

Midterm Review

Chapter 1

- What is a computer?
- What are the main hardware components of a computer?
- What is a program?
- What is an algorithm?
- What is machine language? What does it consist of?
- What is a high-level programming language? What is a low-level programming language?

Chapter 2

- What object is required to output information to the console?
- What header file must be included at the top a program to use the object in last question?
- What statement should be included before main to avoid prefixing `std::` before common standard objects?
- What is a literal?
- What is a variable?
- How are variables declared?
- What is variable initialization?
- What is variable assignment?
- Can a variable be used before it has been declared?
- What are the rules for naming a variable?
- What is a `char` data type? How many bytes of memory does a `char` contain?
- What is a string literal? How many bytes of memory does a string literal contain?
- What is a `bool` data type? How many bytes of memory does a `bool` contain?
- What is an `int` data type? How many bytes of memory does an `int` contain?
- What are the `float` and `double` data types? How many bytes of memory does a `float` contain? How many bytes of memory does a `double` contain?
- What is a `string` object?
- What header file should be included to declare string objects?
- What is a unary operation? What is the unary arithmetic operator?
- What is a binary operation? What are the binary arithmetic operators?
- How is a single line comment written?
- How is a multi-line comment written?
- What is a named constant?

Chapter 3

- What object is required to retrieve information from the console?
- What header file must be included at the top a program to use the object in last question?
- What order of operations is followed with mathematical expressions?
- What is the modulus operator? What mathematical precedence does the operator hold?
- What is type conversion?
- When dividing an integer by an integer, what happens to the numbers after the decimal point?
- What is multiple assignment? In what direction is the assignment performed?
- What is combined assignment?
- What header file is necessary to manipulate the output of your code to the terminal?
- What is `setw`? What is `left`? What is `right`? What is `setprecision`? What is `fixed`?
- What is `getline`?
- What header file should be included to use certain mathematical functions?
- What is `pow`? What is `sqrt`?
- What function is used to generate a random number?
- What header file must be included at the top a program to use the function in last question?
- Since the random function yields the same number each time the program is run, what statement should be added to the top of the main program to ensure the number is not always the same each run through?
- What additional header file should be included to ensure the random number is not always the same?

Chapter 4

- What are the 6 relational operators?
- What is an `if` statement?
- What is an `if/else` statement?
- What is a nested `if` statement?
- What is an `if/else if` statement?
- An `if` statement takes a Boolean expression as it's condition. With respect to Boolean expressions, any expression that does not result in 0 is considered what?
- What are the 3 logical operators?
- How are `char` variables compared? How are strings compared?
- What is the conditional operator a.k.a. a ternary expression?
- What is a `switch` statement? What are the rules of a `switch` statement?