

Flowgorithm

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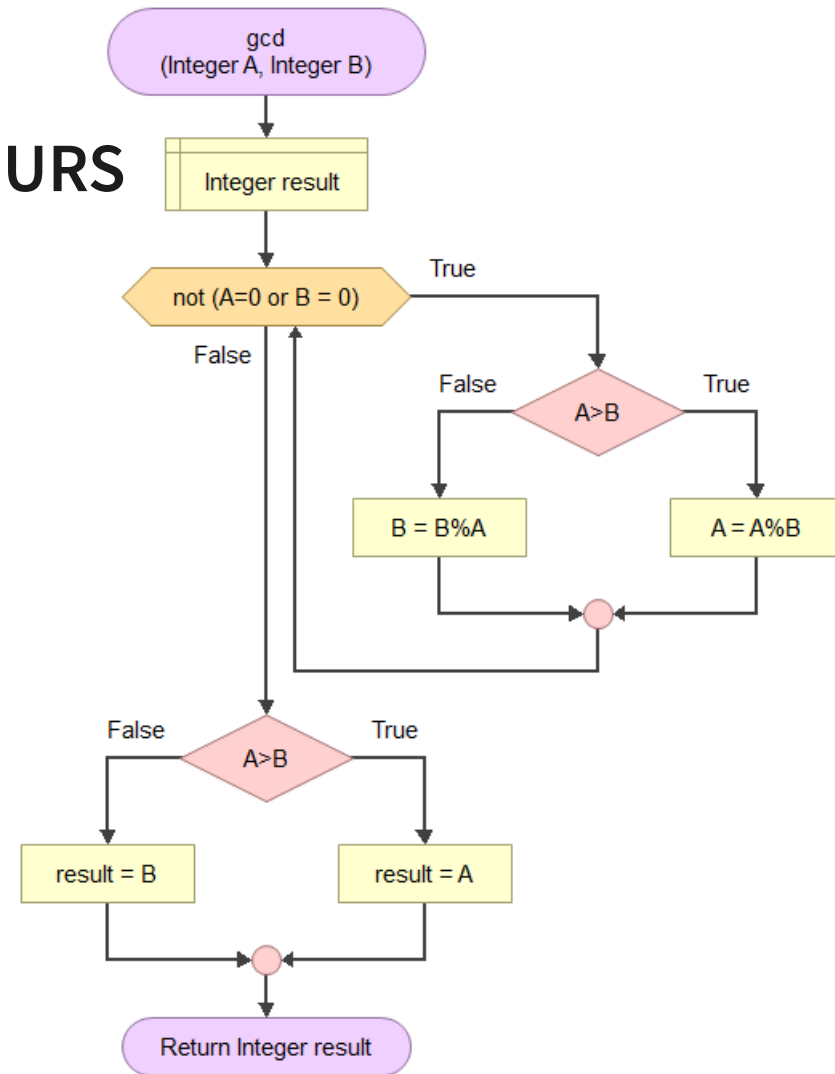
Flowgorithm = Flow-chart + Algorithm

Executable flow-charts

Personalized flow-chart STYLE and COLOURS

Generate your code in many languages

MISSING: load a program
and generate its flow-chart



Code generation by templates

Code generation
from flow-charts
to many
programming
languages
(even personalized)



C#



Perl



TypeScript



C++



PHP



VBA



Fortran 2003



Powershell



Visual Basic .NET



Java



Python



Gaddis Pseudocode



JavaScript



QBasic



IBO Pseudocode



Lua



Ruby



Auto Pseudocode



MATLAB



Scala



Smalltalk



Nim



Swift



Pascal



Open...

Simple Data types (and arrays)

T = Integer, Float, String, Boolean

Array of <T>

NO bigintegers

NO lists or dynamic arrays

NO heterogeneous arrays

NO multidim. arrays

NO objects

NO coroutines

NO function objects

NO files

The screenshot shows a 'Declare Properties' dialog box with a blue header bar. On the left, there is a yellow 'Declare' button. To its right, a text box explains: 'A Declare Statement is used to create variables and arrays. These are used to store data while the program runs.' Below this, the 'Variable Names:' section contains a text input field with the letter 'A'. The 'Type:' section features a dropdown menu with 'Integer' selected, and a list of options: Integer, Integer, Real, String, and Boolean. To the right of the dropdown is an unchecked checkbox labeled 'Array?'. At the bottom right, there are 'OK' and 'Cancel' buttons.

