cTags

```
user72@trainux01:~$ cd CGBatch17Oct2024
user72@trainux01:~/CGBatch17Oct2024$ ll
total 48
drwxrwxr-x  8 user72 user72 4096 Nov  5 10:30 ./
drwx------ 20 user72 user72 4096 Nov  5 17:56 ../
drwxrwxr-x  8 user72 user72 4096 Nov  5 10:30 .git/
-rw-rw-r--  1 user72 user72   20 Nov  5 10:30 .gitignore
-rw-rw-r--  1 user72 user72  450 Nov  5 10:30 README.md
drwxrwxr-x  4 user72 user72 4096 Nov  5 10:30 day01_day03/
drwxrwxr-x  3 user72 user72 4096 Nov  5 10:30 day04_day05/
drwxrwxr-x  6 user72 user72 4096 Nov  5 10:30 day06/
drwxrwxr-x  2 user72 user72 4096 Nov  5 10:30 day07/
drwxrwxr-x  2 user72 user72 4096 Nov  5 10:30 day08/
-rw-rw-r--  1 user72 user72    0 Nov  5 10:30 t1.txt
-rw-rw-r--  1 user72 user72    6 Nov  5 10:30 t2.txt.txt
-rw-rw-r--  1 user72 user72    0 Nov  5 10:30 t3.txt
-rw-rw-r--  1 user72 user72   15 Nov  5 10:30 t4.txt
-rw-rw-r--  1 user72 user72    0 Nov  5 10:30 t5.txt
user72@trainux01:~/CGBatch17Oct2024$ cd day06
user72@trainux01:~/CGBatch17Oct2024/day06$ ll
total 24
```

```
drwxrwxr-x 8 user72 user72 4096 Nov  5 10:30 ../
drwxrwxr-x 3 user72 user72 4096 Nov  5 10:30 cTagsTool/
drwxrwxr-x 2 user72 user72 4096 Nov  5 10:30 gdbTool/
drwxrwxr-x 2 user72 user72 4096 Nov  5 10:30 gprofTool/
drwxrwxr-x 2 user72 user72 4096 Nov  5 10:30 valgrindTool/
user72@trainux01:~/CGBatch17Oct2024/day06$ cd cTagsTool
user72@trainux01:~/CGBatch17Oct2024/day06/cTagsTool$ ll
total 12
drwxrwxr-x 3 user72 user72 4096 Nov  5 10:30 ./
drwxrwxr-x 6 user72 user72 4096 Nov  5 10:30 ../
drwxrwxr-x 3 user72 user72 4096 Nov  5 10:30 ctags/
user72@trainux01:~/CGBatch17Oct2024/day06/cTagsTool$ cd cTags
-bash: cd: cTags: No such file or directory
user72@trainux01:~/CGBatch17Oct2024/day06/cTagsTool$ cd ctags
user72@trainux01:~/CGBatch17Oct2024/day06/cTagsTool/ctags$ ll
total 12
drwxrwxr-x 3 user72 user72 4096 Nov  5 10:30 ./
drwxrwxr-x 3 user72 user72 4096 Nov  5 10:30 ../
drwxrwxr-x 7 user72 user72 4096 Nov  5 10:30 project/
user72@trainux01:~/CGBatch17Oct2024/day06/cTagsTool/ctags$ cd project
user72@trainux01:~/CGBatch17Oct2024/day06/cTagsTool/ctags/project$ ll
total 56
drwxrwxr-x 7 user72 user72  4096 Nov  5 10:30 ./
drwxrwxr-x 3 user72 user72  4096 Nov  5 10:30 ../
-rwxrwxr-x 1 user72 user72   318 Nov  5 10:30 Makefile*
-rw-rw-r-- 1 user72 user72   218 Nov  5 10:30 cscope.files
-rw-rw-r-- 1 user72 user72 15863 Nov  5 10:30 cscope.out
drwxrwxr-x 3 user72 user72  4096 Nov  5 10:30 main/
drwxrwxr-x 4 user72 user72  4096 Nov  5 10:30 mod1/
drwxrwxr-x 4 user72 user72  4096 Nov  5 10:30 mod2/
drwxrwxr-x 4 user72 user72  4096 Nov  5 10:30 mod3/
drwxrwxr-x 4 user72 user72  4096 Nov  5 10:30 mod4/
-rw-rw-r-- 1 user72 user72  1075 Nov  5 10:30 tags
user72@trainux01:~/CGBatch17Oct2024/day06/cTagsTool/ctags/project$ cd main
user72@trainux01:~/CGBatch17Oct2024/day06/cTagsTool/ctags/project/main$ ll
total 12
drwxrwxr-x 3 user72 user72 4096 Nov  5 10:30 ./
drwxrwxr-x 7 user72 user72 4096 Nov  5 10:30 ../
drwxrwxr-x 2 user72 user72 4096 Nov  5 10:30 src/
user72@trainux01:~/CGBatch17Oct2024/day06/cTagsTool/ctags/project/main$ cd src
user72@trainux01:~/CGBatch17Oct2024/day06/cTagsTool/ctags/project/main/src$ ll
total 12
drwxrwxr-x 2 user72 user72 4096 Nov  5 10:30 ./
drwxrwxr-x 3 user72 user72 4096 Nov  5 10:30 ../
-rwxrwxr-x 1 user72 user72  116 Nov  5 10:30 main.c*
user72@trainux01:~/CGBatch17Oct2024/day06/cTagsTool/ctags/project/main/src$ cd main.c
-bash: cd: main.c: Not a directory
user72@trainux01:~/CGBatch17Oct2024/day06/cTagsTool/ctags/project/main/src$ vi main.c
user72@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   }
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:set   tags=../../tags█
```

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

```
 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 }
~
~
~
```

```
 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 }
~
```

```
 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 }
~
```

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