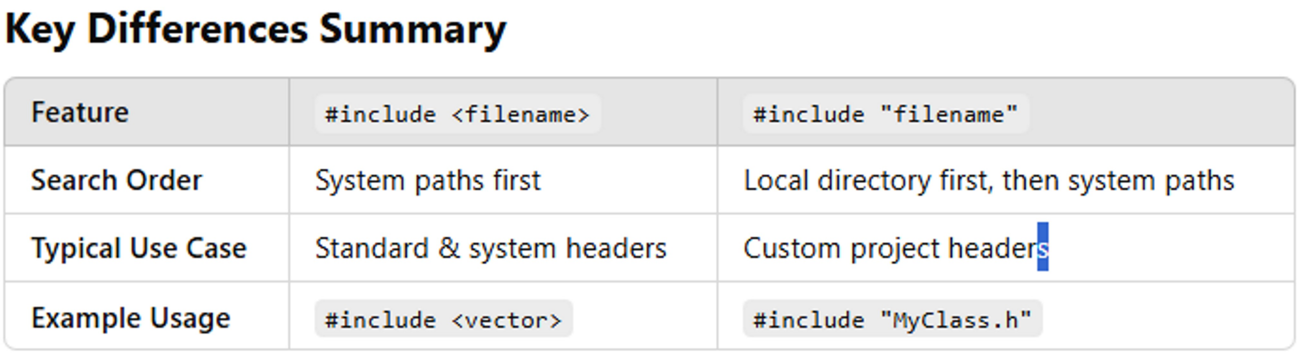
6 - How the c++ Compiler works

segunda-feira, 27 de janeiro de 2025 07:20

How the C++ Compiler Works

- The comiler needs to take the text file and convert it into obj files
    - Needs to preprocess the statements
    - tokenize and parsing the c++ language into a compiler format
        - Representation of the code
    - The job is to convert into a const data or instruction
    - After that it can begin understand the code
    - File is a way to feeder the compiler
    - # include
        - The compiler reads the file, and add it wehreyou want to use it
        - There is na exampe with end braces, just need to incude and it put it there
        - Open the file, copy the content and put it in place
    - Once the pre process is done, we can translate to machine code
    - What is inside na .obj file
        - The machine code the compiler will going to run
        - we got a bunch of assembly instrunctions
    - Compil optimize the code, and that is gerat
    - Not sure how to enable it in VSCode and cmake
        - TODO



Key Differences Summary

Feature	`#include <filename>`	`#include "filename"`
Search Order	System paths first	Local directory first, then system paths
Typical Use Case	Standard & system headers	Custom project headers
Example Usage	`#include <vector>`	`#include "MyClass.h"`