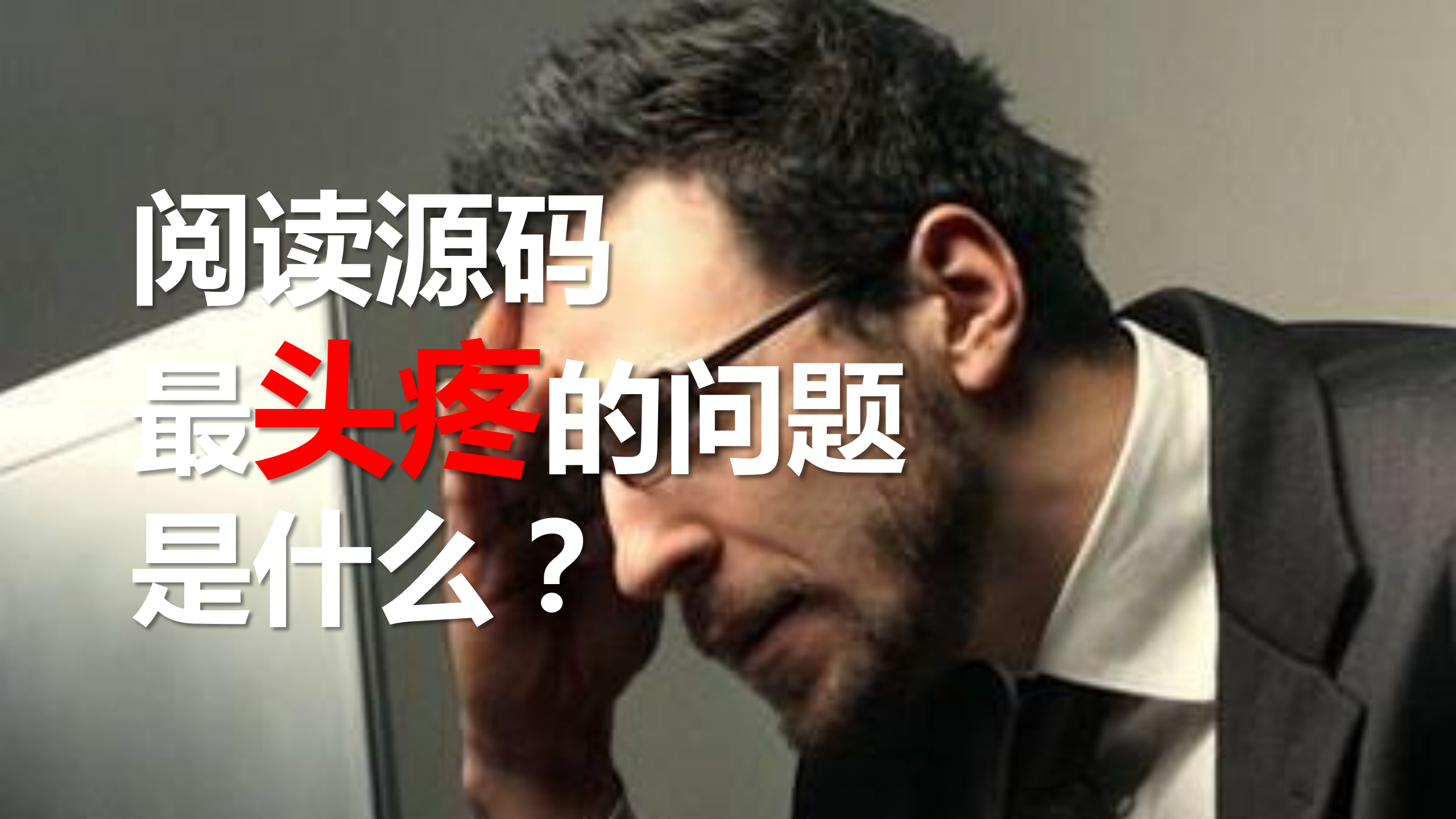
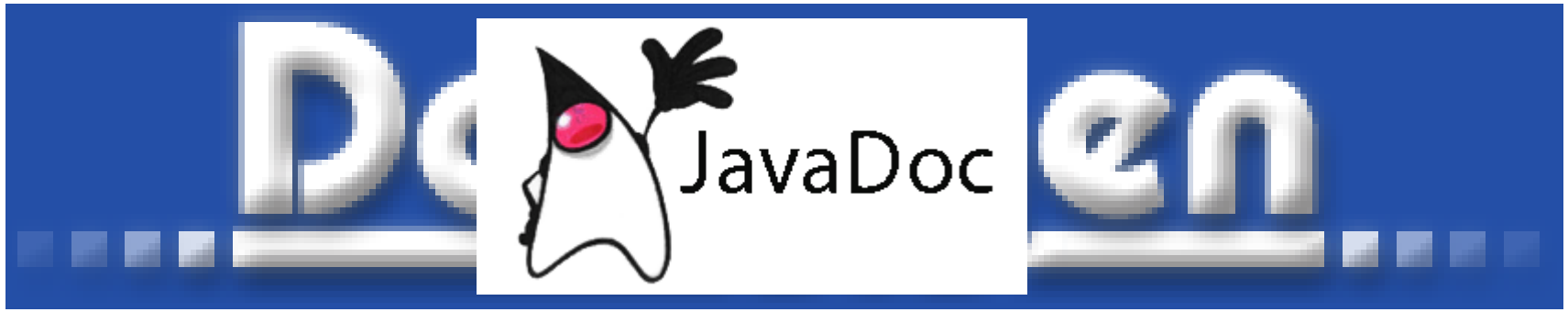
Python文档化

