

Programming in Python

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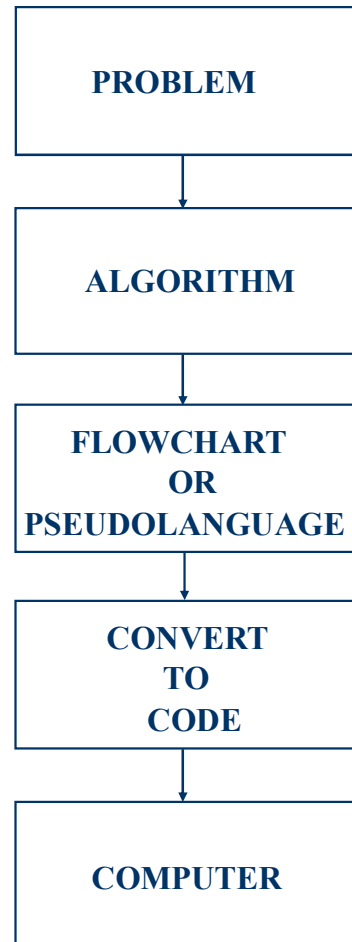
Algorithm

ALGORITHM - A series of separate steps that following a certain sequence lead to the solution of the problem

EXAMPLES

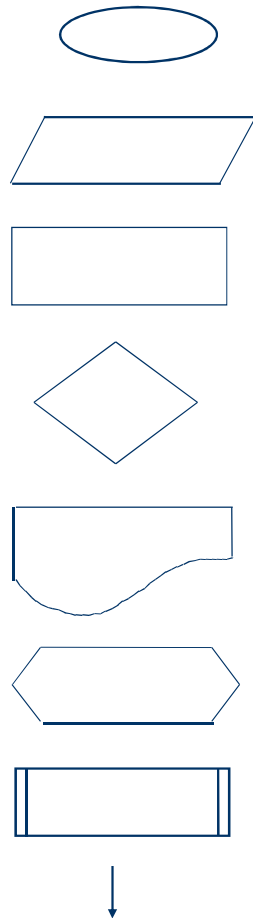
- Cooking recipe
- Route directions
- Equipment setup

Solving a problem



Algorithm description

FLOWCHART



INSTRUCTIONS

START / END

READ

ASSIGNMENT

DECISION

WRITE

LOOP

FUNCTION

FLOW DIRECTION

PSEUDOLANGUAGE

START / END

INPUT()

VARIABLE <- EXPRESSION

IF ... THEN

ELSE

END IF

PRINT()

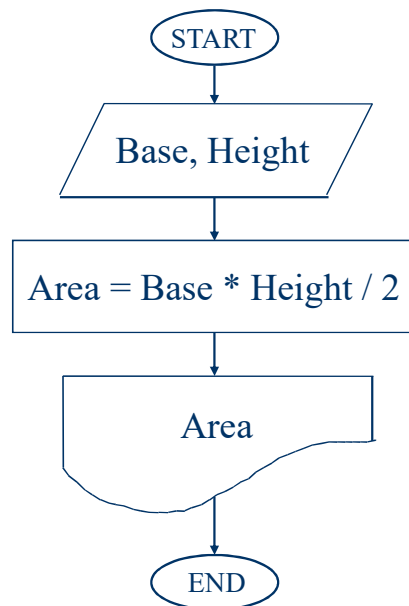
FOR ... TO

END FOR

Creating Algorithms - example

Given the base and the height calculate the area of a triangle

FLOWCHART



PSEUDOLANGUAGE

START

INPUT(Base, Height);

Area <- Base * Height / 2;

PRINT(Area);

END

PYTHON

Calculate the area of a triangle

base = **float**(**input** ("Triangle base:"))

height = **float**(**input** ("Triangle height:"))

area = base * height / 2

print("Area of the triangle = ", area)

Spyder IDE

