

Assignment No: 2

Compilation is the process of converting a code in a programming language (c) to machine language.
The different steps involved.

- a) Preprocessor
- b) Assembly code
- c) object code
- d) linker

a) preprocessor : Remove all element, replace the include header file statement with the actual content of the header file

`gcc -E code.c`

b) Assembly code : The compiler will convert the preprocessor code `code.i` into assembly code `code.s`

`gcc -S code.i`

c) Object code : The assembler takes our assembly code `code.s` and converts it in object code `code.o`

`gcc -c code.s`

d) linker : Our object code `code.o` is linked with the other we are using, we are using `printf` function so our object code will be linked with the object code for `printf` or rather the library code containing `printf` and an executable will be created.

`gcc code.o`

Compilation process in C (from code.c to a.out)

- a) preprocessor (code.c \rightarrow code.i)
- b) Assembly code (code.i \rightarrow code.s)
- c) object code (code.s \rightarrow code.o)
- d) linker (code.o \rightarrow a.out)