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9/3/14

CSI 130 - 01CA

Pg2-30: 13, 19, 20, 21, 23 b,

25, 27

13.) In order to reserve a memory location in C++ you need to declare a variable. Declaring a variable tells the program to assign a portion of RAM for that specific variable.

19.) The following C++ variable names are illegal; 3peat,z1mm3rm@n, and who?. C++ syntax dictates that a variable may not start with a number or contain special characters with the exception of underscores.

|  |  |  |  |
| --- | --- | --- | --- |
| X | Y | answer | Output |
| ~~0~~  3 | ~~-3~~(-3 crossed out)  8 | ~~0.0~~  ~~6~~  3.75 | Enter two numbers.  3  8  The answer is 3.75! |

20.)

21.) The modulus (%) operator will return the remainder of an operation. For example, the code below would print 2. This is because 17 / 3 would be 5 with a remainder of 2.

int number\_1 = 17, number\_2 = 3;

float dividedanswers = number\_1 % number\_2;

cout << dividedanswers << endl;

23b.) float H, w;

H = 5;

w = 123 \* (H - 12) / 15;

25.) The three control structures are; sequence structure, loop structure, and the selection structure.

27.)

a. Sequence – An algorithm structure that executes code in a certain order.

b. Loop – A structure that will repeat code depending on results to a question.

c. Selection – An algorithm structure that will execute different code depending on an answer to a question.

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25, 27 cont.

27 cont.)

d. Control structure – The flow of code within a program. It allows for different code to be ran depending on different input. Or it may just run code in a predefined order.

e.) Nesting – This consist of combining control structures inside of another control structure. For instance; you may have a selection structure inside of a loop.

f.) Stacking – This method of combining structures means that you stack them one on top of another. The exit of the top structure will connect to the entrance of the next structure and so on.

g.) Variable declaration – Declaring a variable is giving a unique name to a variable. This assigns a portion of memory to be reserved for the declared variable.

h.) Assignment operator – This is used to assign a value to the variable. Represented by the “=” sign, it does not mean equality, but merely assigns what follows to the variable name.

i.) Lvalue – Meaning left value. This is information to the left of the assignment operator.

j.) Rvalue – Meaning right value. This is the value to the right of the assignment operator.

k.) Literal – Anything that is found between double-quotation marks. It’s called literal because, everything found in the middle of the quotation marks will be taken literally and not read as machine code.

l.) Pseudo code – This is coding that is combined with English. It assist in readability and the planning phase of a program. The idea is that you write the pseudo code to determine what the program needs to do. From this you can sit down and write the code so it actually does what you want it to.