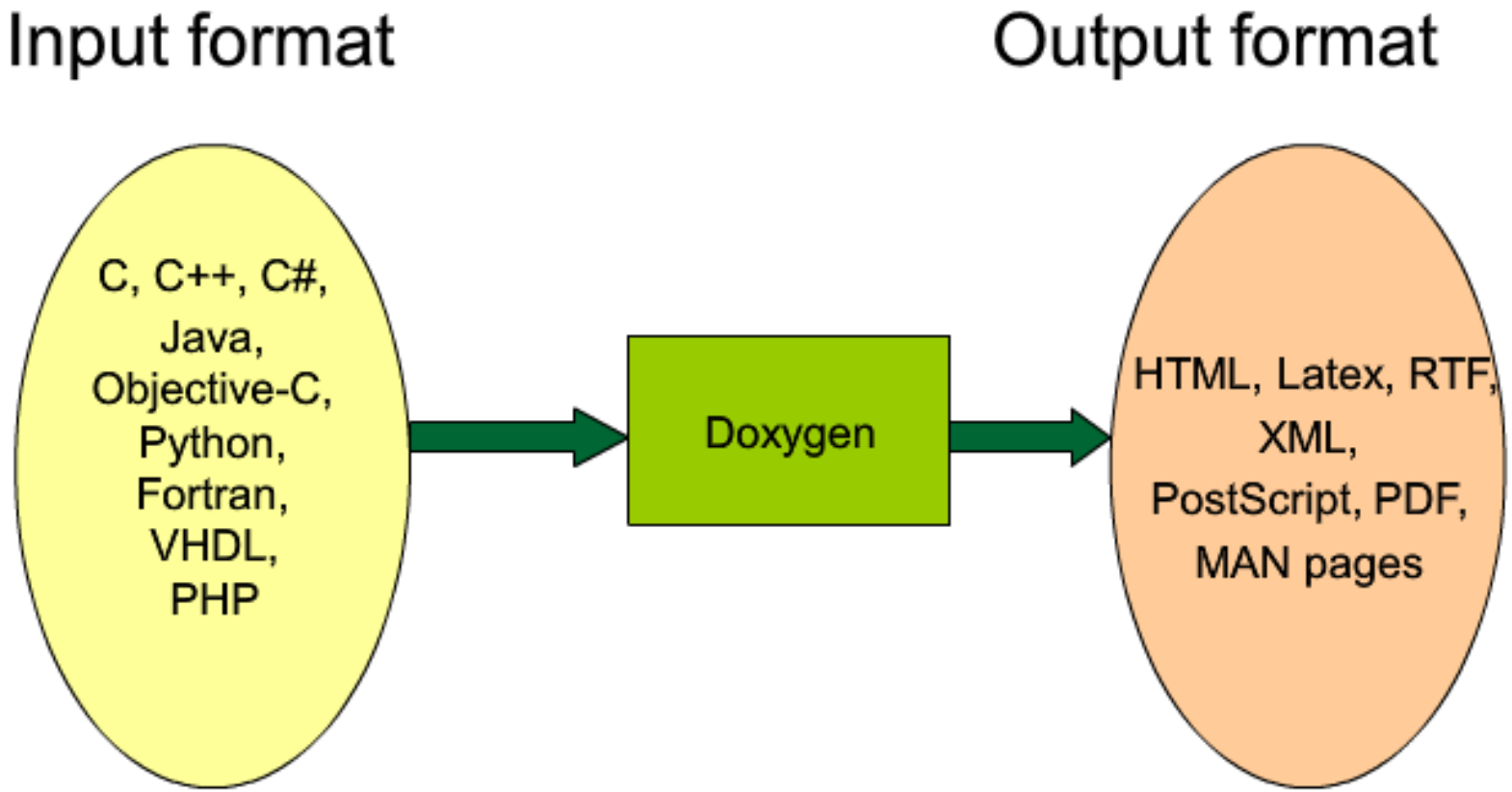
高立琦

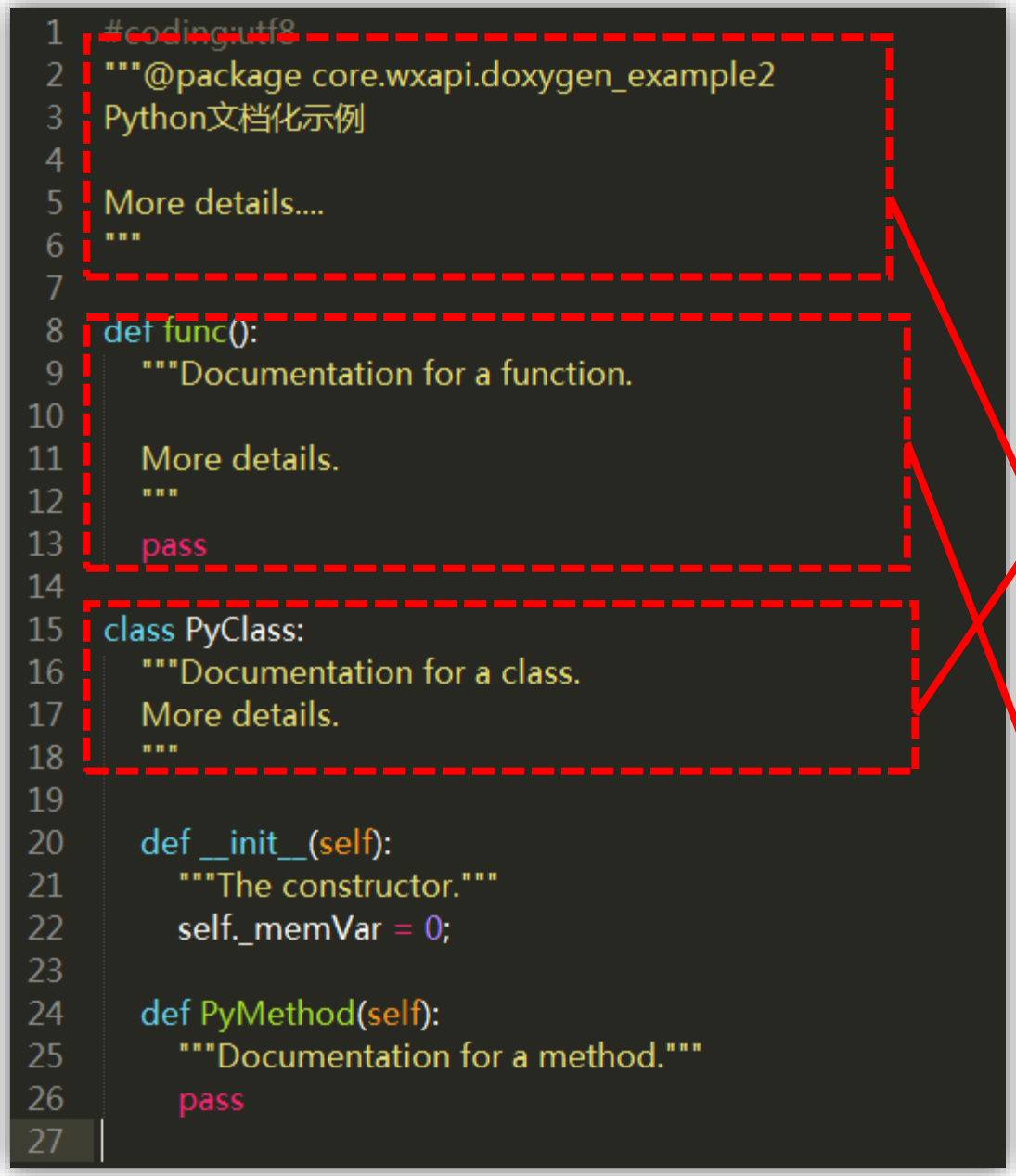

阅读源码
最头疼的问题
是什么？

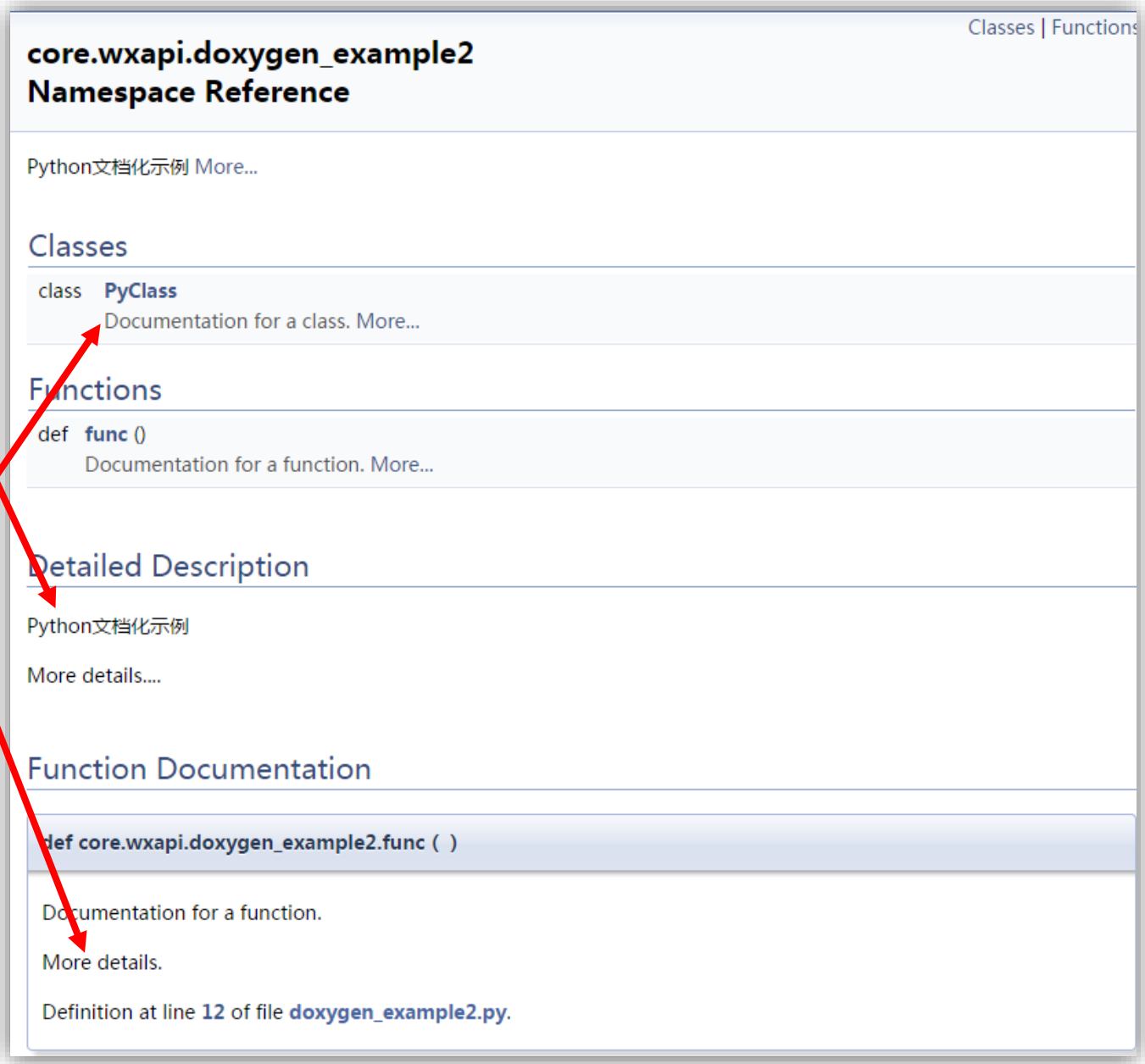
1. 阅读源码没有详细的文档
2. 文档不过、文档与代码不匹配

如何解決？


JavaDoc


Input format
Output format
C, C++, C#,
Java,
Objective-C,
Python,
Fortran,
VHDL,
PHP
Doxygen
HTML, Latex, RTF,
XML,
PostScript, PDF,
MAN pages


#coding:utf8
"""@package core.wxapi.doxygen_example2
Python文档化示例
More details....
"""
def func():
"""Documentation for a function.
More details.
"""
pass
class PyClass:
"""Documentation for a class.
More details.
"""
def __init__(self):
"""The constructor."""
self._memVar = 0;
def PyMethod(self):
"""Documentation for a method."""
pass


Classes | Functions
core.wxapi.doxygen_example2
Namespace Reference
Python文档化示例 More...
Classes
class PyClass
Documentation for a class. More...
Functions
def func ()
Documentation for a function. More...
Detailed Description
Python文档化示例
More details....
Function Documentation
def core.wxapi.doxygen_example2.func ( )
Documentation for a function.
More details.
Definition at line 12 of file doxygen_example2.py.

Classes | Variables

core.wxapi.api_upload_news Namespace Reference

调用用户信息API More...

Classes

class **Articles**

class **WeixinUploadNewsApi**

Variables

string **__author__** = 'paco bert'

string **DEFAULT_CONTENT** = u'↓↓↓详情请点击'

string **SEND_CUSTOM_MSG_URI** = 'cgi-bin/media/uploadnews'

Detailed Description

调用用户信息API

HTTP请求方式：POST

URL： https://api.weixin.qq.com/cgi-bin/media/uploadnews?access_token=ACCESS_TOKEN

