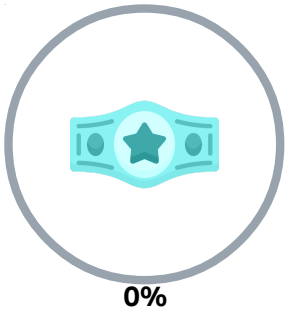
(/)



0%

Python - Data Structures: Lists, Tuples

Python

Novice

By: Guillaume, CTO at Holberton School

Weight: 1

Your score will be updated once you launch the project review.

Resources

Read or watch:

- 3.1.3. Lists (/rltoken/-vGmGe2QK7CIJo3wlF8KkQ)
- Data structures (/rltoken/5w7PFn_PegrzAn9XIcfleg) (*until* `5.3. Tuples and Sequences` *included*)
- Learn to Program 6 : Lists (/rltoken/vsgUpiiT05irvEVpr81gPQ)

Learning Objectives

At the end of this project, you are expected to be able to explain to anyone (/rltoken/mmqmx8Ww9hj4ELNh5F7WGg), **without the help of Google**:

General

- Why Python programming is awesome
- What are lists and how to use them
- What are the differences and similarities between strings and lists
- What are the most common methods of lists and how to use them
- How to use lists as stacks and queues
- What are list comprehensions and how to use them
- What are tuples and how to use them
- When to use tuples versus lists
- What is a sequence

- What is tuple packing
- What is sequence unpacking
- What is the `del` statement and how to use it

Requirements

Python Scripts

- Recommended editor: `Visual studio code`
- All your files will be interpreted/compiled on Ubuntu 20.04 LTS using `python3` (version 3.4.3)
- All your files should end with a new line
- A `README.md` file, at the root of the folder of the project, is mandatory
- Your code should use the `PEP 8` style (version 1.7.*)
- The length of your files will be tested using `wc`

Quiz questions

Great! You've completed the quiz successfully! Keep going! (Show quiz)

Tasks

0. Can you C me now?

mandatory

Write a function that removes all characters `c` and `C` from a string.

- Prototype: `def no_c(my_string):`
- The function should return the new string
- You are not allowed to import any module
- You are not allowed to use `str.replace()`

0)

```
guillaume@ubuntu:~/$ cat 0-main.py
#!/usr/bin/env python3
no_c = __import__('0-no_c').no_c

print(no_c("Holberton School"))
print(no_c("Chicago"))
print(no_c("C is fun!"))

guillaume@ubuntu:~/$ ./0-main.py
Holberton Shool
hiago
 is fun!
guillaume@ubuntu:~/$
```

Repo:

- GitHub repository: `alx_python`
- Directory: `python-data_structures`
- File: `0-no_c.py`

Help | Check your code | >_ Get a sandbox

0/10 pts

1. Lists of lists = Matrix

mandatory

Write a function that prints a matrix of integers.

- Prototype: `def print_matrix_integer(matrix=[[]]):`
- Format: see example
- You are not allowed to import any module
- You can assume that the list only contains integers
- You are not allowed to cast integers into strings
- You have to use `str.format()` to print integers

```
guillaume@ubuntu:~/$ cat 1-main.py
#!/usr/bin/python3
print_matrix_integer = __import__('1-print_matrix_integer').print_matrix_integer

matrix = [
    [1, 2, 3],
    [4, 5, 6],
    [7, 8, 9]
]

print_matrix_integer(matrix)
print("--")
print_matrix_integer()

guillaume@ubuntu:~/$ ./1-main.py | cat -e
1 2 3$
4 5 6$
7 8 9$
--$
$
guillaume@ubuntu:~/$
```

Repo:

- GitHub repository: `alx_python`
- Directory: `python-data_structures`
- File: `1-print_matrix_integer.py`

Help | Check your code | >_ Get a sandbox **0/10** pts

2. More returns! mandatory

Write a function that returns a tuple with the length of a string and its first character.

- Prototype: `def multiple_returns(sentence):`
- If the sentence is empty, the first character should be equal to `None`
- You are not allowed to import any module

7)

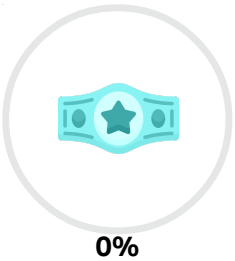
```
guillaume@ubuntu:~/$ cat 2-main.py
#!/usr/bin/python3
multiple_returns = __import__('2-multiple_returns').multiple_returns

sentence = "At Holberton school, I learnt C!"
length, first = multiple_returns(sentence)
print("Length: {:d} - First character: {}".format(length, first))

guillaume@ubuntu:~/$ ./2-main.py
Length: 32 - First character: A
guillaume@ubuntu:~/$
```

Repo:

- GitHub repository: `alx_python`
- Directory: `python-data_structures`
- File: `2-multiple_returns.py`

Help | Check your code | >_ Get a sandbox **0/8** pts

Score



0%

Your score will be updated once you launch the project review.

Please review **all the tasks** before you start the peer review.

Review all the tasks | Skip this project

Previous project (/projects/2056)