

PYTHON CODE ANALYSIS

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1. Introduction

1.1. Description

This is a report document of the code in Python for project **Ex**. The files of the project are:

- `scriptSelector.py`
- `task1.py`
- `task2.py`

1.2. Objectives

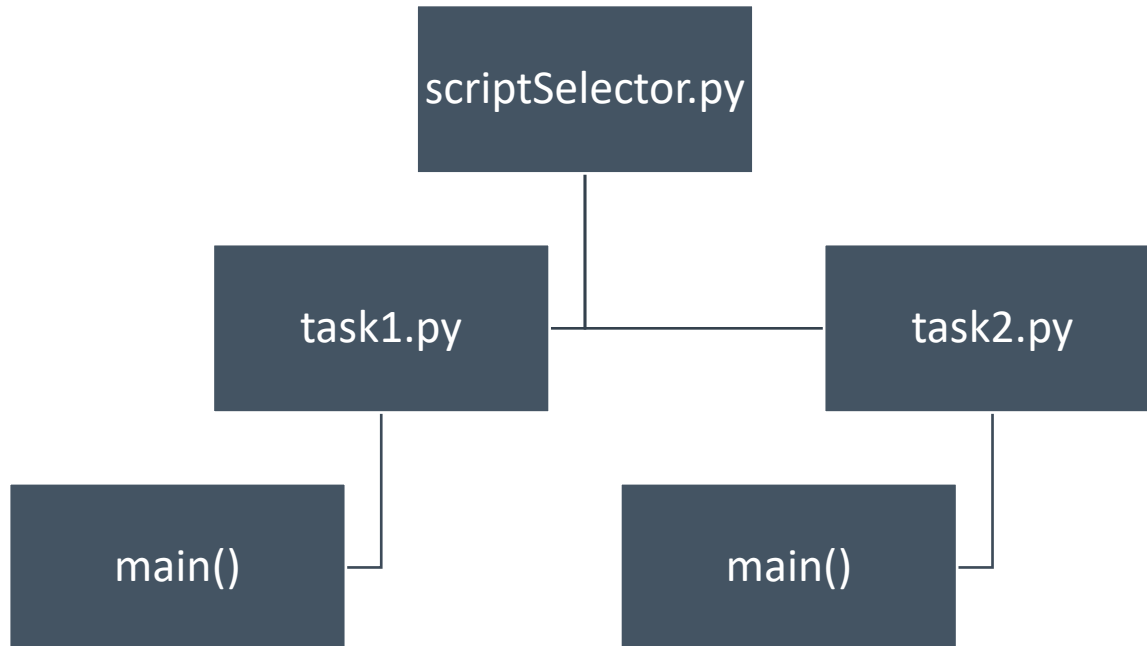
The objective of the document is to extract from the project coded in Python the main components, with the functions, the variables. This is the way to have a better understanding of the code, and to shorten the time to manage any improvement or modification of the code.

The document includes:

- The functions
- The variables
- The relationship between them
- The imported libraries
- The list of comments

1.3. The structure of the project

The structure of the code is:



2. The programs

The list of programs of the project is detailed in the next section

2.1. scriptSelector.py

Imported libraries are:

- task1: line 1
- task2: line 2

Defined functions are:

- There are no defined functions

The comments on code are:

- Case insensitive: line 7
- we exit the infinite loop: line 9

The used variables are:

- mode
 - First use in line 5
 - Next uses:
 - Use: lines 8, 10 and 12

The used functions are:

- Generic:
 - input(): line 5
 - lower(): line 7
 - print(): line 15
- from task1:
 - main(): line 11
- from task2:
 - main(): line 13

2.2. task1.py

Imported libraries are:

- pdfkit: line 1
- requests: line 2

Defined functions are:

- main(): line 5

The comments on code are:

- get the information from the url: line 7
- we get the text from the url, then remove the marquee from the original document: line 10
- and change the encoding to make sure special characters get rendered properly in the pdf: line 11
- generate the pdf: line 13

The used variables are:

- url:
 - First use in line 6
 - Next uses:
 - With functions:
 - requests.get(): line 7
- r:
 - First use in line 7
 - Next uses:
 - Operators:
 - .text.replace: line 9
- html:
 - First use in line 9
 - Next uses:
 - With functions:
 - pdfkit.from_string(): line 13

The used functions are:

