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# **SpringField Documentation**

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## Entities

---

```
class springfield.Entity(**values)
```

```
    flatten()
```

Get the values as basic Python types

```
    get(key, default=None, empty=False)
```

Get a value by key. If passed an iterable, get a dictionary of values matching keys.

**Parameters** `empty` – boolean - Include empty values

```
    jsonify()
```

Return a dictionary suitable for JSON encoding.

```
    to_json()
```

Convert the entity to a JSON string.

```
    update(values)
```

Update attributes. Ignore keys that aren't fields. Allows dot notation.





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## Fields

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**class** `springfield.fields.AdaptableTypeField` (*default=Empty, doc=None, \*args, \*\*kwargs*)  
 A *Field* that has a specific type and can be adapted to another type.

**adapt** (*value*)

Convert the *value* to the *self.type* for this *Field*

**classmethod** `register_adapter` (*from\_cls, func*)

Register a function that can handle adapting from *from\_cls* for this field.

TODO This may be a bad idea, re-evaluate how to register adapters.

**type = None**

The value type this *Field* expects

**class** `springfield.fields.BooleanField` (*default=Empty, doc=None, \*args, \*\*kwargs*)  
 A *Field* that contains a *bool*.

**adapt** (*value*)

Adapt *value* to a *bool*.

**Parameters value** – A boolean-like value.

A *float*, *int*, or *long* will be converted to:

- *True* if equal to *1*
- *False* if equal to *0*

String values will be converted to (case-insensitive):

- *True* if equal to “yes”, “true”, “1”, or “on”
- *False* if equal to “no”, “false”, “0”, or “off”

**type**

alias of `bool`

**class** `springfield.fields.CollectionField` (*field, \*args, \*\*kwargs*)  
 A *Field* that can contain an ordered list of values matching a specific *Field* type.

**adapt** (*value*)

Adapt all values of an iterable to the *CollectionField*’s field type.

**field = None**

The *Field* this collection contains

**flatten** (*value*)

Convert all values of an iterable to the *CollectionField*’s field type’s native Python type.

**jsonify** (*value*)

Convert all values of an iterable to the *CollectionField*'s field type's JSON type.

**class** `springfield.fields.DateTimeField` (*default=Empty, doc=None, \*args, \*\*kwargs*)

*Field* whose value is a Python *datetime.datetime*

**adapt** (*value*)

Adapt *value* to a *datetime.datetime* instance.

**Parameters** **value** – A date-like value. RFC3339 formatted date-strings are supported.

If *dateutil* is installed, *dateutil.parser.parse* is used which supports many date formats.

**jsonify** (*value*)

Get the date as a RFC3339 date-string

**type**

alias of *datetime*

**class** `springfield.fields.EmailField` (*default=Empty, doc=None, \*args, \*\*kwargs*)

*Field* with an email value

**class** `springfield.fields.EntityField` (*entity, \*args, \*\*kwargs*)

*Field* that can contain an *Entity*

**flatten** (*value*)

Convert an *Entity* to a *dict* containing native Python types.

**jsonify** (*value*)

Convert an *Entity* into a JSON object

**class** `springfield.fields.Field` (*default=Empty, doc=None, \*args, \*\*kwargs*)

A field

**adapt** (*value*)

Convert the value from the input type to the expected type if needed.

**Returns** The adapted value

**flatten** (*value*)

Get the value as a basic Python type

**Parameters** **value** – An *Entity*'s value for this *Field*

**init** (*cls*)

Initialize the field for its owner *Entity* class. Any specialization that needs to be done based on the *Entity* class itself should be done here.

**Parameters** **cls** – An *Entity* class.

**jsonify** (*value*)

Get the value as a suitable JSON type

**Parameters** **value** – An *Entity*'s value for this *Field*

**make\_descriptor** (*name*)

Create a descriptor for this *Field* to attach to an *Entity*.

**class** `springfield.fields.FieldDescriptor` (*name, field*)

A descriptor that handles setting and getting *Field* values on an *Entity*.

**class** `springfield.fields.FloatField` (*default=Empty, doc=None, \*args, \*\*kwargs*)

A *Field* that contains a *float*.

**adapt** (*value*)

Adapt *value* to a *float*.

**Parameters value** – Can be an *int*, *float*, *long*, or a *str* or *unicode* that looks like a *float*.

*long* values will remain ‘long’s.

**type**

alias of *float*

**class** `springfield.fields.IdField` (*default=Empty*, *doc=None*, *\*args*, *\*\*kwargs*)

A *Field* that is used as the primary identifier for an *Entity*

TODO This should accept another *Field* type to contain the ID

**class** `springfield.fields.IntField` (*default=Empty*, *doc=None*, *\*args*, *\*\*kwargs*)

A *Field* that contains an *int*.

**adapt** (*value*)

Adapt *value* to an *int*.

**Parameters value** – Can be an *int*, *float*, *long*, or a *str* or *unicode* that looks like an *int*.

*float* or *long* values must represent an integer, i.e. no decimal places.

**type**

alias of *int*

**class** `springfield.fields.SlugField` (*default=Empty*, *doc=None*, *\*args*, *\*\*kwargs*)

*Field* whose value is a slugified string.

A slug is a string converted to lowercase with whitespace replace with a “-” and non-ascii chars converted to their ascii equivalents.

**adapt** (*value*)

Adapt *value* to a slugified string.

**Parameters value** – Any string-like value

**class** `springfield.fields.StringField` (*default=Empty*, *doc=None*, *\*args*, *\*\*kwargs*)

A *Field* that contains a unicode string.

**adapt** (*value*)

Adapt *value* to *unicode*.

**type**

alias of *unicode*

**class** `springfield.fields.UrlField` (*default=Empty*, *doc=None*, *\*args*, *\*\*kwargs*)

*Field* with a URL value



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**timeutil**

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`springfield.timeutil.date_parse` (*date*)

Parse an RFC3339 formatted time string into a datetime object.

Assumes input is UTC.

`springfield.timeutil.generate_rfc3339` (*value*)

Converts a datetime to an RFC3339 formatted time string.

Input is always converted to UTC.

**Parameters** *value* – A datetime instance

`springfield.timeutil.utc = <UTC>`

A tzinfo for UTC

`springfield.timeutil.utcnow` ()

Returns the current time in TZ aware UTC.

**Returns** datetime instance



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## Indices and tables

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