C tags

```
user70@trainux01:~$ cd CGBatch17Oct2024
user70@trainux01:~/CGBatch17Oct2024$ ll
total 48
drwxrwxr-x  8 user70 user70 4096 Nov  5 10:29 ./
drwx------ 23 user70 user70 4096 Nov  6 00:53 ../
drwxrwxr-x  8 user70 user70 4096 Nov  5 10:29 .git/
-rw-rw-r--  1 user70 user70   20 Nov  5 10:29 .gitignore
-rw-rw-r--  1 user70 user70  450 Nov  5 10:29 README.md
drwxrwxr-x  4 user70 user70 4096 Nov  5 10:29 day01_day03/
drwxrwxr-x  3 user70 user70 4096 Nov  5 10:29 day04_day05/
drwxrwxr-x  6 user70 user70 4096 Nov  5 10:29 day06/
drwxrwxr-x  2 user70 user70 4096 Nov  5 10:29 day07/
drwxrwxr-x  2 user70 user70 4096 Nov  5 11:01 day08/
-rw-rw-r--  1 user70 user70    0 Nov  5 10:29 t1.txt
-rw-rw-r--  1 user70 user70    6 Nov  5 10:29 t2.txt.txt
-rw-rw-r--  1 user70 user70    0 Nov  5 10:29 t3.txt
-rw-rw-r--  1 user70 user70   15 Nov  5 10:29 t4.txt
-rw-rw-r--  1 user70 user70    0 Nov  5 10:29 t5.txt
user70@trainux01:~/CGBatch17Oct2024$ cd day07
user70@trainux01:~/CGBatch17Oct2024/day07$ l
```

```
user70@trainux01:~/CGBatch17Oct2024$ cd day06
user70@trainux01:~/CGBatch17Oct2024/day06$ ll
total 24
drwxrwxr-x 6 user70 user70 4096 Nov  5 10:29 ./
drwxrwxr-x 8 user70 user70 4096 Nov  5 10:29 ../
drwxrwxr-x 3 user70 user70 4096 Nov  5 10:29 cTagsTool/
drwxrwxr-x 2 user70 user70 4096 Nov  5 10:29 gdbTool/
drwxrwxr-x 2 user70 user70 4096 Nov  5 10:29 gprofTool/
drwxrwxr-x 2 user70 user70 4096 Nov  5 10:29 valgrindTool/
user70@trainux01:~/CGBatch17Oct2024/day06$ cd cTagsTool
user70@trainux01:~/CGBatch17Oct2024/day06/cTagsTool$ ll
total 12
drwxrwxr-x 3 user70 user70 4096 Nov  5 10:29 ./
drwxrwxr-x 6 user70 user70 4096 Nov  5 10:29 ../
drwxrwxr-x 3 user70 user70 4096 Nov  5 10:29 ctags/
user70@trainux01:~/CGBatch17Oct2024/day06/cTagsTool$ cd ctags
user70@trainux01:~/CGBatch17Oct2024/day06/cTagsTool/ctags$ ll
total 12
drwxrwxr-x 3 user70 user70 4096 Nov  5 10:29 ./
drwxrwxr-x 3 user70 user70 4096 Nov  5 10:29 ../
drwxrwxr-x 7 user70 user70 4096 Nov  5 10:29 project/
user70@trainux01:~/CGBatch17Oct2024/day06/cTagsTool/ctags$ cd project
user70@trainux01:~/CGBatch17Oct2024/day06/cTagsTool/ctags/project$ ll
total 56
drwxrwxr-x 7 user70 user70  4096 Nov  5 10:29 ./
drwxrwxr-x 3 user70 user70  4096 Nov  5 10:29 ../
-rwxrwxr-x 1 user70 user70   318 Nov  5 10:29 Makefile*
```

```
user70@trainux01:~/CGBatch17Oct2024/day06/cTagsTool/ctags$ cd project
user70@trainux01:~/CGBatch17Oct2024/day06/cTagsTool/ctags/project$ ll
total 56
drwxrwxr-x 7 user70 user70  4096 Nov  5 10:29 ./
drwxrwxr-x 3 user70 user70  4096 Nov  5 10:29 ../
-rwxrwxr-x 1 user70 user70   318 Nov  5 10:29 Makefile*
-rw-rw-r-- 1 user70 user70   218 Nov  5 10:29 cscope.files
-rw-rw-r-- 1 user70 user70 15863 Nov  5 10:29 cscope.out
drwxrwxr-x 3 user70 user70  4096 Nov  5 10:29 main/
drwxrwxr-x 4 user70 user70  4096 Nov  5 10:29 mod1/
drwxrwxr-x 4 user70 user70  4096 Nov  5 10:29 mod2/
drwxrwxr-x 4 user70 user70  4096 Nov  5 10:29 mod3/
drwxrwxr-x 4 user70 user70  4096 Nov  5 10:29 mod4/
-rw-rw-r-- 1 user70 user70  1075 Nov  5 10:29 tags
user70@trainux01:~/CGBatch17Oct2024/day06/cTagsTool/ctags/project$ cd main
user70@trainux01:~/CGBatch17Oct2024/day06/cTagsTool/ctags/project/main$ ll
total 12
drwxrwxr-x 3 user70 user70 4096 Nov  5 10:29 ./
drwxrwxr-x 7 user70 user70 4096 Nov  5 10:29 ../
drwxrwxr-x 2 user70 user70 4096 Nov  5 10:29 src/
user70@trainux01:~/CGBatch17Oct2024/day06/cTagsTool/ctags/project/main$ cd src
user70@trainux01:~/CGBatch17Oct2024/day06/cTagsTool/ctags/project/main/src$ ll
total 12
drwxrwxr-x 2 user70 user70 4096 Nov  5 10:29 ./
drwxrwxr-x 3 user70 user70 4096 Nov  5 10:29 ../
-rwxrwxr-x 1 user70 user70  116 Nov  5 10:29 main.c*
user70@trainux01:~/CGBatch17Oct2024/day06/cTagsTool/ctags/project/main/src$ cd main.c
-bash: cd: main.c: Not a directory
user70@trainux01:~/CGBatch17Oct2024/day06/cTagsTool/ctags/project/main/src$ vi main.c
user70@trainux01:~/CGBatch17Oct2024/day06/cTagsTool/ctags/project/main/src$
```

