Test for applicants of Project 7: Stem cell database

Background

This is an exercise which is suppose to be used to evaluate the programming skills of the individual candidates of Project 7: Stem cell database.

You should solve this exercise using python and the resulting script should work on python version 3.6 or higher. You should collect all code in one single file called `main.py`.

You are free to solve this exercise however you like (i.e you can use any resources you like). You will be evaluated on coding style (i.e how do you write your code), documentation (how easy is it to understand how to use your program and what it does) and of course whether you managed to solve the exercises correctly.

Exercises

Exercise 1

Together with this document you should have received a yaml-file called `input.yaml`. By using the correct tool, you can read the content of this file into a python dictionary. Write a function that reads the content of this file and returns the value of the `url` field.

- Hint: There is a python package called `pyyaml` that you can use for this.

Exercise 2

Get the data from the `url`

- Hint: You can use the function `get` from a a package called `request` to get the data.

Exercise 3

The data that you collected from Exercise 2 is a list of dictionaries, with each dictionary having the keys `userId`, `id`, `title` and `completed`. For example one of the elements is

```
{
    "userId": 1,
    "id": 1,
    "title": "delectus aut autem",
```

```
    "completed": False
}
```

Many of the elements share the same value of `userID`. For each distinct value of `userId` print the total number of elements in the list.

Example output could be

```
$ python main.py

Total:
userId  Num
     1   20
     2   20
     3   20
     4   20
     5   20
     6   20
     7   20
     8   20
     9   20
    10   20
```

Exercise 4

Create a new list that includes only those elements with `completed == True`.

Exercise 5

Repeat Exercise 3 for the new list that you obtained in Exercise 4.

Exercise 6

Save the new list that you obtained in Exercise 4 to a yaml file called `output.yaml`.

- Hint: You can use the same package as you used in Exercise 1.