

CoRE WG Virtual Interim

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# JSON Serialization for CoRAL



# Links

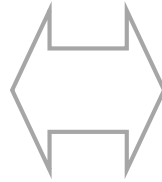
```
a </1> {  
  p </1/x>  
  q </1/y>  
  p </1/z>  
}  
b </2>  
b </3>  
c null {  
  d "foo"  
}
```



```
{  
  "a": {  
    "_link": "/1",  
    "p": [  
      { "_link": "/1/x" },  
      { "_link": "/1/z" }  
    ],  
    "q": { "_link": "/1/y" }  
  },  
  "b": [  
    { "_link": "/2" },  
    { "_link": "/3" }  
  ],  
  "c": {  
    "d": "foo"  
  }  
}
```

# Forms

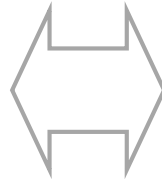
```
create -> </frob> [  
  method "POST"  
  accept "application/json"  
  schema <http://example.com/schema.json> {  
    type "application/schema+json"  
  }  
]
```



```
{  
  "create": {  
    "_form": "/frob",  
    "method": "POST",  
    "accept": "application/json",  
    "schema": {  
      "_link": "http://example.com/schema.json",  
      "type": "application/schema+json"  
    }  
  }  
}
```

# Literals

```
has-published-item true
current-rate 4.53
max-rate 50
created dt'2019-08-13T17:00:00+02:00'
id "t123"
title "Temperaturwerte" {
  language "de-DE"
  direction "LTR"
}
title "Temperature values" {
  language "en-US"
  direction "LTR"
}
key b64'AQIDBAU='
```



```
{
  "has-published-item": true,
  "current-rate": 4.53,
  "max-rate": 50,
  "created": {
    "_datetime": "2019-08-13T17:00:00+02:00"
  },
  "id": "t123",
  "title": [
    {
      "_text": "Temperaturwerte",
      "language": "de-DE",
      "direction": "LTR"
    },
    {
      "_text": "Temperature values",
      "language": "en-US",
      "direction": "LTR"
    }
  ],
  "key": { "_bytes": "AQIDBAU=" }
}
```

# Issues

- Type tags
  - All literals are optionally tagged by their data type as shown left
  - If the tag is not present, it defaults to the data types shown right

CoRAL type	JSON tag	JSON value
Boolean value	"_bool"	true / false
integer	"_int"	number
floating-point number	"_float"	number
date/time value	"_datetime"	rfc3339 string
byte string	"_bytes"	base64 string
text string	"_text"	string

JSON value	CoRAL type
true / false	Boolean value
number	floating-point number
string	text string

- Order of elements
  - Grouping elements by relation type makes the JSON serialization more restrictive than the other two serializations
- CURIEs

# CURIEs (1/4)

```
{
  "http://coreapps.org/collections#create": {
    "_form": "/items",
    "http://coreapps.org/http#method": "POST",
    "http://coreapps.org/http#accept": "application/json",
    "urn:example:foo:schema": {
      "_link": "http://example.com/schema.json",
      "http://coreapps.org/http#type": "application/schema+json"
    }
  }
}
```

# CURIEs (2/4)

```
{
  "_curie": {
    "_default": "http://coreapps.org/collections#",
    "http": "http://coreapps.org/http#",
    "foo": "urn:example:foo:"
  }
  "create": {
    "_form": "http://example.com/my-collection",
    "http:method": "POST",
    "http:accept": "application/json",
    "foo:schema": {
      "_link": "http://example.com/schema.json",
      "http:type": "application/schema+json"
    }
  }
}
```

# CURIEs (3/4)

```
{
  "_curie": {
    "_default": "http://coreapps.org/collections#",
    "http": "http://coreapps.org/http#",
    "foo": "urn:example:foo:"
  }
  "http://coreapps.org/collections#create": {
    "_form": "http://coreapps.org/http#/example.com/my-collection",
    "http://coreapps.org/http#method": "POST",
    "http://coreapps.org/http#accept": "application/json",
    "urn:example:foo:schema": {
      "_link": "http://coreapps.org/http#/example.com/schema.json",
      "http://coreapps.org/http#type": "application/schema+json"
    }
  }
}
```



# CURIEs (4/4)

```
{
  "_curie": {
    "_default": "http://coreapps.org/collections#",
    "h": "http://coreapps.org/http#",
    "f": "urn:example:foo:"
  }
  "create": {
    "_form": "http://example.com/my-collection",
    "h:method": "POST",
    "h:accept": "application/json",
    "f:schema": {
      "_link": "http://example.com/schema.json",
      "h:type": "application/schema+json"
    }
  }
}
```