



# Programming Methodology I

## COEN-243 Section N NA

THE THIRD TUTORIAL 😊

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# LAST TUTORIAL (✓)

- C++ Syntax based on a “Hello World” program
- Variable Types and C++ Type Language Nature
- Operators and Expressions plus some activities
- Control Flow:
  - Conditional Statement
  - Loopz

# Input/Output

- Basically inputting and outputting readable/viewable text
- LIBRARIES:
  - IOSTREAM: cin, cout, cerr...
  - IOMANIP: setfill, setprecision, setw...
  - FSTREAM: ifstream, ofstream, fstream...
  - SSTREAM: istream, ostream, stringstream...
- <https://cplusplus.com/reference/>

# Variable types

- Integers: 1, 2, 3, 4 ...
- Float: Used for decimal numbers with 7 decimal point precision (4 bytes)
- Double: Used for decimal numbers as well but with 14 decimal point precision
- Long Double: Basically a bigger and more precise double
- There is no nothing called 'long float' in C++
- Boolean: Basically flags that provide the output of a condition (True or False)

# Character Variable types

- Used for defining and representing single letters and special characters
- Example `char a = 'a'`, `char a = 51` (output is a?)...
- Uses ASCII code as reference to show the characters
- Can also be used with some arithmetic but what will happen?
- String Library: an extension of character data type
- Off topic: There is also void or null character type (nothingness)

# IF Statement and Switch Cases

- IF Statement: If a condition is satisfied, then run my code.
- Keywords: *if* ('condition'), *else if* ('condition'), *else*
- Alternative: [https://www.w3schools.com/cpp/cpp\\_conditions\\_shorthand.asp](https://www.w3schools.com/cpp/cpp_conditions_shorthand.asp)
- Switch Case Block: Given a condition, pick the correct case and run its code
- Keywords: *switch* ('selection'), *case* 'option', *break*, *default*

**THANK YOU 😊**