Python Dictionary Exampls and Usages

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Contents

1 Dictionary

Go to the **RMD**, **PDF**, or **HTML** version of this file. Go back to fan's Python Code Examples Repository (bookdown site).

1.1 Create a List of Dictionaries

```
import datetime
import pprint
ls_dc_exa =  [
    {"file": "mat_matlab",
     "title": "One Variable Graphs and Tables",
     "description": "Frequency table, bar chart and histogram",
     "val": 1,
     "date": datetime.date(2020, 5, 2)},
    {"file": "mat_two",
     "title": "Second file",
     "description": "Second file.",
     "val": [1, 2, 3],
     "date": datetime.date(2020, 5, 2)},
    {"file": "mat_algebra_rules",
     "title": "Opening a Dataset",
     "description": "Opening a Dataset.",
     "val": 1.1,
     "date": datetime.date(2018, 12, 1)}
]
pprint.pprint(ls_dc_exa, width=1)
```

```
## [{'date': datetime.date(2020, 5, 2),
##   'description': 'Frequency '
##                  'table, '
##                  'bar '
##                  'chart '
##                  'and '
```

```
##                  'histogram',
##   'file': 'mat_matlab',
##   'title': 'One '
##            'Variable '
##            'Graphs '
##            'and '
##            'Tables',
##   'val': 1},
##  {'date': datetime.date(2020, 5, 2),
##   'description': 'Second '
##                  'file.',
##   'file': 'mat_two',
##   'title': 'Second '
##            'file',
##   'val': [1,
##           2,
##           3]},
##  {'date': datetime.date(2018, 12, 1),
##   'description': 'Opening '
##                  'a '
##                  'Dataset.',
##   'file': 'mat_algebra_rules',
##   'title': 'Opening '
##            'a '
##            'Dataset',
##   'val': 1.1}]
```

1.2 Iteratively Add to A Dictionary

Iteratively add additional Key and Value pairs to a dictionary.

```
ls_snm_tex = ["file1.tex", "file2.tex", "file3.tex"]
ls_snm_pdf = ["file1.pdf", "file2.pdf", "file3.pdf"]

dc_tex_pdf = {}
for tex, pdf in zip(ls_snm_tex, ls_snm_pdf):
  dc_tex_pdf[tex] = pdf

pprint.pprint(dc_tex_pdf, width=1)
```

```
## {'file1.tex': 'file1.pdf',
##  'file2.tex': 'file2.pdf',
##  'file3.tex': 'file3.pdf'}
```

1.3 Select by Keys in Dictionary

Given a list of dictionary, search if key name is in list:

```
# string to search through
ls_str_file_ids = ['mat_matlab', 'mat_algebra_rules']
# select subset
ls_dc_selected = [dc_exa
                  for dc_exa in ls_dc_exa
                  if dc_exa['file'] in ls_str_file_ids]
# print
```

```
pprint.pprint(ls_dc_selected, width=1)
```

```
## [{'date': datetime.date(2020, 5, 2),
##   'description': 'Frequency '
##                  'table, '
##                  'bar '
##                  'chart '
##                  'and '
##                  'histogram',
##   'file': 'mat_matlab',
##   'title': 'One '
##            'Variable '
##            'Graphs '
##            'and '
##            'Tables',
##   'val': 1},
##  {'date': datetime.date(2018, 12, 1),
##   'description': 'Opening '
##                  'a '
##                  'Dataset.',
##   'file': 'mat_algebra_rules',
##   'title': 'Opening '
##            'a '
##            'Dataset',
##   'val': 1.1}]
```

Search and Select by Multiple Keys in Dictionary. Using two keys below:

```
# string to search through
ls_str_file_ids = ['mat_matlab', 'mat_algebra_rules']
# select subset
ls_dc_selected = [dc_exa
                  for dc_exa in ls_dc_exa
                  if ((dc_exa['file'] in ls_str_file_ids)
                      and
                      (dc_exa['val']== 1))]
# print
pprint.pprint(ls_dc_selected, width=1)
```

```
## [{'date': datetime.date(2020, 5, 2),
##   'description': 'Frequency '
##                  'table, '
##                  'bar '
##                  'chart '
##                  'and '
##                  'histogram',
##   'file': 'mat_matlab',
##   'title': 'One '
##            'Variable '
##            'Graphs '
##            'and '
##            'Tables',
##   'val': 1}]
```