

## CS 2412 - Assignment #6: Typing Tutor (60 points)

### Overview

Typing quickly and correctly is an essential skill for working effectively with computers and the Internet. In this assignment, you are asked to build an app that can help users learn to “touch type” (i.e., type correctly without looking at the keyboard). You need to use **windows forms** and any controls you may need (i.e. Buttons, TextBoxes, or Labels).

### Introduction

The app should display a virtual keyboard that mimics the one on your computer and should allow the user to watch what he or she is typing on the screen without looking at the actual keyboard. Use Buttons to represent the keys. As the user presses each key, the app highlights the corresponding Button and adds the character to a TextBox that shows what the user has typed so far.

*How to test your program:* You can test your program by typing a pangram—a phrase that contains every letter of the alphabet at least once—such as “The quick brown fox jumped over a lazy dog.” You can find other pangrams on the web.

You also should monitor the user’s accuracy. You should have the user type specific phrases that you’ve prestored in your program as listed below:

1. A typed word is counted as any five keystrokes.
2. Do not stop to correct your errors in these first tests but check them out.
3. The beautiful scenic country of New Zealand is situated in the South Pacific to the east of Australia.
4. The ferry crosses Cook Strait and cruises beautiful Queen Charlotte Sounds between Wellington, NZ's Capital City, and Picton.
5. NZ's East Coast has many stretches of white sand and rolling surf which attract NZ and overseas surfers. They are popular NZ family holiday places.
6. New Zealand is a land of contrasts, which attract thousands of overseas tourists every year to climb, ski or snowboard our mountains, swim, fish or cruise on our lakes and rivers.
7. Between The Southern Alps and the West Coast is a fantastic scenic drive taking the Haast Pass road. Here is our great rain forest. Most overseas and local tours include this route in their Itinerary.
8. New Zealand is a very sport oriented country and sometimes hosts world events. Sports include tennis, golf, yachting, canoeing, cruising, cricket, soccer, rugby, basketball, netball, swimming, surf lifesaving, athletics, and riding.
9. Watching events where they take place is fine but many can only watch at home as the event is screened on our TVs. New Zealand is proud too of our sporting participants who have entered and gained medals in many sporting events including Olympic Games

10. Masters' Games are very popular in New Zealand as in many other countries and NZ swimmers were really proud in the year 2002 to host the FINA World Masters Swimming Champs at Christchurch in the South Island, at which I gained 10th place medals for 100 m and 200 m backstroke.
11. Some challenging events which draw overseas sports people include the annual Coast to Coast involving running, cycling and kayaking from the West Coast, through mountain passes to the East Coast, and the Iron Man including running, cycling, and swimming. I am proud one of my sons twice took part in the Ironman.

You need to display all of the phrases on the screen above the virtual keyboard one by one. You should start with the first phrase and go to the next one after the user finishes typing the current phrase. You have to keep track of

- How many keystrokes the user types correctly.
- How many are typed incorrectly.
- Which keys the user is having difficulty with.

Eventually, when the user is done with all of the phrases, display a report showing keys the user is having difficulty with.

### Notes

- Due: Tuesday March 3<sup>rd</sup> at 11:59pm
- Submit your document and entire Visual Studio solution directory as a .zip file called hw6\_<yourFullname>.zip.