操作步骤：

1. 获得api请求地址
2. 获得请求结果 注：异常信息统交给WeixinApi
3. 格式化请求结果
4. 格式化POST数据

参数信息：

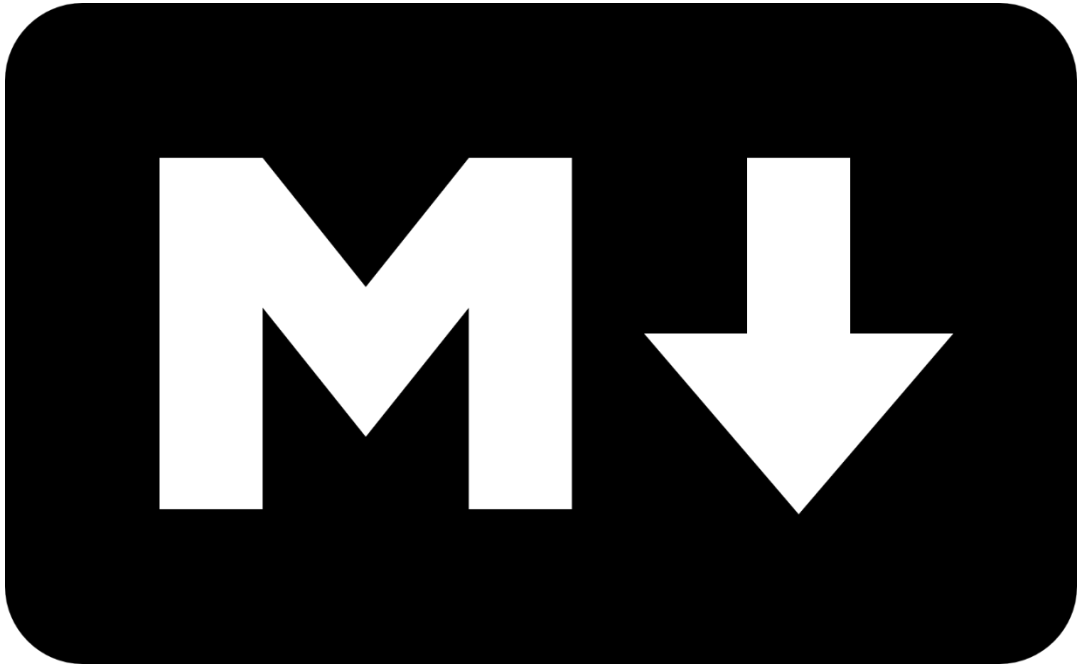
参数	必需	说明
articles	是	图文消息，一个图文消息支持1到10条图文
thumb_media_id	是	图文消息缩略图的media_id，可以在基础支持-上传多媒体文件接口中获得
author	否	图文消息的作者
title	是	图文消息的标题
content_source_url	否	在图文消息页面点击“阅读原文”后的页面
content	是	图文消息页面的内容，支持HTML标签
digest	否	图文消息的描述

举例：

```
{
  "articles": [
        {
      "thumb_media_id":"qI6_Ze_6PtV7svjolgs-rN6stStuHIjs9_DidOHaj0Q-mwvBelOXCFZiq2OsIU-p",
      "author":"xxx",
            "title":"Happy Day",
            "content_source_url":"www.qq.com",
            "content":"content",
            "digest":"digest"
        },
        {
       "thumb_media_id":"qI6_Ze_6PtV7svjolgs-rN6stStuHIjs9_DidOHaj0Q-mwvBelOXCFZiq2OsIU-p",
       "author":"xxx",
            "title":"Happy Day",
            "content_source_url":"www.qq.com",
            "content":"content",
            "digest":"digest"
        }
  ]
}
```

http://192.168.1.39:8080/html/namespacecore_1_1wxapi_1_1api__upload__news.html

Markdown



```
Heading
=======

Sub-heading
-----------

### Another deeper heading

Paragraphs are separated
by a blank line.

Let 2 spaces at the end of a line to do a
line break

Text attributes *italic*, **bold**,
`monospace`, ~~strikethrough~~ .

A [link](http://example.com).
<<<   No space between ] and (  >>>

Shopping list:

  * apples
  * oranges
  * pears

Numbered list:

  1. apples
  2. oranges
  3. pears

The rain---not the reign---in
Spain.
```

Heading

Sub-heading

Another deeper heading

Paragraphs are separated by a blank line.

Let 2 spaces at the end of a line to do a
line break

Text attributes *italic*, **bold**, `monospace` , ~~strikethrough~~.

A link.

Shopping list:

- apples
- oranges
- pears

Numbered list:

1. apples
2. oranges
3. pears

The rain—not the reign—in Spain.

```python
# -*- coding: utf-8 -*-
""" @package core.wxapi.doxygen_example
用Doxygen文档化的范例

@brief Doxygen Python示例

@author Victor <gaoliqi@weizoom.com>
@version $Id$


Doxygen支持Markdown。详细文档参考：[Markdown support](http://www.stack
        nl/~dimitri/doxygen/manual/markdown.html)

目录

[TOC]

\tableofcontents


> 用 \\tableofcontents 也可以
```

core.wxapi.doxygen_example
Namespace Reference

用Doxygen文档化的范例 More...

Functions

def **myfunction**
Does nothing more than demonstrate syntax. More...

