

Dictionaries and Functions

Putting it all Together

Guillermo Ibarra

<https://github.com/mcormoe/Python-Lectures>

March 14, 2016

Python Dictionary

brief introduction

Initiation

```
>>> some_dict = {}
```

Python Dictionary

brief introduction

Initiation

```
>>> some_dict = {}
```

Key Values

```
>>> some_dict['key_a'] = value_a
```

Python Dictionary

brief introduction

Initiation

```
>>> some_dict = {}
```

Key Values

```
>>> some_dict['key_a'] = value_a
```

Nested Dictionaries

```
>>> some_dict['nested_dict'] = {}
```

Python Dictionary

brief introduction

Initiation

```
>>> some_dict = {}
```

Key Values

```
>>> some_dict['key_a'] = value_a
```

Nested Dictionaries

```
>>> some_dict['nested_dict'] = {}
```

Multiple Keys/Nests

```
>>> system = dict(surface={}, cell={}, pin={}, universe={})
```

Python Dictionary

brief introduction

Initiation

```
>>> some_dict = {}
```

Creating Functions

syntax and usage

Basics

```
def func_name(parameters)
    "function docstring"

    main_body

    return func_vars
```

Calling

```
func_vars = func_name(parameters)
```

Script Examples

extracting from serpent

- ▶ requires *extract.py* and *l3_4g.i_res.m* (Aux folder on github)
- ▶ modifying *pull.py* (for printing, also in Aux)
- ▶ modifying *graph.py* (for graphing, also in Aux)

Designing a Program

water properties

- ▶ Steam property functions - [article download](#)
- ▶ rough draft *water.py* (old attempt, found in Aux)