

CS-224: Object Oriented Programming & Design Methodologies

Assignment 01

Duration: 2 Weeks

Submission Deadline is Thursday Midnight of the 2nd Week (14th September, 1159 pm). No late submissions will be accepted.

ALWAYS READ THIS PAGE BEFORE CONTINUING

Guidelines:

For assignments, you will be making groups of 2. This means that 2 students can submit one solution and it will be counted for both. Be extra careful about your submission as plagiarism will count on both group partners if done.

It is strongly recommended that **everyone does the assignment themselves** even if one solution is submitted. Your midterm exams may contain questions done in the assignments. Unless you do the assignment yourself, you will be unable to score in the midterms.

The instructors may choose to take viva of the students if required.

It is better to submit incomplete assignment than none at all.

It is better to submit the work that you have done yourself than what you have plagiarized.

It is strongly advised that you start working on the assignment the day you get it. Assignments **WILL** take time. Also, Google is your friend in case you get stuck or do not know about stuff!

Do not try to make the assignment in one sitting. Pick one function at a time and solve it in a separate project. Make a new project and combine everything in it once you are confident of your solution.

Do not forget to properly comment your solution. Also give proper names to variables. Make a habit of using camel casing! Properly indent your code as well!

Deliverables:

For this assignment you need to submit a single CPP file. Suppose your name is Joh Doe and your id is 0022 so the name of the submitted file should be JohnDoe0022.cpp

Failure to comply will get you **ZERO** marks for not following clearly written instructions.

You will most likely upload your solutions to git hub. We will give you details about submission in the coming weeks. In case you run into problems, **DO NOT MAIL THE ASSIGNMENT TO ANY INSTRUCTOR**. Mail it to yourself as it will create a timestamp. Then you can go to the instructor and download your solution in front of your instructor.

COMMAND LINE TEXT EDITOR

For this assignment, you will be making a command line text editor. When you run the program, you will be provided with a menu that will give you the option to read, edit or exit. It will also show the number of characters that have been read. A sample screenshot is given here:

```
Total characters read so far = 0

Welcome to SimpleTextEdit!

Type 'edit' to edit a text file
Type 'read' to read a text file
Type 'exit' to exit program
Choose what you want to do: edit
```

When you edit the file, you will enter data line by line and when done, you will enter '/' or Ctrl + X to exit.

```
Total characters read so far = 0

Welcome to SimpleTextEdit!

Type 'edit' to edit a text file
Type 'read' to read a text file
Type 'exit' to exit program
Choose what you want to do: edit
Enter name of the file to edit:
data.txt
Start typing. Enter / or CTRL + X to stop editing the file.
1> This is my first text file.
2> It will help me impart knowledge
3> That is all I have to say.
4> /
```

Once done, it will wait for 3 seconds and then reopen the main menu.

For reading a file, it will ask for the file name and then display its contents. If the number of lines is more than 24, it will ask the user if it should continue reading.

```
Total characters read so far = 0

~~~~~
Welcome to SimpleTextEdit!
~~~~~
Type 'edit' to edit a text file
Type 'read' to read a text file
Type 'exit' to exit program
Choose what you want to do: read
Enter name of the file to read:
data.txt
1> This is my first text file.
2> It will help me impart knowledge
3> That is all I have to say.
Press any key to continue . . .
```

Once reading is done, the menu will show the total number of characters read in this session. This means that if you open 3 files and read 50 characters each, then the count should be 150.

```
Total characters read so far = 85

~~~~~
Welcome to SimpleTextEdit!
~~~~~
Type 'edit' to edit a text file
Type 'read' to read a text file
Type 'exit' to exit program
Choose what you want to do:
```

The program should check if the user has entered a proper command. In case the user does not, it should tell the user of his/her mistake.

If the user chooses to edit the file, then the user can enter “edit”, “Edit”, “eDIt”, or any other combination of edit and the program should work. The same thing should happen for all other menu commands. We have provided you with sample code to get you started. You can ask your instructors to show you the working (not the code) of the assignment if needed.

GOOD LUCK!