Detailed Description

用Doxygen文档化的范例

Doxygen Python示例

Author
Victor gaoliqi@weizoom.com

Version
Id

Doxygen支持Markdown。详细文档参考：Markdown support

目录

> 用 \tableofcontents 也可以

customer_message	客服消息
doxygen_example	用Doxygen文档化的范例
doxygen_example2	Python文档化示例

```
段落
==========
Markdown中不按换行区分段落，用空行分隔段落。例如：

    这是第一个段落。

    这是第二个段落。

```

段落

Markdown中不按换行区分段落，用空行分隔段落。例如：

```
这是第一个段落。

这是第二个段落。
```

```
表格
==========

表格示例
----------

表格示例1：

| 参数 | 必需 | 说明 |
| :---------- | :---: | :---------- |
| articles | 是 | 图文消息，一个图文消息支持1到10条图文 |
| thumb_media_id | 是 | 图文消息缩略图的media_id，可以在基础支持-上传多媒体文件接口中获得 |
| author | 否 | 图文消息的作者 |
| title | 是 | 图文消息的标题 |
| content_source_url | 否 | 在图文消息页面点击“阅读原文”后的页面 |
| content | 是 | 图文消息页面的内容，支持HTML标签 |
| digest | 否 | 图文消息的描述 |

表格示例2：

First Header | Second Header
------------ | ------------
Content Cell | Content Cell
Content Cell | Content Cell
```

表格

表格示例

表格示例1：

参数	必需	说明
articles	是	图文消息，一个图文消息支持1到10条图文
thumb_media_id	是	图文消息缩略图的media_id，可以在基础支持-上传多媒体文件接口中获得
author	否	图文消息的作者
title	是	图文消息的标题
content_source_url	否	在图文消息页面点击“阅读原文”后的页面
content	是	图文消息页面的内容，支持HTML标签
digest	否	图文消息的描述

表格示例2：

First Header	Second Header
Content Cell	Content Cell
Content Cell	Content Cell

```
73  @see  更多指令参见 http://www.stack.nl/~dimitri/doxygen/
          manual/commands.html
74
75  引用块
76  ==========
77
78  > This is a block quote
79  > spanning multiple lines
80
81  列表
82  ==========
83
84  无编号列表：
85
86  - Item 1
87
88    More text for this item.
89
90  - Item 2
91    + nested list item.
92    + another nested item.
93  - Item 3
94
95  有编号列表：
96
97  1. Item1 of list 1
98  3. Item2 of list 1
99  2. Item1 of list 2
100 4. Item2 of list 2
101
102
103 -# item1
104 -# item2
105
106 用*的列表：
107 * item 1
108 * item 2
109
```

See also

更多指令参见 http://www.stack.nl/~dimitri/doxygen/manual/commands.html

引用块

> This is a block quote spanning multiple lines

列表

无编号列表：

- Item 1

  More text for this item.

- Item 2
  - nested list item.
  - another nested item.
- Item 3

有编号列表：

1. Item1 of list 1
2. Item2 of list 1

1. Item1 of list 2
2. Item2 of list 2
3. item1
4. item2

用*的列表：

- item 1
- item 2

```
113  代码块(Fenced Code Blocks)
114  ============
115
116
117  Python代码示例
118  ----------------
119
120  有标号的代码块：
121
122  ~~~~~~~~~~~~~~~~~~~~~~~~~{.py}
123      # A class
124      if __name__=="__main__":
125          print("Hello, world!")
126  ~~~~~~~~~~~~~~~~~~~~~~~~~
127
128
129  ~~~~~~~~~~~~~~~~~~~~~~~
130      # A class
131      class Dummy:
132          pass
133  ~~~~~~~~~~~~~~~~~~~~~~~
134
135  C代码示例
136  --------------
137
138  ~~~~~~~~~~~~~~~~~{.c}
139  int func(int a,int b) {
140      return a*b;
141  }
142  ~~~~~~~~~~~~~~~~~
143
144  ~~~~~~~~~~~~~~~~~
145      int func(int a,int b) {
146          return a*b;
147      }
148  ~~~~~~~~~~~~~~~~~
```

代码块(Fenced Code Blocks)

Python代码示例

有标号的代码块：

```python
# A class
if __name__=="__main__":
    print("Hello, world!")
```

```python
# A class
class Dummy:
    pass
```

C代码示例

```
int func(int a,int b) {
    return a*b;
}
```

```c
int func(int a,int b) {
    return a*b;
}
```

水平线

强调(Emphasis)

single asterisks

single underscores

double asterisks

double underscores

```
150  水平线
151  ==========
152
153  - - -
154  ______
155
156
157  强调(Emphasis)
158  ==========
159
160  *single asterisks*
161
162  _single underscores_
163
164  **double asterisks**
165
166  __double underscores__
```

```
Code spans
==========

Use the `println()` function.


链接
==========

* <http://www.example.com>
* <https://www.example.com>
* <ftp://www.example.com>
* <mailto:address@example.com>
* <address@example.com>
* [http://www.weizoom.com]
* [The link text](http://example.net/)
* [The link text](http://example.net/ "Link title")
* [The link text](/relative/path/to/index.html "Link title")
* [The link text](somefile.html)

I get 10 times more traffic from [Google] than from [Yahoo]
        or [MSN].

[google]: http://google.com/        "Google"
[yahoo]:  http://search.yahoo.com/  "Yahoo Search"
[msn]:    http://search.msn.com/    "MSN Search"

参考资料
==========
@see http://www.stack.nl/~dimitri/doxygen/manual/index.
        html
```

Code spans

Use the println() function.

