

# What is the "Flow Chart"?

## Analysis

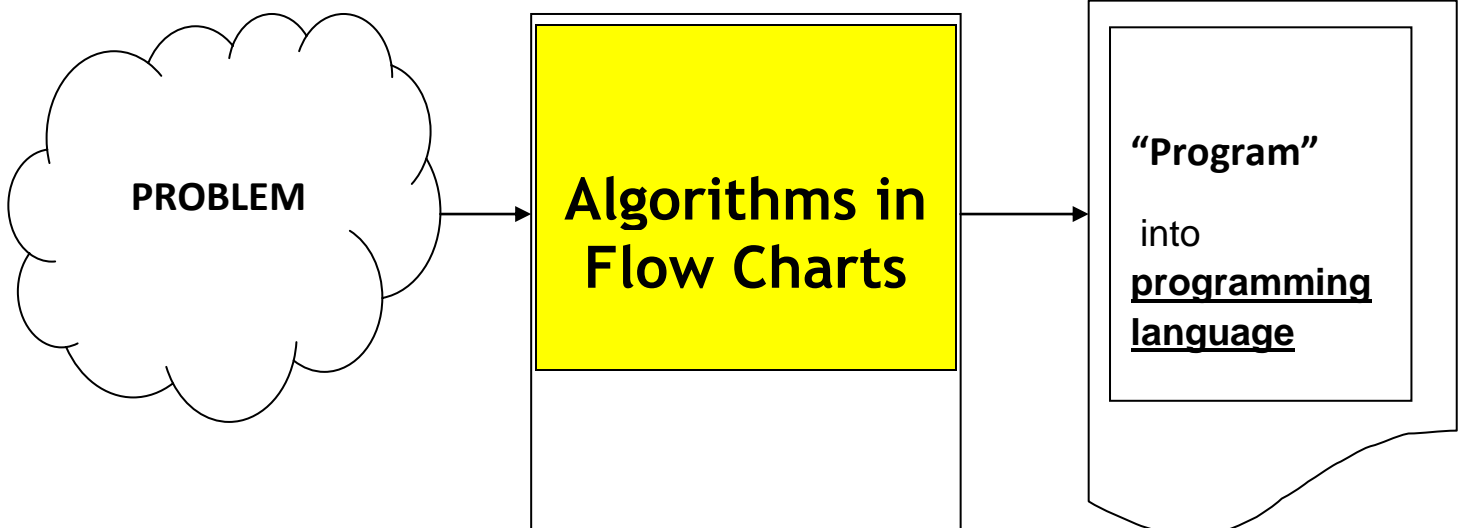
Which are the informations that the problem gives us in input and which results wants in output

## Project

Step by step the resolution of problem

## Program

Resolute step by steps that the computer can run to arrive at the solution of the problem



# What is the "Flow Chart"?

## Brainstorm on the words "ALGORITHM".

### What is an algorithm ?

Who know what is the algorithm? You, you .....tell me if you want.

Ok..... I tell to you what is this algorithm.

An algorithm is a set

of elementary instructions (that cannot be broken down into multiple instructions),

uniquely interpretable (which cannot be interpreted in different ways),

finite in number (their number can be big but not infinite)

that lead us to solve a problem.

## Today we want learn: What is a flow chart ?

Who know what is the a flow chart? You, you .....tell me if you want.

Ok..... I tell to you what is this the flow chart

The flow chart are drawings that allow us to graph algorithms.

The flow charts are very important for computer programmers why allow for immediate visibility and easy development of an algorithm. The algorithm thus designed can then be easily translated into any programming language chosen by the programmer. Drawing a good algorithm means then encode a good program.

# What is the "Flow Chart"?

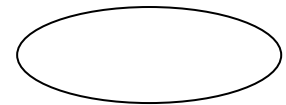
## How are flow chart's symbols?

Who know how are flow chart's symbol? You, you .....tell me if you want.

