
idf-plotter Documentation

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1	Getting started with idf-plotter	1
1.1	Prerequisites	1
1.2	Running idf-plotter the easy way	1
1.3	Running idf-plotter the hard way	1
2	idf-plotter	3
2.1	findreferences module	3
2.2	parseidf module	3
2.3	parsetab module	4
3	Indices and tables	5
	Python Module Index	7

Getting started with idf-plotter

The `idf-plotter` project creates an overview of an EnergyPlus IDF file. If you have EnergyPlus installed on your system, you will have a bunch of these files kicking around. Check the *ExampleFiles* folder of your EnergyPlus installation.

1.1 Prerequisites

You will need to install `ply`:

```
$ pip install ply
```

You will also need to have [GraphViz](#) installed and accessible from your `%PATH%`.

1.2 Running idf-plotter the easy way

The easiest way to use the `idf-plotter` is with the `findreferences.bat` file.

Example:

```
C:\idf-plotter\findreferences.bat C:\EnergyPlusV8-4-0\ExampleFiles\gasAbsorptionChillerHeater.idf
```

This will create a file called `output.dot.pdf` in the current directory.

1.3 Running idf-plotter the hard way

Check the contents of the `findreferences.bat` file:

```
python findreferences.py -i %1 > names.txt
python findreferences.py -i %1 -n names.txt > output.dot
dot -Tpdf -O -v -Gsize="10,15!" -Gratio=0.6 -Nfontname=Arial -Nfontsize=12 -Nshape=box -Ktwopi -Gover
start output.dot.pdf
```

As you can see, `findreferences.bat` calls `findreferences.py`. Twice. Once without the `--names` argument and once with. These two calls work slightly different:

- if `--names` is present, this references a text file containing the list of names to output. Each line of this text file represents an object in the IDF file on a line. The objects are expected to be of the form `CLASS; ID` and the output contains only the `ID` portion. You can pass an edited version of the names text file, e.g. to filter

out unwanted objects. The output of calling `findreferences.py` with a `--names` argument is the DOT graph.

- if `-names` is not present, the output is a `names` text file that can be used in a subsequent call, see above.

2.1 findreferences module

findreferences.py

create a graph of the (named) objects in an idf file. the output is in DOT, so it can be visualized with graphviz.

```
findreferences.get_objects(idf)
findreferences.is_number(s)
findreferences.print_dot(idf, names)
    idf is the output of parseidf.parse(string).
findreferences.print_names(idf)
```

2.2 parseidf module

parseidf.py

parses an idf file into a dictionary of lists in the following manner:

each idf object is represented by a list of its fields, with the first field being the objects type.

each such list is appended to a list of objects with the same type in the dictionary, indexed by type:

```
{ [A] => [ [A, x, y, z], [A, a, b, c], [B] => [ [B, 1, 2], [B, 1, 2, 3] ] }
```

also, all field values are strings, i.e. no interpretation of the values is made.

Note: Use eppy instead!

```
parseidf.p_error(p)
parseidf.p_idffile(p)
    idffile : idfobjectlist
parseidf.p_idfobject(p)
    idfobject : objectname SEMICOLON
parseidf.p_idfobject_with_values(p)
    idfobject : objectname COMMA valuelist SEMICOLON
```

```
parseidf.p_idfobjectlist (p)  
    idfobjectlist : idfobject  
  
parseidf.p_idfobjectlist_multiple (p)  
    idfobjectlist : idfobject idfobjectlist  
  
parseidf.p_objectname (p)  
    objectname : VALUE  
  
parseidf.p_valuelist (p)  
    valuelist : VALUE  
  
parseidf.p_valuelist_multiple (p)  
    valuelist : VALUE COMMA valuelist  
  
parseidf.parse (input)  
    parses a string with the contents of the idf file and returns the dictionary representation.  
  
parseidf.t_COMMENT (t)  
    [ trn]*!.*  
  
parseidf.t_VALUE (t)  
    [ t]*([^!;,n][]*)+[ t]*  
  
parseidf.t_error (t)  
  
parseidf.t_newline (t)  
    [ t]*(r?n)+
```

2.3 parsetab module

Indices and tables

- `genindex`
- `modindex`
- `search`

f

`findreferences`, 3

p

`parseidf`, 3

`parsetab`, 4

F

findreferences (module), 3

G

get_objects() (in module findreferences), 3

I

is_number() (in module findreferences), 3

P

p_error() (in module parseidf), 3

p_idffile() (in module parseidf), 3

p_idfobject() (in module parseidf), 3

p_idfobject_with_values() (in module parseidf), 3

p_idfobjectlist() (in module parseidf), 3

p_idfobjectlist_multiple() (in module parseidf), 4

p_objectname() (in module parseidf), 4

p_valuelist() (in module parseidf), 4

p_valuelist_multiple() (in module parseidf), 4

parse() (in module parseidf), 4

parseidf (module), 3

parsetab (module), 4

print_dot() (in module findreferences), 3

print_names() (in module findreferences), 3

T

t_COMMENT() (in module parseidf), 4

t_error() (in module parseidf), 4

t_newline() (in module parseidf), 4

t_VALUE() (in module parseidf), 4