | | | | | | | | | | | | | | | | | | | |
| enumeration | RG | | | | | | | | | | | | | | | | | | | | | | |
| enumeration | US | | | | | | | | | | | | | | | | | | | | | | |

| | | |
|--|-------------|----|
| | enumeration | XA |
|--|-------------|----|

Element `modality` / `href`

| | | |
|---------|-------------------------|---|
| Diagram | | |
| Type | restriction of xs:token | |
| Facets | enumeration | http://dicom.nema.org/medical/dicom/current/output/html/part03.html#sect_C.7.3.1.1.1 |

Element `biological_sex`

| | | |
|---------|-------------------------|---------------------------|
| Diagram | | |
| Type | restriction of xs:token | |
| Facets | enumeration | M |
| | enumeration | F |
| Used by | Elements | data_element_set, element |

Element `age_range`

| | | |
|----------|---|---------------------------|
| Diagram | | |
| Used by | Elements | data_element_set, element |
| Model | upper_bound{0,1} , lower_bound{0,1} | |
| Instance | <pre><age_range> <upper_bound>{0,1}</upper_bound> <lower_bound>{0,1}</lower_bound> </age_range></pre> | |

Element `upper_bound`

| | | |
|---------|----------|-----------|
| Diagram | | |
| Type | xs:float | |
| Used by | Element | age_range |

Element `lower_bound`

| | | |
|---------|----------|-----------|
| Diagram | | |
| Type | xs:float | |
| Used by | Element | age_range |

Element `authors`

| | | |
|---------|--|--|
| Diagram | | |
|---------|--|--|

| | |
|----------|---|
| Used by | Elements data_element_set, element, image |
| Model | person*, organization* |
| Instance | <pre> <authors> <person>{0,unbounded}</person> <organization>{0,unbounded}</organization> </authors> </pre> |

Element person

| | |
|----------|--|
| Diagram | |
| Used by | Element authors |
| Model | name, (orcid_id twitter_handle url role) |
| Instance | <pre> <person> <name>{1,1}</name> <orcid_id>{1,1}</orcid_id> <twitter_handle>{1,1}</twitter_handle> <url>{1,1}</url> <role>{1,1}</role> </person> </pre> |

Element orcid_id

| | |
|---------|-------------------|
| Diagram | |
| Type | xs:string |
| Used by | Element person |

Element twitter_handle

| | |
|---------|-------------------|
| Diagram | |
| Type | xs:string |
| Used by | Element person |

Element person / url

| | |
|---------|-----------|
| Diagram | |
| Type | xs:string |

Element person / role

| | |
|---------|--|
| Diagram | |
|---------|--|

| | | |
|--------|-------------------------|-------------|
| Type | restriction of xs:token | |
| Facets | enumeration | author |
| | enumeration | editor |
| | enumeration | translator |
| | enumeration | reviewer |
| | enumeration | contributor |

Element organization

| | | |
|----------|--|---------|
| Diagram | | |
| Used by | Element | authors |
| Model | name abbreviation url comment role | |
| Instance | <pre> <organization> <name>{1,1}</name> <abbreviation>{1,1}</abbreviation> <url>{1,1}</url> <comment>{1,1}</comment> <role>{1,1}</role> </organization> </pre> | |

Element organization / abbreviation

| | | |
|---------|-----------|--|
| Diagram | | |
| Type | xs:string | |

Element organization / url

| | | |
|---------|-----------|--|
| Diagram | | |
| Type | xs:anyURI | |

Element comment

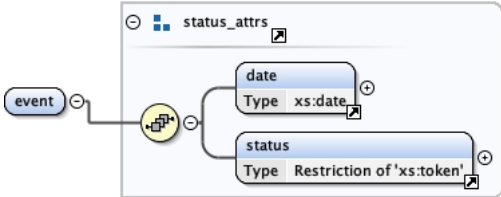
| | | |
|---------|-----------|--------------|
| Diagram | | |
| Type | xs:string | |
| Used by | Element | organization |

