

1. What is a variable?

A variable is a named storage location in a computer's memory that holds a value or piece of data.

2. What is computer programming?

Computer programming is the process of writing step-by-step instructions called code for a computer to follow so that it can perform specific tasks or solve problems.

3. List the programming constructs we use in programming

The three basic structures that control the computer program are:

- Sequence: Executing instructions in a step-by-step order.
- Selection (Decision): Making choices using if-then-else conditions.
- Iteration (Repetition/Loops): Repeating a set of instructions using loops like for or while.

4. Why do you think iterators are useful in programming?

Iterators (and loops) are useful because they:

- Save time and effort by eliminating the need to write the same line of code over and over.
- Make code cleaner and easier to read or update.

5. List the arithmetic operators used in programming

- Addition (+): Adds numbers together (e.g., 5 + 3).
- Subtraction (-): Subtracts one number from another (e.g., 10 - 4).
- Multiplication (*): Multiplies numbers (e.g., 4 * 2).
- Division (/): Divides numbers (e.g., 20 / 4).
- Modulus (%): Finds the remainder after integer division (e.g., 7 % 3 gives 1).

6. List the comparison (relational) operators used in programming

The commonly used comparison or relational operators in programming are:

- Equal to (==): Checks if two values are equal.
- Not equal to (!=): Checks if two values are not equal.
- Greater than (>): Checks if the left value is larger.

- Less than (<): Checks if the left value is smaller.
- Greater than or equal to (>=): Checks if the left value is larger or equal.
- Less than or equal to (<=): Checks if the left value is smaller or equal.

7. List some of the basic data types used in programming

- Integer (int): Whole numbers without decimals (e.g., 42, -5).
- Float / Real (float): Numbers with a decimal point (e.g., 3.14, 0.5).
- String (str): Text, words, or characters inside quotes (e.g., "Hello", "Class 6").
- Boolean (bool): Logical values that are either True or False.