链接

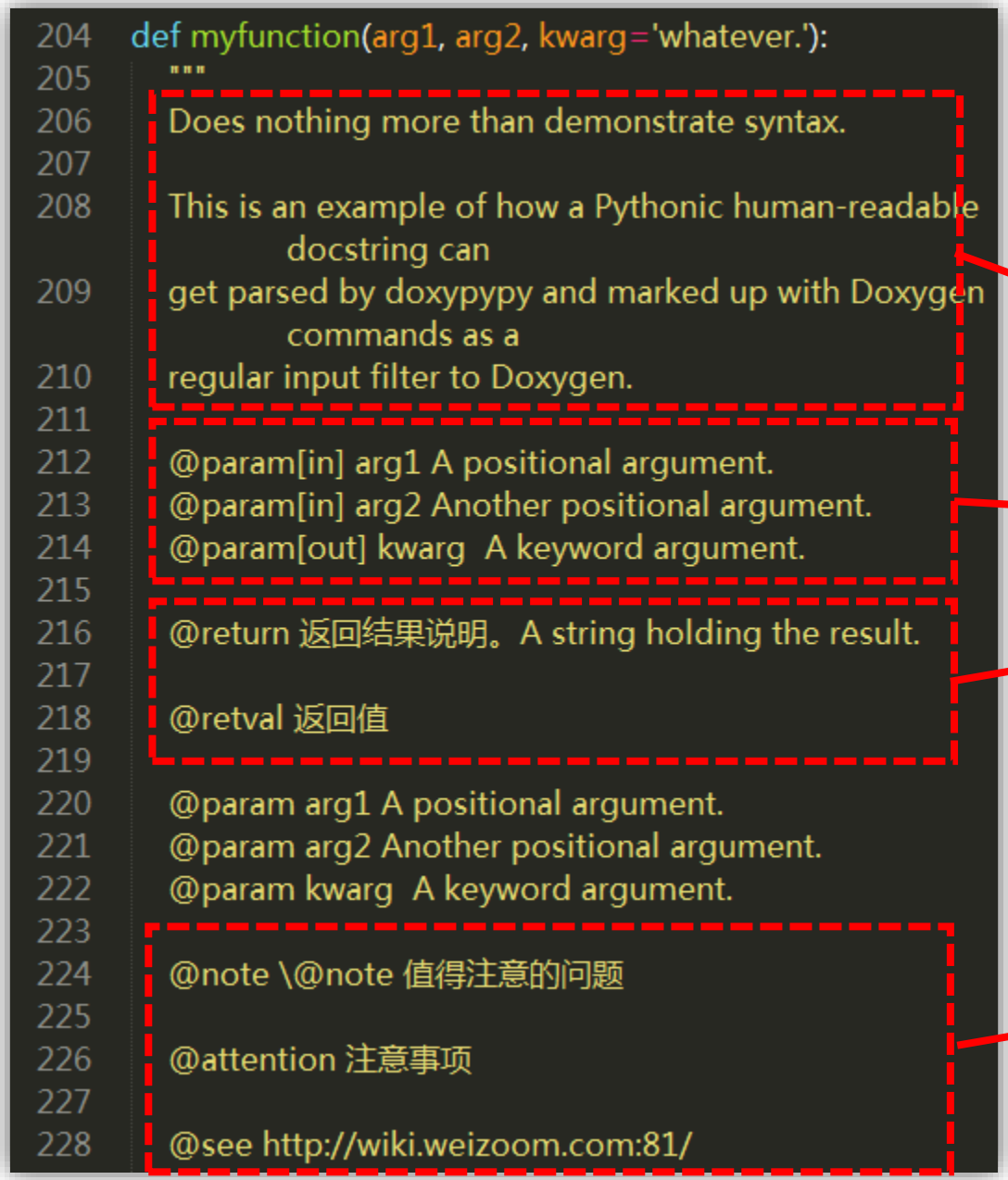
- http://www.example.com
- https://www.example.com
- ftp://www.example.com
- address@example.com
- address@example.com
- [http://www.weizoom.com]
- The link text
- The link text
- The link text
- The link text

I get 10 times more traffic from Google than from Yahoo or MSN.

参考资料

See also

http://www.stack.nl/~dimitri/doxygen/manual/index.html



```
204 def myfunction(arg1, arg2, kwarg='whatever.'):
205     """
206     Does nothing more than demonstrate syntax.
207
208     This is an example of how a Pythonic human-readable
            docstring can
209     get parsed by doxypypy and marked up with Doxygen
            commands as a
210     regular input filter to Doxygen.
211
212     @param[in] arg1 A positional argument.
213     @param[in] arg2 Another positional argument.
214     @param[out] kwarg  A keyword argument.
215
216     @return 返回结果说明。A string holding the result.
217
218     @retval 返回值
219
220     @param arg1 A positional argument.
221     @param arg2 Another positional argument.
222     @param kwarg  A keyword argument.
223
224     @note \@note 值得注意的问题
225
226     @attention 注意事项
227
228     @see http://wiki.weizoom.com:81/
```

Function Documentation

def core.wxapi.doxygen_example.myfunction (arg1, arg2, kwarg = 'whatever.')