Element organization / role

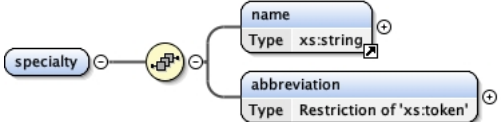
| | | |
|---------|--|--|
| Diagram | | |
|---------|--|--|

| | | |
|--------|-------------------------|-------------|
| Type | restriction of xs:token | |
| Facets | enumeration | contributor |
| | enumeration | sponsor |
| | enumeration | translator |
| | enumeration | reviewer |
| | enumeration | author |


Element event

| | | |
|----------|---|---------|
| Diagram |  | |
| Used by | Element Group | history |
| Model | date , status | |
| Instance | <pre><event> <date>{1,1}</date> <status>{1,1}</status> </event></pre> | |

Element specialty

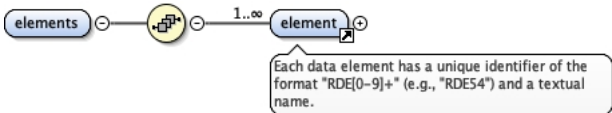
| | | |
|----------|---|---------------------------|
| Diagram |  | |
| Used by | Elements | data_element_set, element |
| Model | name , abbreviation | |
| Instance | <pre><specialty> <name>{1,1}</name> <abbreviation>{1,1}</abbreviation> </specialty></pre> | |

Element specialty / abbreviation

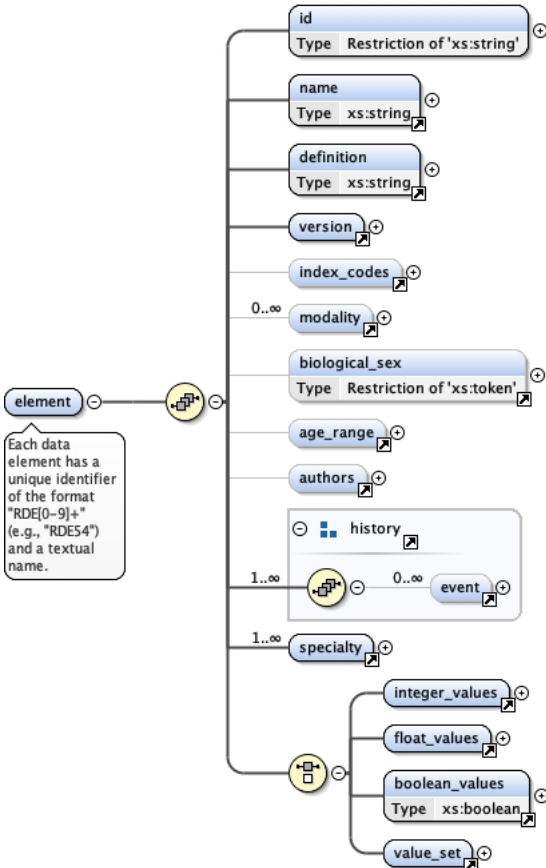
| | | |
|---------|---|----|
| Diagram |  | |
| Type | restriction of xs:token | |
| Facets | enumeration | AB |
| | enumeration | BR |
| | enumeration | CA |
| | enumeration | CH |
| | enumeration | ER |
| | enumeration | GI |
| | enumeration | GU |
| | enumeration | HN |
| | enumeration | IR |
| | enumeration | MI |
| | enumeration | MK |
| | enumeration | NR |
| | enumeration | OB |
| | enumeration | OI |

| | | |
|--|-------------|----|
| | enumeration | OT |
| | enumeration | PD |
| | enumeration | QI |
| | enumeration | RS |
| | enumeration | VI |

Element elements

| | |
|----------|--|
| Diagram |  |
| Used by | Element data_element_set |
| Model | element+ |
| Instance | <pre><elements> <element>{1,unbounded}</element> </elements></pre> |

