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Define or describe the following:

Syntax: Each programming language has strict rules, known as syntax,

Syntax error: An error in the rules of operation of the programming language causing it not to run.

Logic error: A mistake that does not prevent the program from running, but causes it to produce incorrect results. (Mathematical mistakes are common causes of logic errors.)

Debug: This means that the programmer finds and corrects the code that is causing the error.

Programming development cycle: Sometimes during the debugging process, the programmer discovers that the original design must be changed. This entire process is known as the Programming Development cycle.

Algorithm: A set of well-defined logical steps that must be taken to perform a task.

Pseudocode: The word pseudo means fake, so pseudocode is fake code. It is an informal language that has no syntax rules, and is not meant to be compiled or executed. Instead, programmers use pseudocode to create models, or “mock-ups” of programs. Because programmers don’t have to worry about syntax errors while writing pseudocode, they can focus all of their attention on the program’s design.

Flowchart: A diagram that graphically depicts the steps that take place in a program.

Terminal symbols: The symbols demarcating the start and end of the program on a flowchart. We use ovals in class.

Processing symbols: These symbols represent a step in the program and go between the terminal symbols on the flowchart. We used parallelograms in class.

Input /output symbols: The rectangles on our flow chart asking the user to input data run it through an operation and outputting new data.

Flowlines: Lines connecting symbols on a flow chart to show the order the computer will operate.

Output: Data supplied by the computer based on input data and operation.

Input: Data supplied by the user.

Variable: A storage location in memory that is represented by a name.

Typical 3 step program process: Input, Process, output

Display: We will use the word display in pseudocode to provide a way to display screen output.

Significance of double Quotation marks in a display statement: They simply mark the beginning and the end of the text that we wish to display.

Statement: The individual instructions that you use to write a program in a high-level programming language are called statements.

Sequence structure: A set of statements that execute in the order in which they appear.

Control structure: a logical design that controls the order in which a set of statements execute.

String: A sequence of characters that are used as data.

String literal: In pseudocode, as it does in Program 2-1) it is called a string literal. In program code, or pseudocode, a string literal is usually enclosed in quotation marks.

Basic Input Operation: reading data that has been typed on the keyboard.

Input Statement: How we read the data from the keyboard in pseudocode.

Line numbers in source code: The line numbers are not part of the pseudocode. We will refer to the line numbers later to point out specific parts of the program.

Output statement: A statement the computer makes after processing the input data.

Variable names: Variable names must be one word. They cannot contain spaces. In most languages, punctuation characters cannot be used in variable names. It is usually a good idea to use only alphabetic letters and numbers in variable names. In most languages, the first character of a variable name cannot be a number.

Prompt: a message that tells (or asks) the user to enter a specific value.

User-friendly: commonly used in the software business to describe programs that are easy to use.

Process of Input from Keyboard:

Assignment statement: Sets a variable to a specified value.

Math operators: A programmer's tools for performing calculations

Order of Operations: 1. Perform any operations that are enclosed in parentheses. 2. Perform any operations that use the exponent operator to raise a number to a power. 3. Perform any multiplications, divisions, or modulus operations as they appear from left to right. 4. Perform any additions or subtractions as they appear from left to right.

Math formula vs programming Statement

1. Create a variable name for a student's final grade using 3 different methods discussed in the text.
finalgrade finalGrade Final_Grade
2. Write the pseudocode to display your name.
Display "Enter your name."
Input name
Display "This person's name is", name
3. Write the pseudocode to display your name and your age in one line of output.
Display "Enter your name."
Input name
Display "Enter your age."
Input age
Display name, age
4. Write the pseudocode that prompts a user for their age.
Display "How old are you?"
Input age
5. Write the pseudocode that stores the value 25 into the variable streetnumber.
Streetnumber = 25
6. Write the following math formula as a programming statement: $F = 9/5C + 25$
 $F = [(9/5)*C] + 25$
7. Which symbols /shapes would you use to prompt a user to enter their name and then display it on the console.
Display "What is your name?"
Input yourName
Display "Your name is," yourName
8. Create the algorithm you would use to wash your car.
 1. Roll all windows up and secure doors closed.
 2. Spray all dirt off with a high pressure hose.
 3. Using warm water mix car washing solution in accordance with the manufacturers directions.
 4. Use the car wash soap to soap up the car.
 5. Spray the soap off the car with a high pressure hose.
 6. Shammie dry

7. Apply wax in accordance with manufactures instructions
 8. Windex windows.
 9. Air dry the vehicle.
9. What is the output going to be for the following word problem: (I am looking for what the OUTPUT will be .. I am not asking you to write the program...just looking for the OUTPUT).
- a. A customer in a store is purchasing 3 items. Design a program that asks for the price of each item, and then displays the subtotal, the amount of sales tax charged and the total. Sales tax is 6%.
Display "Total" $subTotal + (subTotal * salesTax)$
10. What is the INPUT going to be for the following word problem: (I am looking for what the INPUT will be .. I am not asking you to write the program...just looking for the INPUT).
- a. A customer in a store is purchasing 3 items. Design a program that asks for the price of each item, and then displays the subtotal, the amount of sales tax charged and the total. Sales tax is 6%.
Input subtotal