user70@trainux01: ~/CGBatch17Oct2024/day06/cTagsTool/ctags/project/main/src

```
 1 #include <stdio.h>
 2 #include "mod1_func.h"
 3
 4 int main()
 5 {
 6    printf("main() started\n");
 7    mod1_func();
 8
 9    return 0;
10 }
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
"main.c" 10L, 116C
```

Bring the cursor to the function call of "mod1_func", and press Ctrl-]. Will notice vi opens the file where mod1_func is defined.

Now position the cursor on mod2_func call. Press Ctrl-]. Reach the definition of mod2 func.

Function call stack as of now: main() -> mod1_func() -> mod2_func().

Press Ctrl-t. You will return backwards to the calling place i.e. reach mod1_func()

Function call stack as of now: main() -> mod1_func()

Press Ctrl-t. Will return backwards to the calling place i,e. reach main()

Function call stack as of now: main()

There are many more commands and shortcuts in vi using ctags. e.g. you can give vi command its mod4 func Above command will jump to mod4_func() definition.

```c
1 #include <stdio.h>
2 #include "mod1_func.h"
3 #include "mod2_func.h"
4
5 void mod1_func()
6 {
7   printf("mod1_func() is called\n");
8   mod2_func();
9 }
```

```c
1 #include <stdio.h>
2 #include "mod2_func.h"
3 #include "mod3_func.h"
4
5 void mod2_func()
6 {
7   printf("mod2_func() is called\n");
8   mod3_func();
9 }
```

```c
1 #include <stdio.h>
2 #include "mod3_func.h"
3 #include "mod4_func.h"
4
5 void mod3_func()
6 {
7   printf("mod3_func() is called\n");
8   mod4_func();
9 }
```

```c
1 #include <stdio.h>
2 #include "mod4_func.h"
3
4 void mod4_func()
5 {
6   printf("mod4_func() is called\n");
7 }
```