Element element


| | |
|-------------|---|
| Annotations | Each data element has a unique identifier of the format "RDE[0-9]+" (e.g., "RDE54") and a textual name. |
| Diagram |  |
| Used by | Element elements |
| Model | id, name, definition, version, index_codes{0,1}, modality*, biological_sex{0,1}, age_range{0,1}, authors{0,1}, event*, specialty+, (integer_values float_values boolean_values value_set) |
| Instance | <pre><element> <id>{1,1}</id> <name>{1,1}</name> <definition>{1,1}</definition> <version>{1,1}</version> <index_codes>{0,1}</index_codes></pre> |

```

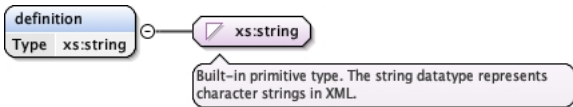
<modality>{0,unbounded}</modality>
<biological_sex>{0,1}</biological_sex>
<age_range>{0,1}</age_range>
<authors>{0,1}</authors>
<event>{0,unbounded}</event>
<specialty>{1,unbounded}</specialty>
<integer_values>{1,1}</integer_values>
<float_values>{1,1}</float_values>
<boolean_values>{1,1}</boolean_values>
<value_set>{1,1}</value_set>
</element>

```

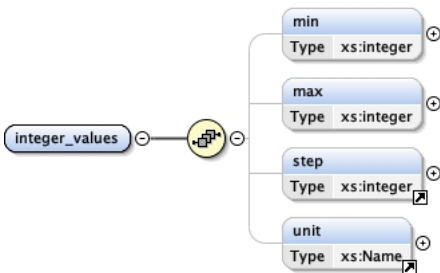
Element `element` / `id`

| | |
|---------|---|
| Diagram |  |
| Type | restriction of xs:string |
| Facets | pattern RDE\d+ |

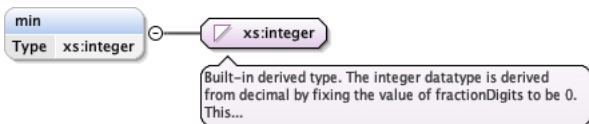
Element definition

| | |
|---------|---|
| Diagram |  |
| Type | xs:string |
| Used by | Elements element, value_set/value |

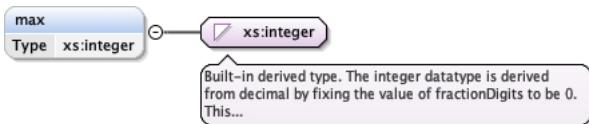
Element `integer_values`

| | |
|----------|---|
| Diagram |  |
| Used by | Element element |
| Model | min{0,1} , max{0,1} , step{0,1} , unit{0,1} |
| Instance | <pre> <integer_values> <min>{0,1}</min> <max>{0,1}</max> <step>{0,1}</step> <unit>{0,1}</unit> </integer_values> </pre> |

Element `integer_values` / `min`

| | |
|---------|---|
| Diagram |  |
| Type | xs:integer |

Element `integer_values` / `max`

| | |
|---------|---|
| Diagram |  |
|---------|---|

| | |
|------|------------|
| Type | xs:integer |
|------|------------|

Element step

| | |
|---------|---------------------------------------|
| Diagram | |
| Type | xs:integer |
| Used by | Elements float_values, integer_values |

Element unit

| | |
|---------|---------------------------------------|
| Diagram | |
| Type | xs:Name |
| Used by | Elements float_values, integer_values |

Element float_values

| | |
|----------|---|
| Diagram | |
| Used by | Element element |
| Model | min{0,1} , max{0,1} , step{0,1} , unit{0,1} |
| Instance | <pre> <float_values> <min>{0,1}</min> <max>{0,1}</max> <step>{0,1}</step> <unit>{0,1}</unit> </float_values> </pre> |

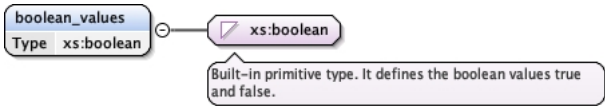
Element float_values / min

| | |
|---------|----------|
| Diagram | |
| Type | xs:float |

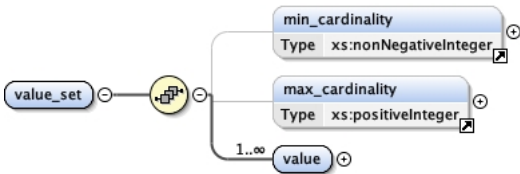
Element float_values / max

| | |
|---------|----------|
| Diagram | |
| Type | xs:float |

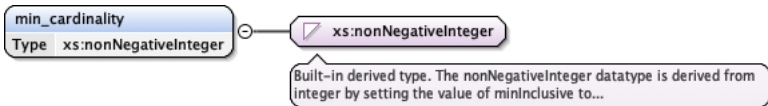
Element boolean_values

| | | |
|---------|---|---------|
| Diagram |  | |
| Type | xs:boolean | |
| Used by | Element | element |

