COSC cheat sheet

-Compilers detect syntax errors.

-Usually the most difficult errors to correct are logic errors, since they are not usually detected in the compilation -process.

-Attaching other prewritten routines to your program is done by the linking process.

-Binary code is the machine code consisting of ones and zeroes that is read by the computer.

-Dividing by zero is an example of a ­runtime error

-A ­­constant is a memory location whose value cannot change during the execution of the program.

-Int is a data type that only holds numbers with no fractional component.

-Float is a data type that holds numbers with fractional components.

-Modulo is an arithmetic operator that gives the remainder of a division problem.

-cout << is an example of the Output fundamental instruction.

-Boolean data types only have two values: true and false.

-One Byte consists of ­8 bits.

-// or /\* in C++ indicates the start of a comment

-A variable is a memory location whose value can change during the execution of the program.

-A String can hold a sequence of character such as a name

-What is the final value (in C++) of the following expression ? (5-16/2\*3+(3+2/2)-5) According to codeblocks -20

-How would the following expression be written in C++? 2x+3^4 ? By using the pow function it would be ­(2\*x)+pow(3,4);

-Implicit Conversion is also known as data type coercion

-Explicit type conversion is also known as type casting or type conversion

-List the preprocessor directive that must be included for cin and cout to be used in a C++ program # include <iostream>

-Blank spaces or unseen control characters in a data file are referred to as whitespace

-The << in a cout statement is called the insertion operator

-The #include<iostream>is needed for formatted output

-The ‘\n’ is a special character that to make a new line of output

-C++ is case specific language upper and lowercase

-Cpu consists of Control Unit and ALU (Arithmetic and logic unit)

-variables all have a specific memory address

-typecasting is when programmer indicates they want a calue to be converted to another type

-showpoint-show trailing zeroes -\n go to new line

Preprocessor-a program that finds and attatches to your program the indicated libraries for compilation

-preprocessor directives-tells computer where to find the library for operation

-ojectfile-exectuable version of the program

-3 steps of porgam development 1-Analysis 2-Implementation 3-Maintenance

Token-smallest individual unit of a programming language ,special symbols, words ,identifiers

Pow (x,y) x^y power for dealing with exponents

Iomanip used for manipulating input and output , ex setprecision etc setw

System software and application software, - 2 main types of software

Application software-programs designed to perform specific tasks

Sqrt(x) gives the square root -linker links together the c++ library and the program that we wrote

Computation-producing results based on inputs

<< stream insertion operator

C++ system components-C++ program environment language standard libraries

Float- used to represent and real number between -3.4E + 38 and 3.4E + 38. The memory allocated for a value of float is 4 bytes.

Double- used to represent any real number between -1.7E + 308 and 1.7E + 308. the memory allocated to a value of double is eight bytes. character sets ASCII and EBCDIC- 128 values, and 256 values

Data types- 9 categories of integral data types: char, short, int, long, book, unsigned char, unsigned short, unsigned int, unsigned long (the blue characters)

>>stream extraction operator

Syntax errors uncovered during compile-logic errors uncovered during testing

Key words -reserverd words used by the c++ language

Bitwise operators used to work on bits (0s or 1s)

Link time errors erros found by the linker second easiest error to fix

Object oriented programming- Centered on the object, data and the procedures that operate on the data.

Procedural Programming-centered on the procedure or function

Punctuation marks beginning or end of statement

C++ has header files named .h

Must have main

Arguments input parts to a program

Prompt- asks user for input results output results of a program