
Assignment I: Typing Speed Calculator

CODING BATCH 2020

AUGUST 29, 2020

1 Problem Statement

In this assignment, we will build a small typing speed calculator. This is only intended to get your coding fingers running and get you started with C++. What your program is expected to do, is show a user 5 random English sentences, one by one, and ask them to type it out on the console. Once the 5 sentences are finished, your program will print the number of characters that the user has typed and the time taken in seconds. You will also print out the characters per minute speed of the user. *Make any suitable assumptions as needed.*

For your convenience, a file `shakespeare.txt` containing a few sentences from the play Julius Caesar has been uploaded in github (link at the end). You will read this file line by line into an `string lines[2000]` array. You will choose 5 random lines from this array to display to the user.

2 Help

So what will you need in order to make a typing speed calculator?

1. You will need to be able to read a file using C++. You can refer this link <https://stackoverflow.com/questions/7868936/read-file-line-by-line-using-ifstream-in-c>.
2. C++ allows you to directly declare an array of strings. You can read the above file into an array of strings as if you were reading an array of integers `string lines[2000] ; cin>>lines[i];`.
3. You will need to generate random numbers <http://www.cplusplus.com/reference/cstdlib/rand/>.
4. You will need to be able to read a line from console when the user types. Use `getline(cin,string_variable)` for this. Refer <https://stackoverflow.com/questions/18786575/using-getline-in-c>.

5. You will need to calculate size of each line. In C++, simply doing `string_variable.name.size()` gives you the number of characters in that string. So you can read each line that user types into a string and get the number of characters
<https://www.geeksforgeeks.org/stdstring-class-in-c/>.
6. Lastly, you will need to know how to measure time. You can reference this code for measuring time <https://github.com/regstrtn/cool-codes/blob/master/measure-time-cpp.cpp>. There are other ways also, mentioned on this website.
<https://levelup.gitconnected.com/8-ways-to-measure-execution-time-in-c-c-48634458d0f9>.

3 What to submit?

You will submit a single .cpp file on github. Give your file a unique name, maybe your EmailUsername.cpp.

The first line of the file must have your email address as a comment. Without this, your submission will not get counted.

See example below.

Github link: <https://github.com/regstrtn/coding-batch-2020/tree/master/Screening-Assignment>

typing-speed-luqmankgp.cpp

```
1 // yourusername@gmail.com
2 #include <iostream>
3 using namespace std;
4
5 int main()
6 {
7     fn1();
8     fn2();
9 }
```

4 Help with Github

Try finding this out on Google or Youtube. All you need to do is "fork" the coding-batch-2020 "repository". Then you will upload your EmailUsername.cpp file under the Screening-Assignment/ folder. After that, you have to create a "Pull Request". Even if you just google "fork" and "pull request", you should be able to do this.