



Introduction to Traditional Programming Concepts

Traditional programming concepts form the foundation of imperative and object-oriented programming languages. These fundamental ideas are essential for understanding how programs work and for writing effective and efficient code.

Variables and Data Types

1

Variables

Variables are like containers that hold information. They are given descriptive names that make it easier to understand what they represent.

3

Example

A variable declared as `int weightLimit`; in C can only store integer values.

2

Data Types

Data types define the kind of data a variable can hold, such as numbers, characters, or strings.



Control Structures

1

Control Flow

Control structures change the order in which code is executed.

2

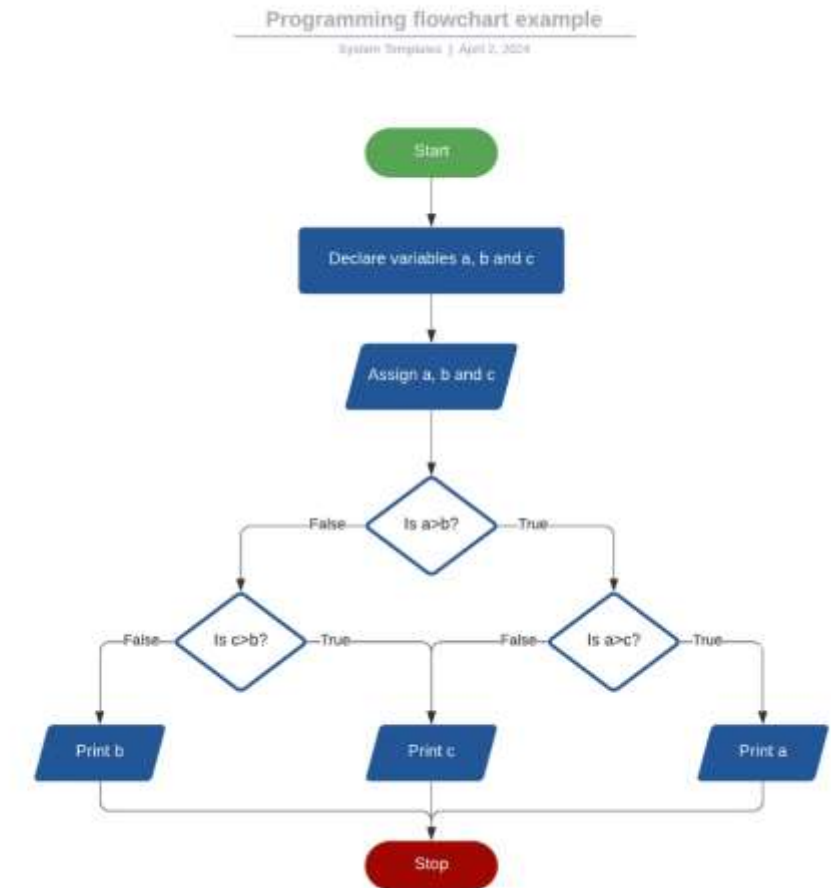
If-Else Statement

An if-else statement checks a condition and performs an action based on the result.

3

Looping

Loops repeat a block of code until a certain condition is met.



Declarative and Imperative Statements

Declarative Statements

Define data, such as variables and constants.

Imperative Statements

Direct the actions to be performed, like algorithms and procedures.

Comments in Code

Importance

Comments improve code readability and maintainability.

Multi-Line Comments

Enclosed within `/*` and `*/`.

Single-Line Comments

Start with `//`.