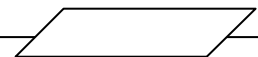
Ok .....How are flow chart symbol

Each design of a flow chart has a precise meaning.

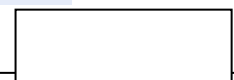
The **oval** is used to indicate the **START** and the **END** of the algorithm



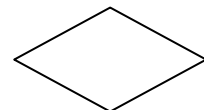
The **parallelogram** is used to indicate **INPUT** or **OUTPUT** data



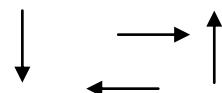
The **Rectangular** is used to indicate **ASSIGNMENT STATEMENTS**



The **Rumble** is used to indicate a condition



The **arrows** are used to connect the different blocks together



The **small circle** is used when the algorithm is very long, to connect algorithm's



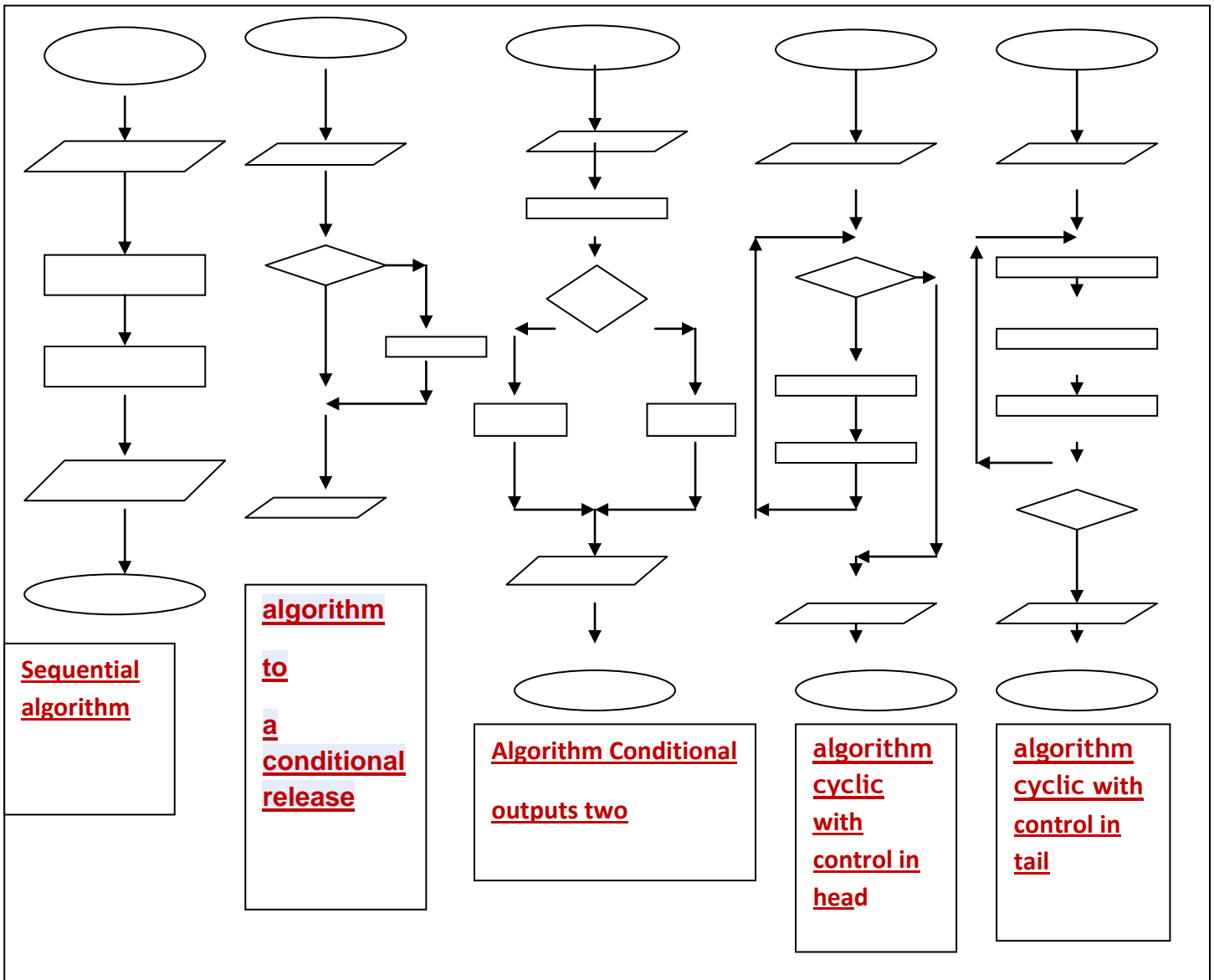
# What is the "Flow Chart"?