Does nothing more than demonstrate syntax.

This is an example of how a Pythonic human-readable docstring can get parsed by doxypypy and marked up with Doxygen commands as a regular input filter to Doxygen.

Parameters

[in] **arg1** A positional argument.

[in] **arg2** Another positional argument.

[out] **kwarg** A keyword argument.

Returns

返回结果说明。A string holding the result.

Return values

返回值

Parameters

arg1 A positional argument.

arg2 Another positional argument.

kwarg A keyword argument.

Note

@note 值得注意的问题

Attention

注意事项

See also

http://wiki.weizoom.com:81/

```
228     @see http://wiki.weizoom.com:81/
229
230     @warning \@warning 警告
231
232     Raises:
233         ZeroDivisionError, AssertionError, & ValueError.
234
235     Examples:
236
237         >>> myfunction(2, 3)
238         '5 - 0, whatever.'
239         >>> myfunction(5, 0, 'oops.')
240         Traceback (most recent call last):
241             ...
242         ZeroDivisionError: integer division or modulo by zero
243         >>> myfunction(4, 1, 'got it.')
244         '5 - 4, got it.'
245         >>> myfunction(23.5, 23, 'oh well.')
246         Traceback (most recent call last):
247             ...
248         AssertionError
249         >>> myfunction(5, 50, 'too big.')
250         Traceback (most recent call last):
251             ...
252         ValueError
253
254     @todo 待做列表
255
256     改进1
257      * 改进2
258
259     @bug \@bug 存在的bug
260
261     bug的描述....
262
263     """
264     assert isinstance(arg1, int)
```

See also

http://wiki.weizoom.com:81/

Warning

@warning 警告

Raises: ZeroDivisionError, AssertionError, & ValueError.

Examples:

```
>>> myfunction(2, 3)
'5 - 0, whatever.'
>>> myfunction(5, 0, 'oops.')
Traceback (most recent call last):
    ...
ZeroDivisionError: integer division or modulo by zero
>>> myfunction(4, 1, 'got it.')
'5 - 4, got it.'
>>> myfunction(23.5, 23, 'oh well.')
Traceback (most recent call last):
    ...
AssertionError
>>> myfunction(5, 50, 'too big.')
Traceback (most recent call last):
    ...
ValueError
```

Todo:

待做列表

```
改进1
 * 改进2
```

Bug:

@bug 存在的bug

```
bug的描述....
```

Definition at line **263** of file **doxygen_example.py**.

```python
def __extract_items(request):
    """
    抽取activity items
    """
    id2info = {}
    for key, value in request.POST.items():
        if not key.startswith('item_'):
            continue

        _, type, name, id = key.split('_')
        if type == 'text':
            type = ACTIVITYITEM_TYPE_TEXT
```

```
list_activities: 显示活动列表 More...
def market_tools.tools.activity.views.create_activity (request)
    添加活动 More...
def market_tools.tools.activity.views.update_activity (request, activity_id)
    update_activity: 更新活动 More...
def market_tools.tools.activity.views.update_activity_status (request, activity_id)
    update_activity_status: 更改活动状态 More...
def market_tools.tools.activity.views.delete_activity (request, activity_id)
```

```python
TYPE_TEXT_NAME = "text_%s"
TYPE_SELECT_NAME = "select_%s"
TYPE_IMAGE_NAME = "image_%s"
TYPE_SELECT_OPTION = "option_%s"
@login_required
def create_activity(request):
    """
    添加活动
    """
    if request.POST:
        name = request.POST["name"]
        detail =request.POST.get("detail", '')
        guide_url = request.POST.get("guide_url", '')
        is_enable_offline_sign = request.POST.get("is_enable_offline_sign", False)
        is_non_member = request.POST.get("is_non_member", False)
        prize_type = request.POST.get("prize_type", '-1')
        prize_source = request.POST.get("prize_source", '')
```

- 源码头部记录
  - 此源码做什么
  - 对理解源码有帮助的信息，比如接口、原理
- 函数
  - 此函数做什么的
  - 记录参数
  - 返回值/返回类型
  - 值得注意
  - 参考
  - TODO列表

Doxygen指令

Doxygen指令	说明
@param	参数说明
@type	参数类型
@see	参考
@brief	简要说明，在doxygen生成的目录中显示
@note	值得注意的问题
@author	作者
@attention	注意事项
@bug	bug
@warning	警告

See also

更多指令参见 http://www.stack.nl/~dimitri/doxygen/manual/commands.html

生成文档

- 编辑Doxygen文件
- 执行doxygen
  - 用cygwin中的doxygen
- 生成文档

让写文档变成享受