SAVE THE EARTH USING ALGORITHMS



1.- Write the definition of:

- An algorithm: An algorithm is a procedure or formula for solving a problem, based on conducting a sequence of specified actions.
- The project approach: Is a method of dealing with and resolving the practical problems affecting any society.It consists of ten stages and we can study it as an algorithm.
- A program: Is the translation of an algorithm into a programming language that can be understood and processed by a computer.

2.- The chart used to represent algorithms is called flowchart or flow diagrams and uses symbols connected by arrows to show the sequences of the actions.

3.- Write the name of the symbols used in flowcharts, what they are used to and insert one image of each one and all together in an example:

Terminal: represents the beginning or end of the development of and algorithm.

Process: used to represent each of the actions needed to develop the algorithm.

Information input or output: used when information is needed (additional data to develop the algorithm) or when we presents data or results.

Decision:used when we need to decide between two more opitions.It indicates the path to follow depending on the chosen option.

Flow line: tells us the order of the actions in the algorithm

TYPES OF ALGORITHMS

1.- SEQUENTIAL ALGORITHMS → Definition and example

an algorithm whose instructions are executed one after he other in the same order as they appear

2.- SELECTIVE (OR CONDITIONAL) ALGORITHMS → Definition and example

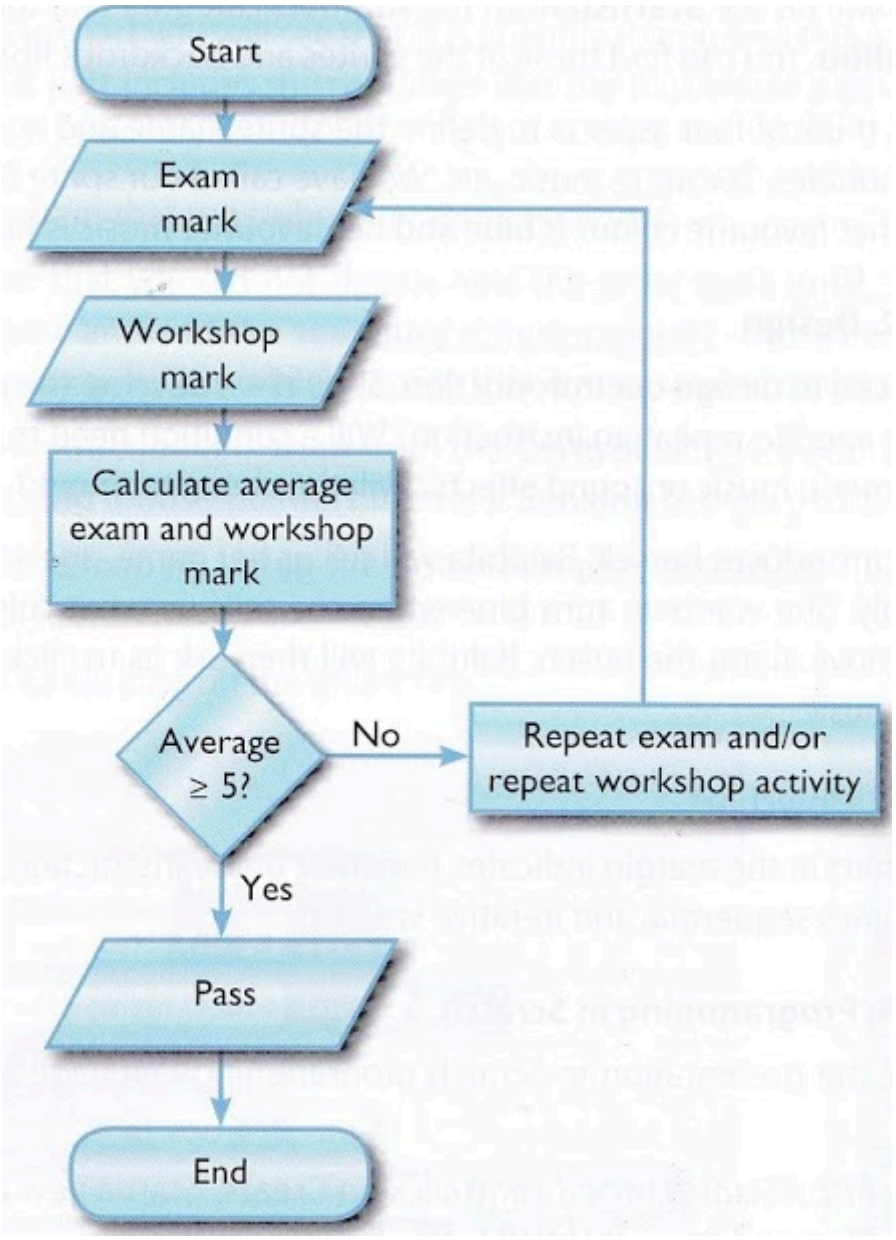
have a series of instructions that are executed depending on whether or not a condition is met

