

# AP Computer Science Java

## Mr. Clausen

### Program 15A

#### PROGRAM 15A Word Jumble (30 points)

Write a program that reads a text file of vocabulary words (VocabList.txt). Select one of the words at random, and turn the word into a “word jumble” by scrambling all the letters of the word. Allow the user as many guesses as there are letters in the word. Keep track of the number of guesses and give the user feedback as to how many guesses remain and/or if they guessed the word correctly. If they guess the word, tell them how many guesses it took.

Make your program user friendly by prompting them for their guess. Use one line comments to separate this program into its parts: input, and “calculations and output” which will be merged into one section.

- 1) Type comments at the beginning of the program to display your name and other information just like those used for program 2A. **Be sure to update the program name, program number, and program description.**
- 2) Import Scanner.
- 3) Declare the class name in the format LastNameFirstNameP15A. Don't forget that the filename needs to be the same when you save your program. This would be a good time to save your program if you haven't done so already, LastNameFirstNameP15A.java.
- 4) Declare the main method:  
`public static void main(String [] args)`
- 5) Instantiate an object of the Scanner class in order to use input from the keyboard.  
`Scanner reader = new Scanner(System.in);`
- 6) Declare all of the variables necessary for this program. Make sure that you use descriptive variable names to create readable, self-documenting code.
- 7) Type the following comment:  
`//-----Display My Information-----`  
Follow this comment with the method `Display_My_Info()` that uses print statements to display your name and period output. **Be sure to change the program name, and program number.**
- 8) Read the contents of a text file named “VocabList.txt” from the current working directory and copy each word into each element of an array. This means that your Source code and the text file need to be in the same folder. The text file can be downloaded from the program description web page for this class.

- 9) Choose one of the words at random. Use `Math.random( )` to generate random numbers like we did in program 4.
- 10) Scramble the letters of the selected word into a “word jumble”.
- 11) Ask the user to enter their guess, check this against the word chosen from the text file and tell the user whether they guessed the word correctly or not. If incorrect, tell the user how many guesses are left. If the user guesses the word, tell them how many guesses it took. Limit the number of guesses to the number of letters in the word.
- 12) **Use methods for each part of the program.** Start your method names with **public static** and then **void** or **int**, etc. The methods should be at the end of your program after the `}` that ends the **public static void main (String [] args)** method and before the final `}` that ends your **public class LastNameFirstNameP15A** class.
- 13) Save your program as `LastNameFirstNameP15WJ.cpp`.

Use blank lines to separate each of the program sections listed in all of the steps above. When you are finished with your program, have tested it thoroughly to make sure that your calculations are correct, and are sure that you don't need to make any changes, then save your program in the “T” network mapping, in the Program 15 WJ folder.