7 - How the C++ Linker Works

segunda-feira, 27 de janeiro de 2025 19:07

How the C++ Linker Works

- Linking is a process from process to executable files
- Focus of lining is to find where each symbo and function is and link it together
- each files is compiled into na obk file and has no relation to each other (don't know where the other is)
- Way to link the files together ito one rogram
- even if everything is in one file, needs to know where the main function is or example
- Thre is compiling and there is linking
  - only compilation will happen at mock
- But if it builds the roject, i'll compile and link the project
- Different error messages
  - Syntax error, compiler error -> C2143 -> ERROR CODE FOR THIS TYPE OF ERROR
    - Starts with letter C
  - If it's a linking eerror, it would begin with the letters LNK
  - helps to understand the error
- Every executable has to have na entrypoint
  - Doesn't have to be the main function, but usually it is
- Unresolved external linker
  - can't find what is looking for
- Never called the loger function, so there is no need to link. But if used it'll cause na error
- If can't find the declaration, itwl trigger a linking error
- Duplicated named functions will also cause problems
  - Linker doesn't know which one to use
- The include can cause duplicates
  - Can mark as static (when it gets included, will by just internal to this file)
    - Each one would have one version of the file
  - Can mek it inline, get the budy and put inline where it's called
  - Third option is to put in one file and add the declaration to the other file