

Software Development Fundamentals-II(15B11C211)

Project Based Learning

Word-Play

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Introduction

This project aims at helping a person to sharpen his/her vocabulary with random english words thrown to them when he/she decides to run the program. The user can run it as per their choice , every time they feel like learning a new English word. Also this program provides the functionality to add a word to his/her collection and review those bunch of words in future for references. In addition to that it also provides a dictionary tool that helps you search the meanings of any other arbitrary word of your choice.

Functionality

This is a menu driven program written in c++, which offers the following choice when you run it.

```
----- Welcome to Wordplay (•_•) -----  
  
Enter choice  
1 -to generate the Word of the day.  
2 -to search for a word.  
3 -to display your collection of words.  
4 -to quit WordPlay  
█
```

When you generate a random word by entering '1'.

```
----- Welcome to Wordplay (•_•) -----  
  
Enter choice  
1 -to generate the Word of the day.  
2 -to search for a word.  
3 -to display your collection of words.  
4 -to quit WordPlay  
1  
The word of the day is:  
Wild  
Various meanings of Wild in the English language are:  
-adj. 1 in its original natural state; not domesticated, cultivated, or civilized (wild cat; wild strawberry). 2 unrestrained, dis  
orderly, uncontrolled (wild youth; wild hair). 3 tempestuous (wild night). 4 intensely eager, frantic (wild excitement; wild delig  
ht). 5 (foll. By about) colloq. Enthusiastically devoted to. 6 colloq. Infuriated. 7 haphazard, ill-aimed, rash (wild guess; wild  
venture). 8 colloq. Exciting, delightful. -adv. In a wild manner. -n. 1 wild tract of land. 2 desert. in the wild in an uncultiva  
ted etc. State. In the wilds colloq. Far from towns etc. Run wild grow or stray unchecked or undisciplined. wildly adv. Wildness  
n. [old english]  
  
Enter 1-to add this word to your collection, 0-to pass.  
█
```

In this case “Wild” is the word of the day. You can either wish to add this to your collection or pass. We will just add this in our collection.

```
----- Welcome to Wordplay (•_•) -----

Enter choice
1 -to generate the Word of the day.
2 -to search for a word.
3 -to display your collection of words.
4 -to quit WordPlay
1
The word of the day is:
Wild
Various meanings of Wild in the English language are:
-adj. 1 in its original natural state; not domesticated, cultivated, or civilized (wild cat; wild strawberry). 2 unrestrained, dis
orderly, uncontrolled (wild youth; wild hair). 3 tempestuous (wild night). 4 intensely eager, frantic (wild excitement; wild delig
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venture). 8 colloq. Exciting, delightful. -adv. In a wild manner. -n. 1 wild tract of land. 2 desert. in the wild in an uncultiva
ted etc. State. In the wilds colloq. Far from towns etc. Run wild grow or stray unchecked or undisciplined. wildly adv. Wildness
n. [old english]

Enter 1-to add this word to your collection, 0-to pass.
1
Wild was successfully added to your collection 🐾🐾🐾

Enter choice
1 -to generate the Word of the day.
2 -to search for a word.
3 -to display your collection of words.
4 -to quit WordPlay
█
```

If you wish to search for a word. You need to press ‘2’ in the main menu.

```
Enter choice
1 -to generate the Word of the day.
2 -to search for a word.
3 -to display your collection of words.
4 -to quit WordPlay
1
The word of the day is:
Wild
Various meanings of Wild in the English language are:
-adj. 1 in its original natural state; not domesticated, cultivated, or civilized (wild cat; wild strawberry). 2 unrestrained, dis
orderly, uncontrolled (wild youth; wild hair). 3 tempestuous (wild night). 4 intensely eager, frantic (wild excitement; wild delig
ht). 5 (foll. By about) colloq. Enthusiastically devoted to. 6 colloq. Infuriated. 7 haphazard, ill-aimed, rash (wild guess; wild
venture). 8 colloq. Exciting, delightful. -adv. In a wild manner. -n. 1 wild tract of land. 2 desert. in the wild in an uncultiva
ted etc. State. In the wilds colloq. Far from towns etc. Run wild grow or stray unchecked or undisciplined. wildly adv. Wildness
n. [old english]

Enter 1-to add this word to your collection, 0-to pass.
1
Wild was successfully added to your collection 🐾🐾🐾

Enter choice
1 -to generate the Word of the day.
2 -to search for a word.
3 -to display your collection of words.
4 -to quit WordPlay
2
Enter a word to search(first letter uppercase, rest lowercase)
Rodeo
The word you entered is:
Rodeo
Various meanings of Rodeo in the English language are:
n. (pl. -s) 1 exhibition of cowboys' skills in handling animals. 2 round-up of cattle on a ranch for branding etc. [spanish]
Enter 1-to add this word to your collection, 0-to pass.
█
```