- From requests library:
 - get(): line 7
- From pdfkit library:
 - from_string(): line 13
- With variable r:
 - .text.replace(): line 9
- From task1:
 - main(): line 17
- Generic:
 - replace: line 9

2.3. task2.py

Imported libraries are:

- requests: line 1
- random: line 2
- pdfkit: line 3
- BeautifulSoup imported from bs4: line 4

Defined functions are:

- main(): line 7

The comments on code are:

- We retrieve the verbs and store them for later use: line 12
- Pdf formatting: line 31
- # if the last number given by the user is larger than the number of verbs remaining, we adjust it: line 47
- Complete Table: line 63
- Partial Table: line 67

The used variables are:

- verbInfo:

- First use in line 8
- Next uses:
 - With functions:
 - requests.get(): line 9
- verbDoc:
 - First use in line 9
 - Next uses:
 - With functions:
 - BeautifulSoup(): line 10
- soup:
 - First use in line 10
 - Next uses:
 - With functions:
 - Enumerate(): line 18
 - Operators:
 - .stripped_strings: line 18
- infinitive:
 - First use in line 13
 - Next uses:
 - With functions:
 - format(): line 65, 73
 - Operators:
 - .append: line 21
- past:
 - First use in line 14
 - Next uses:
 - With functions:
 - format(): line 65, 76
 - Operators:
 - .append(): line 23
- pastParticiple:
 - First use in line 15
 - Next uses:
 - With functions:
 - format(): line 65, 81
 - Operators:
 - .append: line 27
- catalan:
 - First use in line 16
 - Next uses:
 - With functions:
 - format(): line 65, 85
 - Operators:
 - .append: line 29
- readStrings:

- First use in line 18
- Next uses:
 - Use: line 19, 20, 22, 24, 28
- string:
 - First use in line 18
 - Next uses:
 - Use: line 19, 21, 23, 25, 27, 29
 - Operators:
 - .append: line 26
- head:
 - First use in line 33
 - Next uses:
 - With functions:
 - pdfkit.from_string(): line 89, 90
- verblists:
 - First use in line 38
 - Next uses:
 - Reassignment: line 49
 - Use: line 49
 - With functions:
 - len(): line 49
 - enumerate(): line 52
 - Operators:
 - .append: line 44
- numVerbs:
 - First use in line 39
 - Next uses:
 - Reassignment: line 49
 - Use: line 42, 47, 48, 49
- n:
 - First use in line 41
 - Next uses:
 - Reassignment: line 45, 48
 - Use: line 42, 45, 47, 48, 49
- userInput:
 - First use in line 43
 - Next uses:
 - Use: line 44, 45
- lastVerb:
 - First use in line 51
 - Next uses:
 - Reassignment: line 91
 - With functions:
 - range(): line 62
- index:
 - First use in line 52

- Next uses:
 - With functions:
 - format(): line 89, 90
- number:
 - First use in line 52
 - Next uses:
 - Use: line 91
 - With functions:
 - format(): line 56, 60
 - range(): line 62
- answerSheet:
 - First use in line 54
 - Next uses:
 - Reassignment: line 64, 87
 - With functions:
 - pdfkit.from_string(): line 89
- quizSheet:
 - First use in line 58
 - Next uses:
 - Reassignment: line 72, 76, 80, 84, 88
 - With functions:
 - pdfkit.from_string(): line 90
- x:
 - First use in line 62
 - Next uses:
 - Use: line 65, 73, 76, 82, 85
- c:
 - First use in line 69
 - Next uses:
 - Use: line 71, 75, 79

The used functions are:

- From task2:
 - main(): line 95
- From random library:
 - randint(): line 69
- From requests library:
 - get(): line 9
- From bs4 library:
 - BeautifulSoup(): line 10
- From pdfkit:
 - from_string(): line 89, 90
- Generic:
 - enumerate(): line 18, 52
 - int(): line 43
 - input(): line 43

- len(): line 49
 - format(): line 56, 60, 65, 72, 76, 80, 84, 89, 90
 - range(): line 62
- with variable soup:
 - .stripped.strings: line 18
- With variable infinitive:
 - .append: line 21
- With variable past:
 - .append: line 23
- With variable string:
 - .append: line 26
- With variable pastParticiple:
 - .append: line 27
- With variable catalan:
 - .append: line 29
- With variable verblists:
 - .append: line 44

3. Some statistics

The project has 3 programs, with 2 defined functions. The program define 25 variables and import 4 libraries (external libraries) on 130 lines of python code.