

### Preprocessing:

- Read Library directives
- Remove Comments

Directives are LINES that in C/C++ program that begins with a '#' symbol.

#include <stdio.h> (command) (arguments)

- <stdio.h> is to be found in the library-include in the user directories
- "stdio.h" is to be found in the user-defined directories, defaulted path is the same directory as the C/C++ file

### **Preprocessing Command Lines:**

g++ -E a.cpp

Output: Printout of lines of loaded directive.

**Assembly command Line:** 

g++ -S a.cpp Output: .s file

Object file command Line:

g++ -c a.cpp Output: .o file

Full compilation command Line:

g++ a.cpp

Output: .exe file

Reading Link: <a href="https://www.calleerlandsson.com/the-four-stages-of-compiling-a-c-program/">https://www.calleerlandsson.com/the-four-stages-of-compiling-a-c-program/</a>

- "String Literally" is whatever in between the " " with an escaped character /0
- A statement is a line end with;

#### **Identifies**

- Name
- Variables and Functions have names
- Cannot starts with digits, e.g. 2\_abcd, 2abcd, 234abcd
- A-Z, a-z, digits 0-9, \_ (Underscore)

# Compile (.s file)

- Translation of C Code into Assembly code

# Assembling (.o file)

- Translation of Assemble code into incomplete machine code
- Linking error usually means a called component is missing