Assignment and Constants



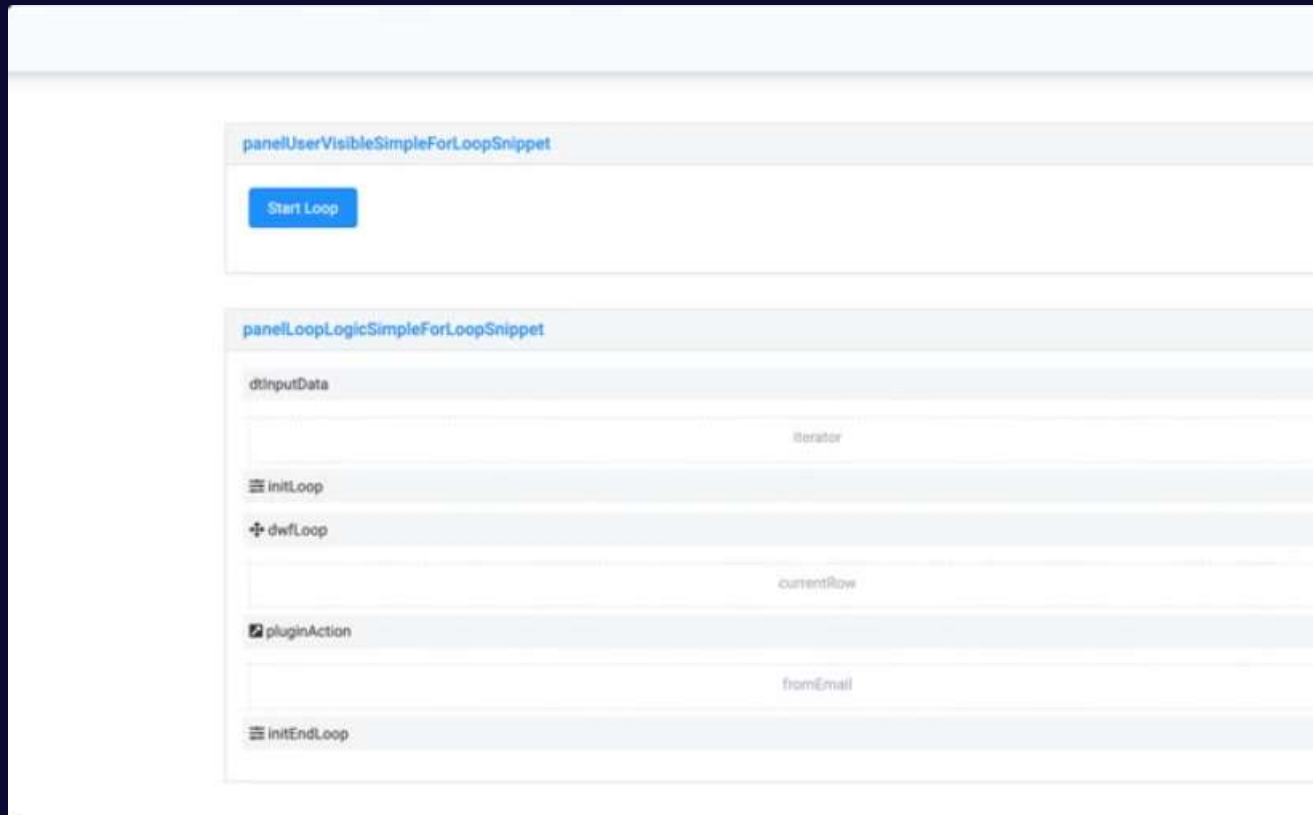
Assignment

Storing a value in a variable.

Constants

Values that cannot be changed, offering clarity and ease of modification.

Control Flow Examples



For Loop

Repeats a block of code a specified number of times.

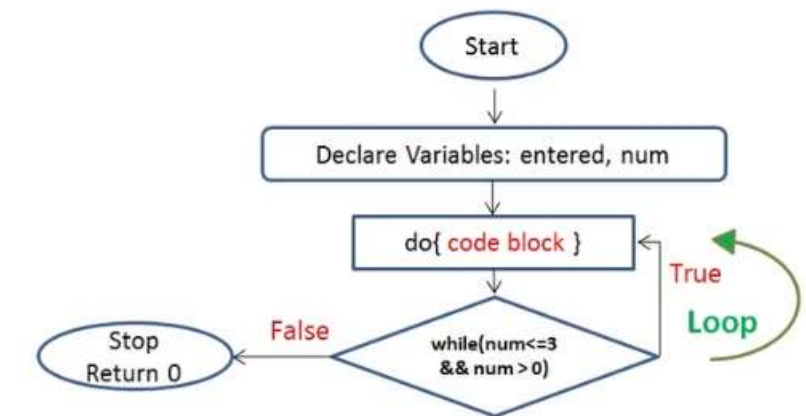
Example 3. Do-While

OUTPUT:

1-Ottawa
2-Toronto
3- Montreal
0- None

Selection: 1
Ottawa is the capital..

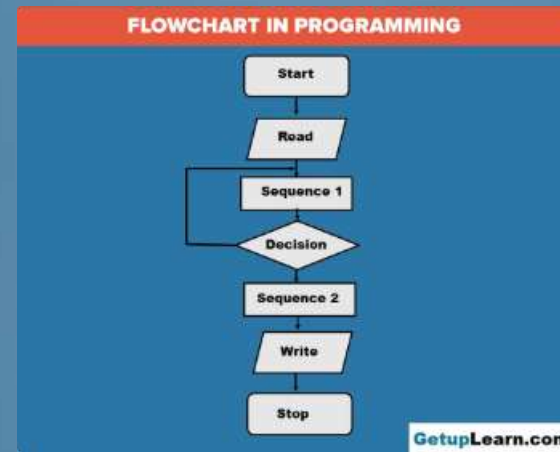
1-Ottawa
2-Toronto
3- Montreal
0- None
...



Do-While is generally used to create menus in applications.

Switch-Case Statement

Executes different code blocks based on a condition.



Conclusion

Variables

Hold information.

Control Structures

Change the flow of program execution.

1

2

3

4

Data Types

Define the kind of data variables can store.

Comments

Make code easier to understand.