



CAL~~A~~STONE



CANDIDATE CODING ASSIGNMENT



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Introduction

Pre-requisites

The candidate is expected to have access to a computer with an IDE that supports C# programming.

It is also expected that the candidate will have a few free hours to focus on the test.

Instructions

The purpose of this assessment is to complete a simple programming assignment.

The details of the assignment are elaborated in section 2.

Candidate is required to:

- Produce code that is:
 - Working and solves the problem;
 - Unit Tested;
 - Easy to read and understand;
 - Extendable;
 - Follows object-oriented principles and best practice;
- Walk through your code with the assessor, answering questions on the code and programming/design choices as requested by the assessor;

If you have any issues with the programming assignment, please ensure that you inform the organiser immediately.

You are expected to work on this task on your own, without help or advice from others. If you need clarification on any aspect of the assessment, please seek help from your organiser.

You are given 2 days to complete this task. Even if the solution is not complete, the workings to that point should be submitted.

Coding assignment

Text filter

Write a C# application with the associated unit tests that will be able to take multiple text filters and apply them on any given string. This should take no more than 2 hours.

The application should:

- Read from a txt file
- Create and apply the following 3 filters:
 - Filter1 – filter out all the words that contains a vowel in the middle of the word – the centre 1 or 2 letters ("clean" middle is 'e', "what" middle is 'ha', "currently" middle is 'e' and should be filtered, "the", "rather" should not be)
 - Filter2 – filter out words that have length less than 3
 - Filter3 – filter out words that contains the letter 't'
- After all filters have completed display the resulted text in the console;

Submit your solution to a public repository account (e.g. GitHub).

Text Input

Alice was beginning to get very tired of sitting by her sister on the bank, and of having nothing to do: once or twice she had peeped into the book her sister was reading, but it had no pictures or conversations in it, 'and what is the use of a book,' thought Alice 'without pictures or conversation?' So she was considering in her own mind (as well as she could, for the hot day made her feel very sleepy and stupid), whether the pleasure of making a daisy chain would be worth the trouble of getting up and picking the daisies, when suddenly a White Rabbit with pink eyes ran close by her. There was nothing so very remarkable in that; nor did Alice cross think it so very much out of the way to hear the Rabbit say to itself, 'Oh dear! Oh dear! I shall be late!' (when she thought it over afterwards, it occurred to her that she ought to have wondered at this, but at the time it all seemed quite natural); but when the Rabbit actually took a watch out of its waistcoat pocket, and looked at it, and then hurried on, Alice started to her feet, for it flashed across her mind that she had never before seen a rabbit with either a waistcoat pocket, or a watch to take out of it, and burning with curiosity, she ran across the field after it, and fortunately was just in time to see it pop down a large rabbit hole under the hedge. In another moment down went Alice after it, never med once considering how in the world self she was to get out again. The rabbit hole went straight on like a tunnel for some way, and then dipped suddenly down, so suddenly that Alice had not a moment to think about stopping herself before she found herself falling down a very deep well. Either the well was very deep, or she fell very slowly, for she had plenty of time as she went down to look about her and to wonder what was going to happen next. First, she tried to look down and make out what she was coming to, but it was too dark to see anything; then she looked at the sides of the well, and noticed that they were filled with cupboards and book shelves; here and there she saw maps and pictures hung upon pegs. She took down a jar from one of the shelves as she passed; it was labelled 'ORANGE MARMALADE', but to her great disappointment it was empty: she did not like to drop the jar for fear of killing somebody, so managed to put it into one of the cupboards as she fell past it.