Programming Methodology I COEN-243 Section N NA

THE FORTH TUTORIAL

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SOME QUICK TIPS

- As engineers, you are better off finding solutions by hand and then apply them

- E.g., in the assignments try to come up with a solution in your brain or on paper and then try to implement them as code. (Questions on calculating income tax!?)

- Writing code before thinking will cause lots of misunderstanding and confusion later on!

- It also adds ton of errors in your code which might make you start over!

- TERMINOLOGIES

Fstream (File stream)

- Reading from or writing to a file.

- ifstream is for reading from the file

- ofstream is for writing to the file

- Multiple features available for manipulating with file data

- **Small Exercise:** Try to read from a file line by line

- https://www.w3schools.com/cpp/cpp_files.asp

IF Statement and Switch Cases (Exercise)

- IF statements and Switch blocks can be used for conditional control flow

- However, IF statements tend to be more powerful due to their flexibility and ability to check multiple conditions

- Switch blocks gives a nicer structure to your code but not necessarily better!

- Sometimes it also easier to comprehend switch cases if there are lots of condition

- Main difference: switch blocks are based on selection while if statements are based on conditions

Some Arithematic Tricks

- Finding the reminder of a number

- Finding the result of numbers with exponents

- Checking even or odd

- Multiplying and dividing by two

- Swapping numbers

- Check out Binary numbers

- Check out **cmath library** and **https://www.geeksforgeeks.org/c-tricks-competitive-programming-c-11/**

Wrap Up

- Text output formatting

- For loops and while/do-while loops (Grid)

- Nested 'if statements'

- Arrays

References

- https://www.w3schools.com/cpp/cpp_files.asp

- https://www.geeksforgeeks.org/c-tricks-competitive-programming-c-11/

- https://cplusplus.com/reference/cmath/

- https://github.com/TheBarzani/COEN243_Fall2022

THANK YOU ☺