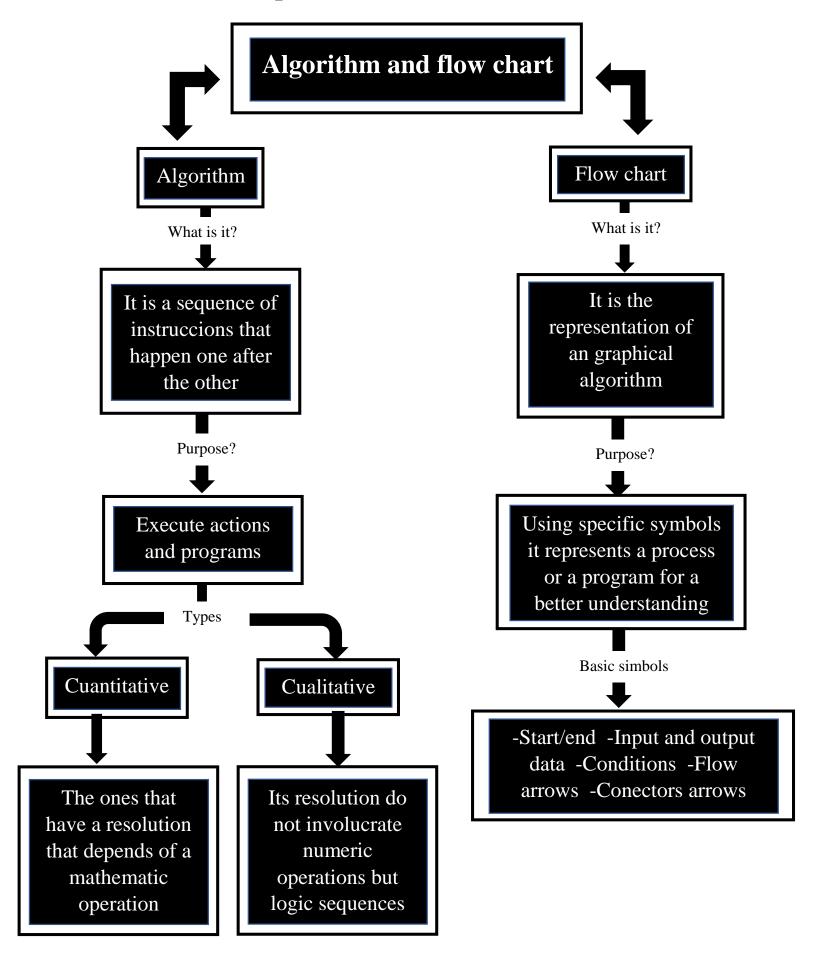
### Universidad Politécnica de Yucatán

Structured Programming
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Computational Robotics 2A
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### Programming Languages

What i it?





Program that has the purpose of build other informatic programs



Design and organize algorithms and logic process that will be applied by a computer

On this you can control its logic, physic behaviour and the communication with the user

Most used programming languages



-General purpose language -Multiparadigm -Interpretated language Multiplataform -Dinamic -Object oriented -Free distribution



-Popular between WEB developers -Interpretated language -Weak typed -Dinamic and interactive -Object oriented





SQL



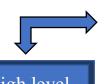
-Portable -Structured -Created to program compilators, compilers, operative systems, etc. -General purpose language

-Standarized language -Data integrity -Flexibility

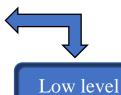
## Classification of programming language

Function?

Create programs to control devices through the writing of a sequence of instructions that will allow in the process, data and algorithms that are necessary



Classification



High level

-Make the programmation easier -Independent of hardware -Translated using a compiler or intepreter -Limited number of programmming structures -

Harder to code and debug -

It is the interface



It translates programs in programming language to machine language that the computer has.

Machine code

Primitive language and consist in the binary code.

Ex: 100011011



#### Compiler

It allows you to translate a whole program in just once time, being faster and able to be saved

Assembly language

It generates quick, compactand efficient codes for the coder

Ex: MOV AL, 61h

# Process of the compilation of the program

What is compiler?

Special program that process statements written in a particular programming language and turns them into machine language or code that computer's uses.

Four steps of compilation

Preprocessing

First step. On this step happens the next process:

-Removing comments Expanding macros -Expanding included file

Assembly

It will convert the assembly code into pure binary code.

Compiling

It takes the output of the preprocessor and generates assembly language. It is specific to the target processor

Linking

On this process the linker merges all the object code from multiple modules into a single one