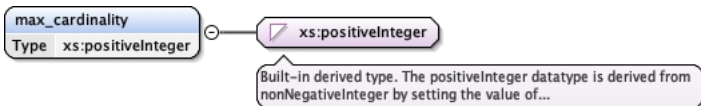
Element value_set

| | | |
|----------|--|---------|
| Diagram |  | |
| Used by | Element | element |
| Model | min_cardinality{0,1} , max_cardinality{0,1} , value+ | |
| Instance | <pre><value_set> <min_cardinality>{0,1}</min_cardinality> <max_cardinality>{0,1}</max_cardinality> <value>{1,unbounded}</value> </value_set></pre> | |

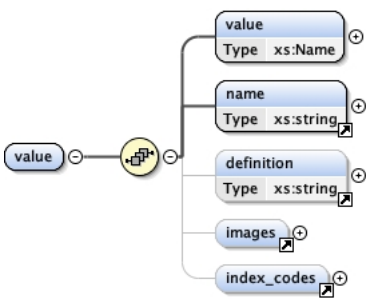
Element min_cardinality

| | | |
|---------|--|-----------|
| Diagram |  | |
| Type | xs:nonNegativeInteger | |
| Used by | Element | value_set |

Element max_cardinality

| | | |
|---------|--|-----------|
| Diagram |  | |
| Type | xs:positiveInteger | |
| Used by | Element | value_set |

Element value_set / value

| | | |
|----------|---|--|
| Diagram |  | |
| Model | value , name , definition{0,1} , images{0,1} , index_codes{0,1} | |
| Instance | <pre><value></pre> | |

```

<value>{1,1}</value>
<name>{1,1}</name>
<definition>{0,1}</definition>
<images>{0,1}</images>
<index_codes>{0,1}</index_codes>
</value>

```

Element value_set / value / value

| | |
|---------|---------|
| Diagram | |
| Type | xs:Name |

Element images

| | |
|----------|--|
| Diagram | |
| Used by | Element value_set/value |
| Model | image+ |
| Instance | <pre> <images> <image>{1,unbounded}</image> </images> </pre> |

Element image

| | |
|----------|--|
| Diagram | |
| Used by | Element images |
| Model | url height width caption rights source authors |
| Instance | <pre> <image> <url>{1,1}</url> <height>{1,1}</height> <width>{1,1}</width> <caption>{1,1}</caption> <rights>{1,1}</rights> <source>{1,1}</source> <authors>{1,1}</authors> </image> </pre> |

Element image / url

| | |
|---------|-----------|
| Diagram | |
| Type | xs:anyURI |

Element height

| | | |
|---------|--------------------|-------|
| Diagram | | |
| Type | xs:positiveInteger | |
| Used by | Element | image |

Element width

| | | |
|---------|--------------------|-------|
| Diagram | | |
| Type | xs:positiveInteger | |
| Used by | Element | image |

Element caption

| | | |
|---------|-----------|-------|
| Diagram | | |
| Type | xs:string | |
| Used by | Element | image |

Element rights

| | | |
|---------|-----------|-------|
| Diagram | | |
| Type | xs:string | |
| Used by | Element | image |

Element source


| | | |
|---------|-----------|-------|
| Diagram | | |
| Type | xs:string | |
| Used by | Element | image |

Element Group(s)

Element Group status_attr

| | | |
|---------|---------------|----------------|
| Diagram | | |
| Used by | Elements | event, version |
| Model | date , status | |

Element Group history

| | | |
|---------|---|---------------------------|
| Diagram |  | |
| Used by | Elements | data_element_set, element |
| Model | event* | |