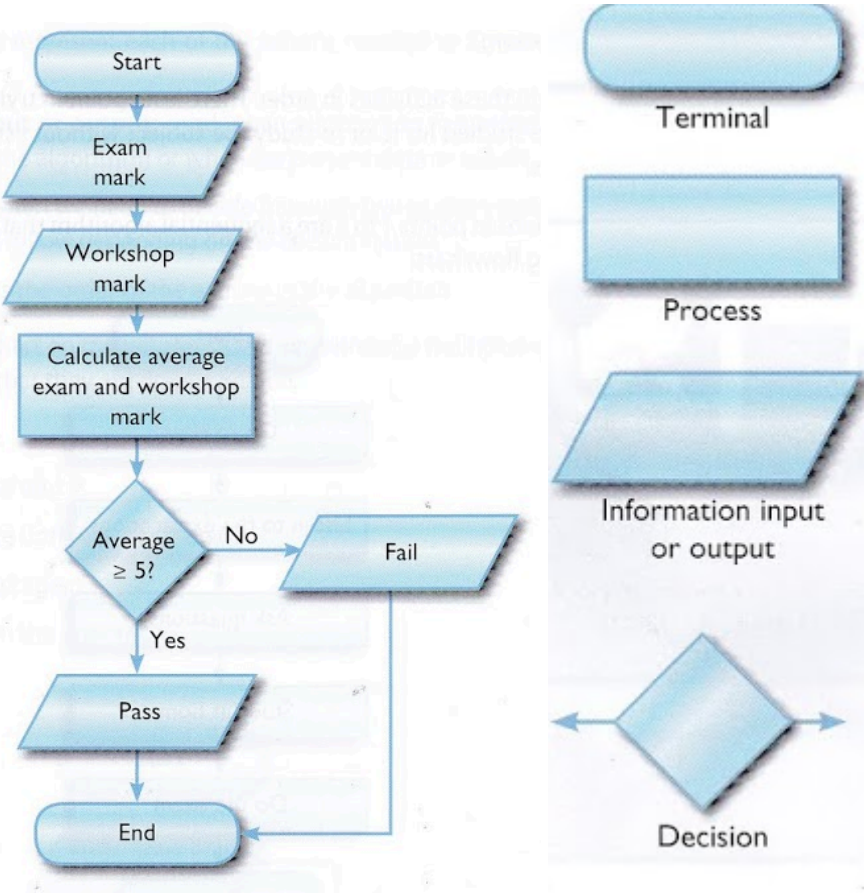
For example: Imagine that you have passed yourTecnology exam:However, to pass the whole course you need a pass for you workshop activity too

3.- ITERATIVE (OR REPEATING) ALGORITHMS → Definition and example

have a set instruction that are repeated several times.These instructions are contained in loops that mark the beginning and end of the repetition

For example That you could repeat the technology exam and workshop activity as often as you needed to obtain an average mark of 5 or more.




Start
Exam mark
Workshop mark
Calculate average exam and workshop mark
Average ≥ 5?
No
Fail
Yes
Pass
End
Terminal
Process
Information input or output
Decision