The word we entered here was “Rodeo” and then several meanings of it got displayed to your screen. You can also add the searched word to your collection.

NOTE that you need to enter a word in the specific format i.e. first letter uppercase and rest normal case.

Lastly if you wish to display your collection of words, you can do that by entering '3' again in the main menu.

```
-----WELCOME TO YOUR PERSONAL COLLECTION-----  
  
-----  
Word: Rattlesnake  
Meanings:  
n. Poisonous american snake with a rattling structure of horny rings on its tail.  
-----  
Word: Commotion  
Meanings:  
n. Confused and noisy disturbance, uproar. [latin: related to *com-]  
-----  
Word: Cancel  
Meanings:  
v. (-ll-; us -l-) 1 revoke or discontinue (an arrangement). 2 delete (writing etc.). 3 mark (a ticket, stamp, etc.) To invalidate it. 4 annul; make void. 5 (often foll. By out) neutralize or counterbalance. 6 math. Strike out (an equal factor) on each side of an equation etc. cancellation n. [latin: related to *chancel]  
-----  
Word: Wild  
Meanings:  
-adj. 1 in its original natural state; not domesticated, cultivated, or civilized (wild cat; wild strawberry). 2 unrestrained, disorderly, uncontrolled (wild youth; wild hair). 3 tempestuous (wild night). 4 intensely eager, frantic (wild excitement; wild delight). 5 (foll. By about) colloq. Enthusiastically devoted to. 6 colloq. Infuriated. 7 haphazard, ill-aimed, rash (wild guess; wild venture). 8 colloq. Exciting, delightful. -adv. In a wild manner. -n. 1 wild tract of land. 2 desert. in the wild in an uncultivated etc. State. In the wilds colloq. Far from towns etc. Run wild grow or stray unchecked or undisciplined. wildly adv. Wildness n. [old english]  
-----  
Word: Rodeo  
Meanings:  
n. (pl. -s) 1 exhibition of cowboys' skills in handling animals. 2 round-up of cattle on a ranch for branding etc. [spanish]
```

NOTE that the last two words in your collection are "Wild" and "Rodeo" as we added them before in the program.

Concepts used

1. File Handling

Firstly this program uses file handling in c++ to read and write to/from a file.

The "example_2.text" acts as a database and stores all the english words in a specific format.

For example - 9) Abandoned adj. 1 deserted, forsaken. 2 unrestrained, profligate.

First the index number followed by a '}', then the Word followed by the information regarding it.

"Collection.txt" contains the word you wish to bookmark for future reference.

2. *Regular expressions*

The program uses regular expressions to search for a word from the file and also to match the index to generate a random word.

The regex pattern used are as followed -

```
regex b("^"+index + "\\) ([a-zA-Z0-9- ]*) (.*)");
```

And

```
regex b("[0-9]*\\) " + to_search + "-? (.*)");
```

3. *rand() and Srand()*

I used the srand() function to generate a random number every time the program was run.

4. *Stringsream*

To convert the randomly generated int number to a string.

Future scopes

1. Maybe to add the functionality to generate different collections of words for different users. To facilitate multiple users with personalised collection of words.
2. To be able to also output the usage of every word in the english language.
3. To update the database with new words.

Thank You