## How many are the topologies of algorithms ?

The topologies of algorithm are different for different problem that they must solve.

The theorem Böhm-Jacopino, as set out in 1966 by Corrado Böhm and Giuseppe Jacopino says that any algorithm can be implemented using only three structures, sequence, selection and loop

### Categories the words of the Algorithms in flow charts



# What is the "Flow Chart"?

**Exercise 1:** Solve these anagrams about topologies of "Symbol in flow charts"

Rtast \_\_\_\_\_

Den \_\_\_\_\_

Nioticond \_\_\_\_\_

Gnmentassi menstatet \_\_\_\_\_

Contorsnec \_\_\_\_\_

Worra klin \_\_\_\_\_

Tupin \_\_\_\_\_

Tuputo \_\_\_\_\_

**Exercise 2:** Solve these anagrams about topologies of "Algorithms in flow charts": a sequential algorithm, conditional algorithm, cyclic algorithm,

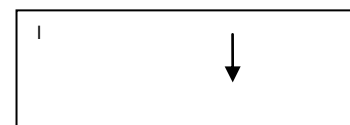
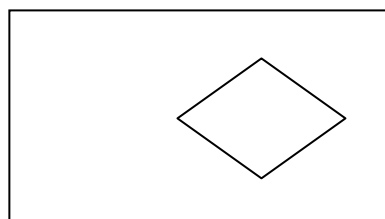
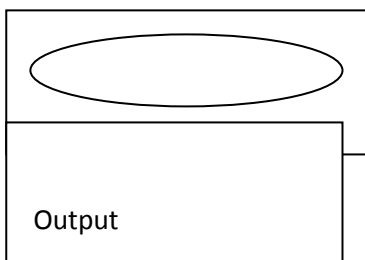
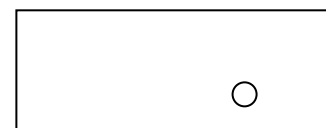
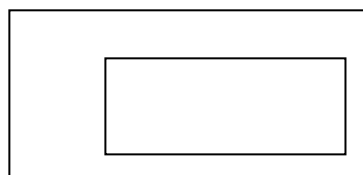
Algorithm Clicyc \_\_\_\_\_

Algorithm Lanoitidnco \_\_\_\_\_

Algorithm Laiseqntue \_\_\_\_\_

Ctionsinstru Calcycli \_\_\_\_\_

**Exercise 3:** Write the name of Symbol in flow charts or the design of word



# What is the "Flow Chart"?

## What have we learned in this lesson?

### **The flow charts**

are very important for computer programmers

why allow for immediate visibility of an algorithm

and easy development of an algorithm.

The algorithm thus designed can then be easily translated into any programming language chosen by the programmer

.Drawing a good algorithm means then encode a good program.

### **Each design of a flow chart has a precise meaning**

The oval is used to indicate the START and the END

The parallelogram is used to indicate INPUT or OUTPUT data

The Rectangular is used to indicate ASSIGNMENT STATEMENTS

The Rumble is used to indicate a condition

The topologies of algorithm are different for different problem that they must solve.

The algorithms can be implemented using only three structures: sequence, selection and loop

**Homework : repeat the lesson step by step**