

# Dictionaries

Registry v4.0.0 introduces *Dictionaries*, which are basically customizable lists that can be used in various contexts, such as [Attribute Enumerations](#) and [Identifier Validation](#). The semantics of using a Dictionary varies according to the context in which it is used.

See the appropriate documentation for more information.

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## 1. Dictionary Modes

Dictionaries are created via *CO > Configuration > Dictionaries*. Dictionaries can operate in several *Modes*:

- **Department:** The Dictionary is automatically constructed from the Department Registry, using the object id and name as entries in the Dictionary.
- **Organization:** The Dictionary is automatically constructed from the Organization Registry, using the object id and name as entries in the Dictionary.
- **Standard:** Standard Dictionaries use *Dictionary Entries*, described below.

## 2. Dictionary Entries

Entries can be added manually, using a pre-defined list, or by uploading a file of entries.

Dictionary Entries consist of the following components:

- **Value:** The entry, as a human-readable text string. The only required field.
- **Code:** A code representing the entry. The use is context-specific, but may (for example) be used in constructing IDs for HTML Select lists.
- **Order:** An integer representing the order of the entry within the Dictionary. The use is context-specific, but may (for example) be used to bubble specific entries to the top of the Dictionary list.

## 3. Pre-Defined Standard Dictionaries

Some *Pre-Defined Standard Dictionaries* are available out of the box:

- **Coded Passport Issuers:** An English language list of Passport Issuing Authorities (as defined [here](#) and [here](#)) which also have an [ISO-3166 Alpha-3 Country Code](#) assigned. This Dictionary includes the Country Code in the *Code* field.
- **Coded Passport Issuers 2:** An English language list of Passport Issuing Authorities (as defined [here](#) and [here](#)) which also have an [ISO-3166 Alpha-2 Country Code](#) assigned. This Dictionary includes the Country Code in the *Code* field.
- **Passport Issuers:** An English language list of Passport Issuing Authorities (as defined [here](#) and [here](#)) which also have an [ISO-3166 Alpha-3 Country Code](#) assigned. Note this Dictionary does not include the Alpha-3 codes, they are only used for inclusion criteria.
- **US States and Possessions:** United States of America States and Possessions as defined by the [US Postal Service](#).
- **US States and Possessions with Postal Abbreviations:** United States of America States and Possessions as defined by the [US Postal Service](#). This Dictionary includes the State Codes in the *Code* field.
- **US and Canada States and Provinces:** United States of America States and Possessions as defined by the [US Postal Service](#), and [Canadian Provinces and Territories as defined by the Canadian Postal Service](#).
- **US and Canada States and Provinces with Postal Abbreviations:** United States of America States and Possessions as defined by the [US Postal Service](#), and [Canadian Provinces and Territories as defined by the Canadian Postal Service](#). This Dictionary includes the State and Province Codes in the *Code* field.

(Pre-Defined Dictionaries are distributed in the `Lib/Dictionary` directory, and use the Dictionary File Format defined below.)

## 4. Standard Dictionary File Format

Registry Dictionary Files are JSON documents, consisting of an object with the following members:

- **description:** An optional string describing the Dictionary.
- **format:** The Dictionary File Format definition used to construct the Dictionary. The current format is "v1".
- **source:** An optional string describing the source material for constructing the Dictionary.
- **title:** A short title for the Dictionary, suitable for use in Select lists and other similar contexts.

- **version**: A Dictionary-specific version number. Must be a valid JSON number.
- **dictionary**: A JSON array consisting of zero or more objects, each of which may have the following members:
  - **code**: An optional code representing the entry.
  - **order**: An optional integer representing the order of the entry within the Dictionary. Note that, for compatibility with database reserved keywords, there is no *e* in *order*.
  - **value**: The value of the entry.

## 4.1. Example

```
{
  "format": "v1",
  "version": 1,
  "title": "USDA Egg Grades",
  "source": "https://www.ams.usda.gov/grades-standards/egg/grade-shields",
  "description": "Egg categories for consumer grades",
  "dictionary": [
    { "code": "AA", "value": "The freshest and highest quality eggs (AA)", "order": 1 },
    { "code": "A", "value": "Very high quality eggs (A)", "order": 2 },
    { "code": "B", "value": "Eggs suitable for liquid and baking purposes (B)", "order": 3 }
  ]
}
```

**i** When uploading, a Dictionary File may replace all existing Dictionary Entries (if any), or merge into them. When merging, only the *value* field is examined – *code* and *order* are ignored. As an example, if this Dictionary Entry already exists:

```
{ "code": "abc", "value": "foo" }
```

and the following entry is uploaded:

```
{ "code": "def", "value": "foo" }
```

on merge, the *abc* code will remain and the *def* code will not be added, since only *value* is examined and the value *foo* is already present.

**i** A Dictionary with no entries is a valid file, and can be used to create an empty Dictionary (or empty an existing one).