

CPSC1012 Advanced Portfolio 1 – Text Processing and File Streams

Weight: **8%** of your final mark

Due: **Week 14 Class 2 at the beginning of class.**

Hangman Game.

Write a hangman game that picks a random word from a list of words. The list will be read from a text file of words. The object of the game is to ask the user to guess each letter of the word. Each letter in the word is displayed as an asterisk. When the user makes a correct guess, the actual letter(s) is/are then displayed. When the user finishes a word, display the number of misses and ask the user whether to continue to play with another word. The player is limit to 7 misses. After 7 misses the player loses the game. Here is are two sample runs (of just the game):

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|-----|
| CPSC1012 Hangman Game |
|-----|
I have picked a random word on Programming.
Your task is to guess the correct word.

(Guess) Enter a letter in word ***** > p
(Guess) Enter a letter in word p***** > r
(Guess) Enter a letter in word pr*** > p
    p is already in the word
(Guess) Enter a letter in word pr*** > o
(Guess) Enter a letter in word pro*** > g
(Guess) Enter a letter in word progr** > n
    n is not in the word
(Guess) Enter a letter in word progr** > m
(Guess) Enter a letter in word progr*m > a
The word is program. You missed 1 time. You win.
Do you want to guess another word? Enter y or n > y

I have picked a random word on Programming.
Your task is to guess the correct word.

(Guess) Enter a letter in word ***** > a
    a is not in the word
(Guess) Enter a letter in word ***** > e
    e is not in the word
(Guess) Enter a letter in word ***** > i
    i is not in the word
(Guess) Enter a letter in word ***** > o
(Guess) Enter a letter in word *oo***** > l
(Guess) Enter a letter in word *oo*l** > p
    p is not in the word
(Guess) Enter a letter in word *oo*l** > d
    d is not in the word
(Guess) Enter a letter in word *ook*l** > k
(Guess) Enter a letter in word *ook*l** > r
    r is not in the word
(Guess) Enter a letter in word *ook*l** > h
    h is not in the word
The word is bookclub. You missed 7 times. You lose.
Do you want to guess another word? Enter y or n > n

Good-bye and thanks playing my Hangman game.
```

Processing

Create 3 text files with up to 10 words each. Each text file will be about a topic (Animals, Food, Jobs, Games, etc.). Your program will prompt the user to pick a topic. Your program will then read the selected file. **The files are to be kept at the root of your exercise repository. Assume your repository will be in your special folder Documents under the folder Github/repositoryname.** Your program must handle invalid input values and not crash.

Marking Guide

Description	Marks Possible	Marks Earned
Correctness <ul style="list-style-type: none"> • Loads words from a text file into an array • Picked word is randomized • Correctly checks if letter is in word • Correctly tracks the number guess letters not in word • Correctly ignores guess letter already used • Loops until word guessed or 7 misses 	6	
Structure <ul style="list-style-type: none"> • Code to play game multiple times • Code to guess limited to 7 misses 	2	
Style and Readability <ul style="list-style-type: none"> • Class standards meet 	1	
Documentation <ul style="list-style-type: none"> • Opening documentation • Method code comments 	1	
Total:	10	

Coding Requirements

The following coding standards must be followed when developing your program:

- Your C# Console App project must be named as **AdvancedPortfolio01-FLast** (eg: AdvancedPortfolio01-DWelc)
- Appropriate documentation at the beginning of the source file and beginning of each method.
- Appropriate coding standards used in this class section.
- There can only be one exit point for a loop, do not use the break/goto statement inside a loop.
- Do NOT use class level static variables.

Demonstration and Submission Requirements

- Demonstrate your program to your instructor on the due date. Be prepared to answer questions about your code. **No marks will be given** if you are unable to explain your code or without a demonstration of your program to your instructor. **Submit to your exercise repository.**