

Collection Data Types Programming Assignments

You are to submit three files:

```
external_sites.py  
uniquewords2.py  
generate_usernames.py
```

1. ExternalSites

Modify the `external_sites.py` program to use a default dictionary. This is an easy change requiring an additional import, and changes to just two other lines.

2. UniqueWords2

Modify the `uniquewords2.py` program so that it outputs the words in frequency of occurrence order rather than in alphabetical order. You'll need to iterate over the dictionary's items and create a tiny two-line function to extract each item's value and pass this function as `sorted()`'s key function. Also, the call to `print()` will need to be changed appropriately. This isn't difficult, but it is slightly subtle.

3. GenerateUsernames2

Modify the `generate_usernames.py` program so that it prints the details of two users per line, limiting names to 17 characters and outputting a form feed character after every 64 lines, with the column titles printed at the start of every page.

Here's a sample of the expected output:

Name	ID	Username	Name	ID	Username
Aitkin, Shatha...	(2370)	saitkin	Alderson, Nicole.	(8429)	nalderso
Allison, Karma...	(8621)	kallison	Alwood, Kole E...	(2095)	kealwood
Annie, Neervana..	(2633)	nannie	Apperson, Lucyann	(7282)	leappers

This is challenging. You'll need to keep the column titles in variables so that they can be printed when needed, and you'll need to tweak the format specifications to accommodate the narrower names. One way to achieve pagination is to write all the output items to a list and then iterate over the list using striding to get the left- and right-hand items, and using `zip()` to pair them up. The file `users.txt` provides an example data file and a longer sample data file is provided in `users2.txt`.