Osnova

Review test Intro

PYTHON ACADEMY / PROJECT 1: TEXT ANALYZER / REVIEW TEST INTRO

Awesome! You are about to do your first project :)

However, before we set you off to dive into it, you should really go through the review test that is about to follow. It will test your knowledge from the previous 4 lessons. Depending on your score, you should consider revision of the particular lesson.

Good luck with the test as well as the project!

Review test 1-4

PYTHON ACADEMY / PROJECT 1: TEXT ANALYZER / REVIEW TEST 1-4

1/15

show questions

Which of the following conversion expressions will return error?

- [ ] dict('name' = 'John')
- [ ] tuple({'name':'John'})

75% z Lekce 5

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PROJECT

Before we start

PYTHON ACADEMY / PROJECT 1: TEXT ANALYZER / PROJECT / BEFORE WE START

You are about to write your very first complex project. Before you start reading the description, we'd like to tell you something about PEP-8. It might sound strange, but we'll explain in the following paragraphs. :)

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Before first lessons we were focused on Python syntax and basic concepts. We didn't want to overwhelm you with information apart what's really needed. Now, you understand those concepts and we believe you are ready to hear a little bit about **PEP-8**. Strange name, what is it? It's a **coding standard and style guide for readability and maintainability**. It's true that you do not have to write you code in PEP-8 standard for your code to work, but it's a good coding practice you should follow.

Everything you need to know about PEP-8 can be found at pep8.org or official Python webpage.

Make it easy for you and for others

Your goal should be to write code that is **understandable not only by you, but also by others**. Imagine this project - our lecturers will be reviewing the code. You can make it easier for them. If they completely understand your code and how you meant to write those lines, you can receive **better feedback**. And not only that - imagine yourself as a future programmer. You'll be in a team with another programmers. It'll be appreciated if your colleagues can read your code, and remember, you will be reading theirs, too. :)

Project Description

Great! You are now familiar with PEP-8 standard. We believe that you'll keep this standard in mind while working on this project. Alright, no more words from our side, just take a look at the project description below. :)

Guidelines

- At the beginning, **please download** the file template into which you will write your code. The template already contains text which your program should be analyzing.
- Once you will be satisfied with your solution, please, **send it via e-mail** to your lecturer for evaluation.
- There's **no deadline** for you to complete the project. We understand that you might not

- Osnova keep in mind that you are **eligible to have your project reviewed** by our ... you have **access** to this course. You have **access for 6 months since the start** of your Python Academy run. So, if you have a lot of work to do, it's okay to send the code for evaluation let's say after 10th lesson. But it's not possible, for example, one year after you started attending academy.
- If you have any questions, feel free to **use Live Chat** (bottom right corner) to seek our help.

Task Description

Let's create a program that will perform the following tasks:

1. Greet or welcome the user to the app
2. Ask the user for entering username and password
3. Check whether the password and username entered are among those registered.

The registered username - password pairs:

```
| USER |   PASSWORD  |
-----------------------
| bob  |     123     |
| ann  |    pass123  |
| mike | password123 |
| liz  |    pass123  |
```

If you consider this task difficult, then just check, whether the username and password entered are among the registered, without taking care of pairing them together.

4. Ask the user to select among the three texts stored in the variable TEXTS.
5. Calculate the following statistics for the selected text:
    - number of words in total
    - number of words starting with capital letter
    - number of uppercase words
    - number of lowercase words

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6. Create a chart depicting the frequencies of word lengths in the text. For example:

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```
1 * 1
 2 *********** 11
 3 *************** 15
 4 ********* 9
 5 ********** 10
```

In the above chart, there is one word of length 1, 11 words of length 2, 15 words of length 3 etc.

7. Calculate the sum of all the numeric "words" in the given text. For example the sum for the string below would be 8500:

```
"that rises sharply some 1000 feet above
Twin Creek Valley to an elevation of more
than 7500 feet above sea level. The butte
is located just north of US 30N"
```

Your program could run as follows:

```
[engeto@localhost PythonLesson3]$ python task.py
----------------------------------------
Welcome to the app. Please log in:
USERNAME: bob
PASSWORD: 123
----------------------------------------
We have 3 texts to be analyzed.
Enter a number btw. 1 and 3 to select: 2
----------------------------------------
There are 62 words in the selected text.
There are 10 titlecase words
There are 0 uppercase words
There are 51 lowercase words
There are 1 numeric strings
----------------------------------------
 2 ******* 7
 3 ***************** 17
```

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```
 5 ********** 10
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 7 *** 3
 8 ** 2
 9 ***** 5
10 * 1
13 * 1
----------------------------------------
If we summed all the numbers in this text we would get: 300.0
----------------------------------------
```

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