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BSIT-1A Sir Alvin Jael

1. What are variables?

- A variable in programming is a value that can change depending on the conditions or information passed to the program. Variables are used to store data that will be referenced and manipulated by a computer program. They also allow us to label data with descriptive names, making our programs easier to understand for both the reader and ourselves.

2. Some rules must be followed for naming variables.

**Rules for naming variables:**

* Variable names in Visual C++ can have a length of up to 255 characters. To make variable names portable to other environments, keep them between 1 and 31 characters long.
* All variable names must begin with an alphabet letter or an underscore( \_ ). It may be easier for beginning programmers to begin all variable names with a letter of the alphabet.
* Variable names can include letters and numbers after the first initial letter. However, no spaces or special characters are permitted.
* Uppercase characters are distinct from lowercase characters. Using all uppercase letters is used primarily to identify constant variables.
* You cannot use a C++ keyword (reserved word) as a variable name.

3. Arithmetic operator and their operator precedence.

- An arithmetic operator is a mathematical function that performs a calculation on two operands. They're frequent in everyday math, and most computer languages provide a collection of them that can be employed in equations to do a variety of sequential calculations. The arithmetic operators perform addition, subtraction, multiplication, division, exponentiation, and modulus operations.

- Like in mathematics, arithmetic operators follow the same precedence rules, and these are: exponentiation is performed first (when available), multiplication and division are performed next, addition and subtraction are performed last. When multiplication and division occur in the same equation and are of equal priority, they are performed left to right (in the same order as they are read), which means that 6/3\*2 is equivalent to 4, (division is performed before multiplication). If you wish the division to come before the multiplication, use parenthesis to change the order, for example: 6/(3\*2), which is equivalent to 6/3\*2.

4. Logical Operator.

- A logical operator is a symbol or word that connects two or more expressions so that the value of the compound expression created is solely determined by the value of the original expressions and the operator's meaning. AND, OR, and NOT are examples of common logical operators.