Statements

DECLARE variable

ASSIGN variable

INPUT

OUTPUT

IF

CALL procedure/function

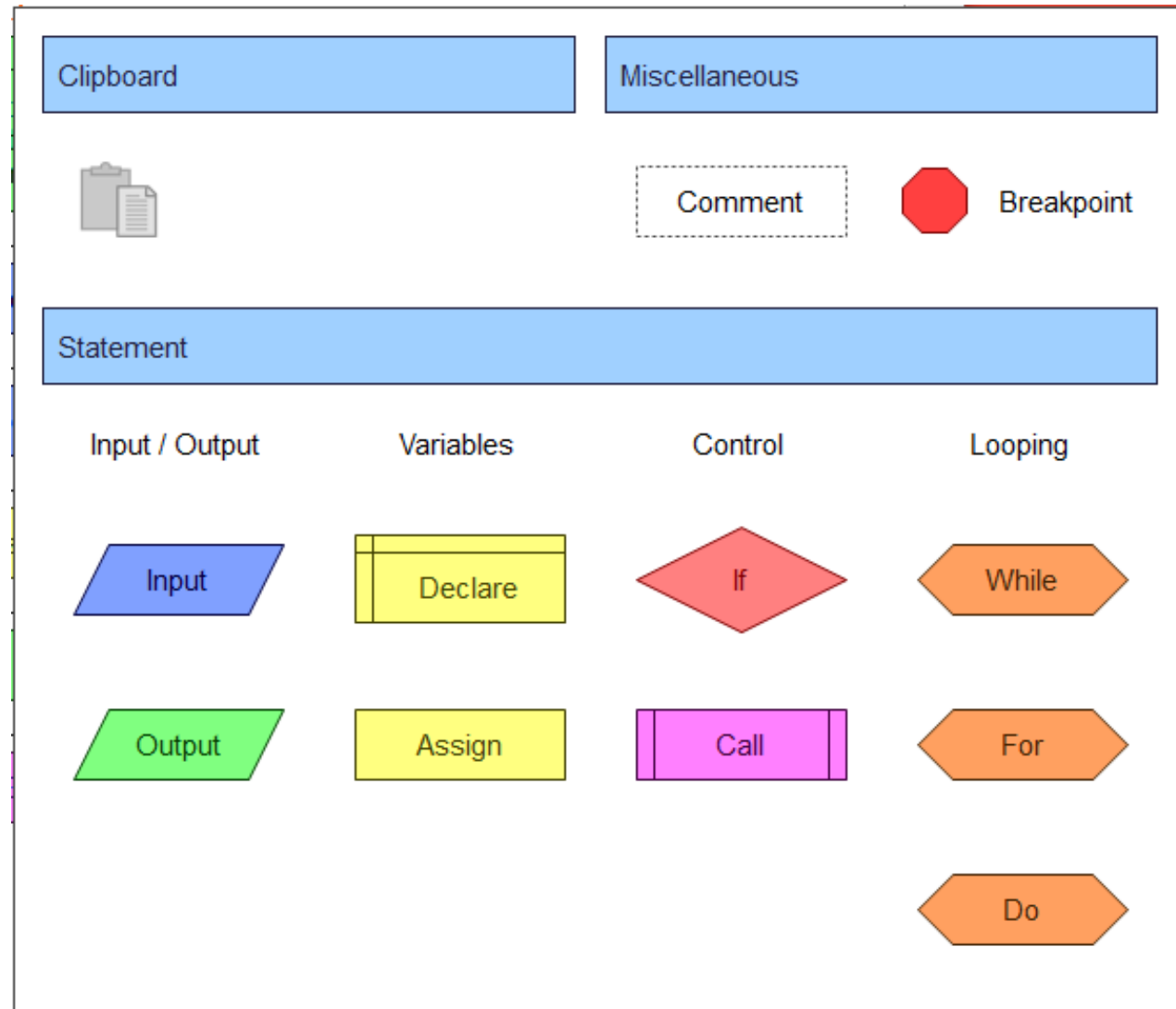
WHILE-do

counted FOR

DO-while

(NO foreach)

COMMENTS



Expressions and operators

Function calls

Logic: and, or, not, comparison

Math: +, -, *, /, %, ^, sign
trigonometry, log/pow, random, round

String: concat, len, char(S, i)

Arrays: size

Conversions: char, ascii, int, float, str, round

Precedences as usual

Control flow

Functions?	YES
args by reference?	NO (except for arrays)
multiple return values?	NO (single simple types only)
<u>ONE entry</u> and <u>ONE exit</u> per function/diagram	
NO early return	(use an IF to skip the rest of the code)
NO break	(use an IF to skip the rest of the code)
Multiple assignments?	NO
Concurrency/multi threading?	NO
Events?	NO
Recursion?	YES
Exceptions?	NO

Programming style

PROCEDURAL/SEQUENTIAL?	YES	
FUNCTIONAL?	NO	no functions as arguments
STRUCTURED?	YES	
DECLARATIVE?	NO	
EVENT-BASED?	NO	
CONCURRENT?	NO	
MODULARIZATION?	YES	by function/procedure
ANALYSIS		
TOP-DOWN?	YES	
BOTTOM-UP?	NO	
OBJECT-ORIENTED?	NO	no objects

Debug support

Step-by-step execution (both flow-chart AND generated code)

NOTE: the generated code is NOT executed

View Variables content (both simple values and arrays)

Breakpoints

Assertions? by hand

Exceptions? NO

IDE support

Refactoring PARTIAL (cut/paste into new functions)

Literate programming / Documentation?

Program properties:

Title, Author, Description

BUT: they are NOT present in the generated code!!!

Comments in the flow-chart

NO free text

DEMO