



Properties (JSON keys) are described in **objects**

specification	key	values
data type	“type”	“string”, “number”, “boolean” “array”, “object
entry format	“format”	“date” “email” ...
mandatory properties	”required”	array of properties
controlled list / vocabulary	“enum”	array of values



Properties (JSON keys) are described in **objects**

specification	key	values
data type	“type”	“string”, “number”, “boolean”, “array”, “object”, “null”
enum	“enum”	“email”, ... “password”
mandatory properties	“required”	array of properties
controlled list / vocabulary	“enum”	array of values

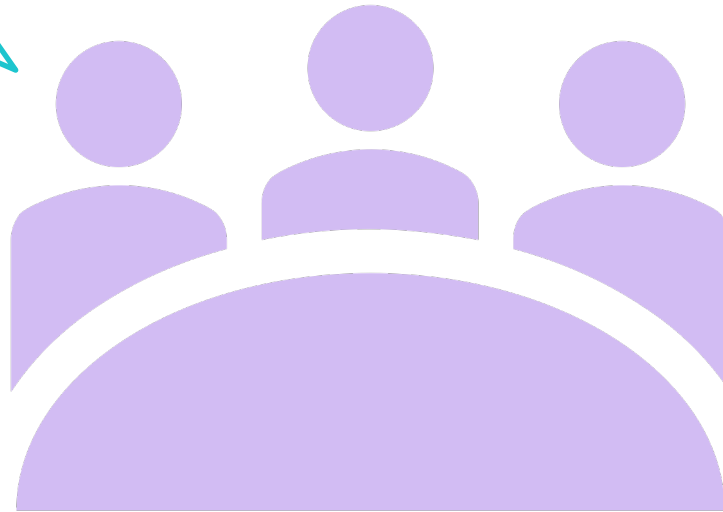


www.json-schema.org



Everyone documents
their metadata
differently!
It's not comparable!

We need to
harmonize the
metadata records.



Questions?



Meanwhile in your collaboration



JSON < >

```
{
  "experimentalConditions": {
    "ride": {
      "rideType": "roller coaster",
      "rideName": "Flight of the Bat",
      "location": "Gotham City, New Jersey"
    },
    "testPerson": {
      "sex": "male",
      "height": 180
    },
    "recording": {
      "testDevice": "iPhone X",
      "testDeviceFixture": "left upper arm",
      "testApp": "Physics Toolbox Suite by Vieyra Software"
    }
  }
}
```

Meanwhile in your collaboration



JSON < >

```
{
  "experimentalConditions": {
    "ride": {
      "rideType": "roller coaster",
      "rideName": "Flight of the Bat",
      "location": "Gotham City, New Jersey"
    },
    "testPerson": {
      "sex": "male",
      "height": 180
    },
    "recording": {
      "testDevice": "iPhone X",
      "testDeviceFixture": "left upper arm",
      "testApp": "Physics Toolbox Suite by Vieyra Software"
    }
  }
}
```

Let's distribute the schema definitions among us.

CHALLENGE 4:

JSON Schema

In the following code block you see the JSON schema draft for the experimental conditions. Your collaborators already modelled constraints and valid values for `ride` and `testPerson`.

Discuss and add constraints to `recording` property.

- `testDevice`, `testDeviceFixture` and `testApp` are **mandatory** properties for the `recording` object
- `testDevice` value must be one of:
 - `iPhone X`
 - `iPhone 6`
 - `iPhone 6s`
 - `other`
- `testApp` value must be one of:
 - `Physics Toolbox Suite by Vieyra Software`
 - `Bunny Rollercoaster Physics App`
- `testDeviceFixture` value must be one of:
 - `left upper arm`
 - `right upper arm`
 - `mouth fixture device`
 - `other`

CHALLENGE 5:

Form Input & Validation with JSON Schema

```
1  {
2  "title": "Sample JSON schema title",
3  "description": "Sample description. Schema validates a JSON object entry",
4  "type": "object",
5  "required": [
6    "fileName",
7    "abstract",
8    "format",
9    "creator",
10   "date",
11   "experimentalConditions",
12   "columns"
13  ],
14  "properties": {
15    "fileName": {
16      "description": "Name of the described data file or set.",
17      "type": "string",
18      "minLength": 1
19    },
20    "abstract": {
21      "description": "A free text abstract of the experimental setup.",
22      "type": "string",
23      "minLength": 24
24    },
25    "format": {
26      "description": "The Internet Media Type of the resource, MIME Type.",
27      "type": "string",
28      "enum": [
29        "text/csv",
30        "video/mp4",
31        "text/markdown",
32        "image/png",
33        "other"
34      ]
35    }
36  }
37 }
```



Sample JSON schema title

Sample description. Schema validates a JSON object entry for the DC shared universe repository.

fileName*
Name of the described data file or set.

abstract*
A free text abstract of the experimental setup.

format*
The Internet Media Type of the resource, MIME Type.

creator*
An array of people (1-n) primarily responsible for making the resource.

creatorName
The name of the creator, a person.

creatorAffiliation
The name of the institute the creator is working for.

DISCLAIMER

This slide deck is part of the Lesson

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