

Assignment #3 – Word Scramble

Date assigned: Monday, March 8, 2010

Date due: Friday, March 19, 2010

Points: 40

Each of you has implemented the Word and Dictionary classes from assignment #2. It is now time to put that code to use in a Word Scramble game. The game is to be played as follows:

Word Scramble

Enter a difficulty level [E)asy M)edium H)ard]: **E**

Unscramble the Word: **urof**

Answer: **furo** (Incorrect, Try Again)

Answer: **four** (Correct, Nice Job)

Time Taken: 6.23 seconds

Play Again (Y/N):Y

Word Scramble

Enter a difficulty level [E)asy M)edium H)ard]: **H**

Unscramble the Word: **veoba**

Answer: **giveup**

The word is above

Time Taken: 45.2 seconds

Play Again (Y/N):N

Game notes:

- 1) Easy Level: The word is randomly displayed consisting of 3 and 4 character words.
- 2) Medium Level: The word is randomly displayed consisting of 4 character words.
- 3) Hard Level: The word is randomly displayed consisting of 5 character words.
- 4) If your program is run multiple times, make sure that the same set of random words is not displayed.
- 5) Make sure that the scrambled word when displayed is never the same as the answer.
- 6) A person can answer as many times as they want but if they type the phrase **giveup** the

answer is displayed a shown above.

7) Three word lists will exist in the CS250 Public directory called (three.txt, four.txt, five.txt).

Goals for Assignment #3:

1. Design your code in an object-oriented fashion. Think of well-defined objects with a single purpose (e.g. Word, Dictionary, Game, Random, ...).
 2. Reuse existing code without modification, so reuse Word and Dictionary class code just as they are.
 3. Use the .h/.cpp separate file design for defining and implementing classes.
 4. Implement at most one constructor or method at a time and make sure to extensively test the constructor or method before going on. I promise you that on this assignment if you write to much code you will have extreme difficulties getting the code to compile and run.
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Note1: Save your project as 03PUNetID fully and correctly documented.

Note2: Your code is to be written using Visual Studio 2008 and placed in the CS250 Drop Box by 9:15am on the day in which the assignment is due. A stapled hard copy must be placed on the instructor's desk before 9:15am on the day the assignment is due. Remember, print main.cpp, and the .h/.cpp related files.

Note3: If you come to me with a question regarding your solution and I need to look at your code, I will either grab your code off of Turing or a jump drive. I will not look at your code on your computer as it just takes me too long to get at the problem. Further, I want you to bring in your textbook and lecture notes in case I want you to look up something. Remember, I'm not just a tell you the answer guy.

Note4: If you want help with a compiler error, you must be able to tell me exactly what statement you put in your code that caused the error and be able to isolate the error. If you have typed in a bunch of code and have not tested your code as you've gone along, I'm not going to help you sort out the mess. You've been warned!!

Note5: The game is to look and work EXACTLY as shown above.