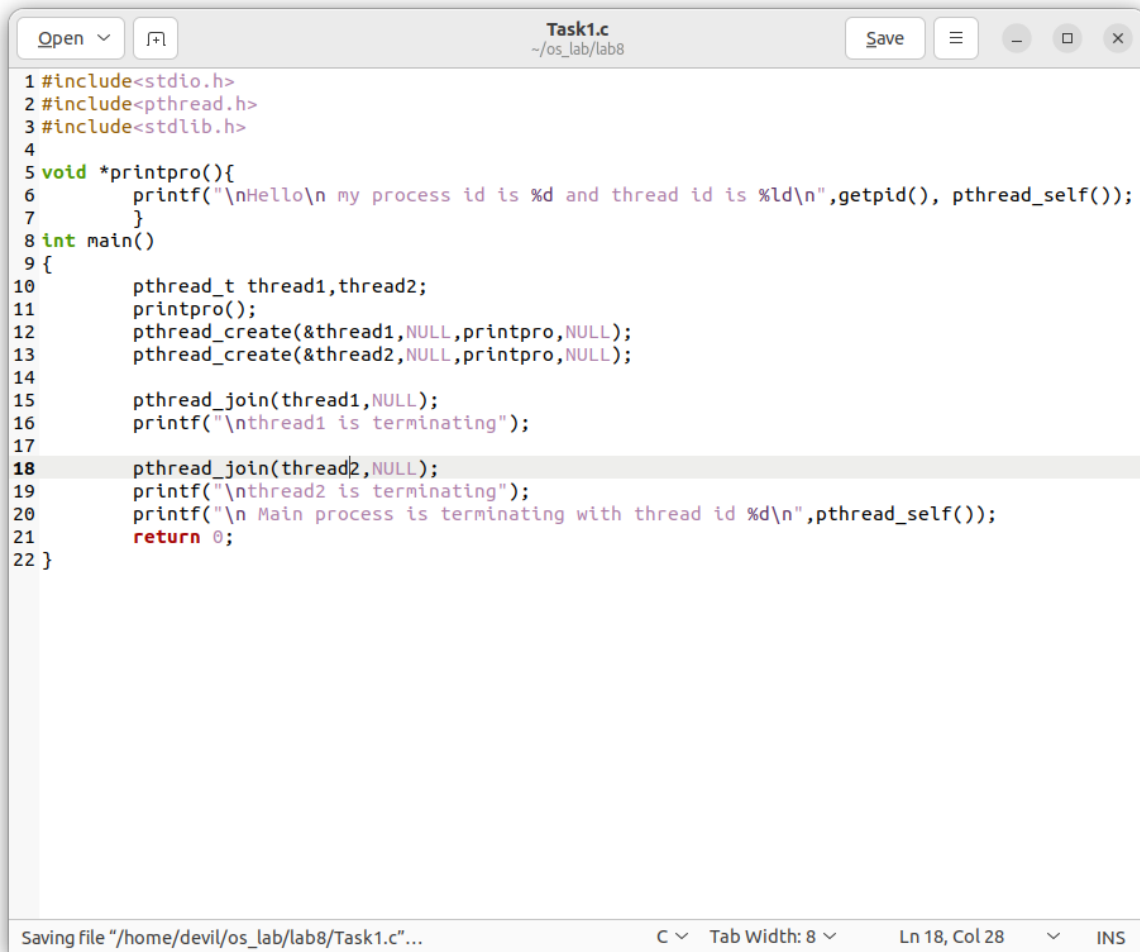


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TASK1



```
1 #include<stdio.h>
2 #include<pthread.h>
3 #include<stdlib.h>
4
5 void *printpro(){
6     printf("\nHello\n my process id is %d and thread id is %ld\n",getpid(), pthread_self());
7 }
8 int main()
9 {
10     pthread_t thread1,thread2;
11     printpro();
12     pthread_create(&thread1,NULL,printpro,NULL);
13     pthread_create(&thread2,NULL,printpro,NULL);
14
15     pthread_join(thread1,NULL);
16     printf("\nthread1 is terminating");
17
18     pthread_join(thread2,NULL);
19     printf("\nthread2 is terminating");
20     printf("\n Main process is terminating with thread id %d\n",pthread_self());
21     return 0;
22 }
```

Task1.c
~/os_lab/lab8

Open Save

Saving file "/home/devil/os_lab/lab8/Task1.c"...

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```
devil@Devil: ~/os_lab/lab8
2 has type 'pthread_t' {aka 'long unsigned int'} [-Wformat=]
20 |     printf("\n Main process is terminating with thread id %d\n",pthread
   |     ~^      ~~~~~
   |     |      |
   |     int   pthread
   |     %ld
devil@Devil:~/os_lab/lab8$ ./Task1

Hello
my process id is 6507 and thread id is 139722268354368

Hello
my process id is 6507 and thread id is 139722265458240

thread1 is terminating
Hello
my process id is 6507 and thread id is 139722257065536

thread2 is terminating
Main process is terminating with thread id -1607719104
devil@Devil:~/os_lab/lab8$
```

TASK 2:

```
Task2.c
~/os_lab/lab8

1 #include<stdio.h>
2 #include<pthread.h>
3 #include<stdio.h>
4
5 void *printMessage(){
6     printf("Child Thread Created Process Id = %d and thread id
7     =%d\n",getpid(),pthread_self());
8 }
9 void *makeChildThread(){
10    printf("Parent Thread Created Process id =%d and thread id
11    =%d\n",getpid(),pthread_self());
12    pthread_t th1;
13    pthread_create(&th1,NULL,printMessage,NULL);
14    pthread_join(th1,NULL);
15    printf("\nTerminating Thread");
16 }
17
18 int main(){
19    pthread_t th1;
20    pthread_create(&th1,NULL,makeChildThread,NULL);
21    pthread_join(th1,NULL);
22    printf("\nTerminating Parent Thread");
23    return 0;
24 }
```

Saving file "/home/devil/os_lab/lab8/Task2.c"...

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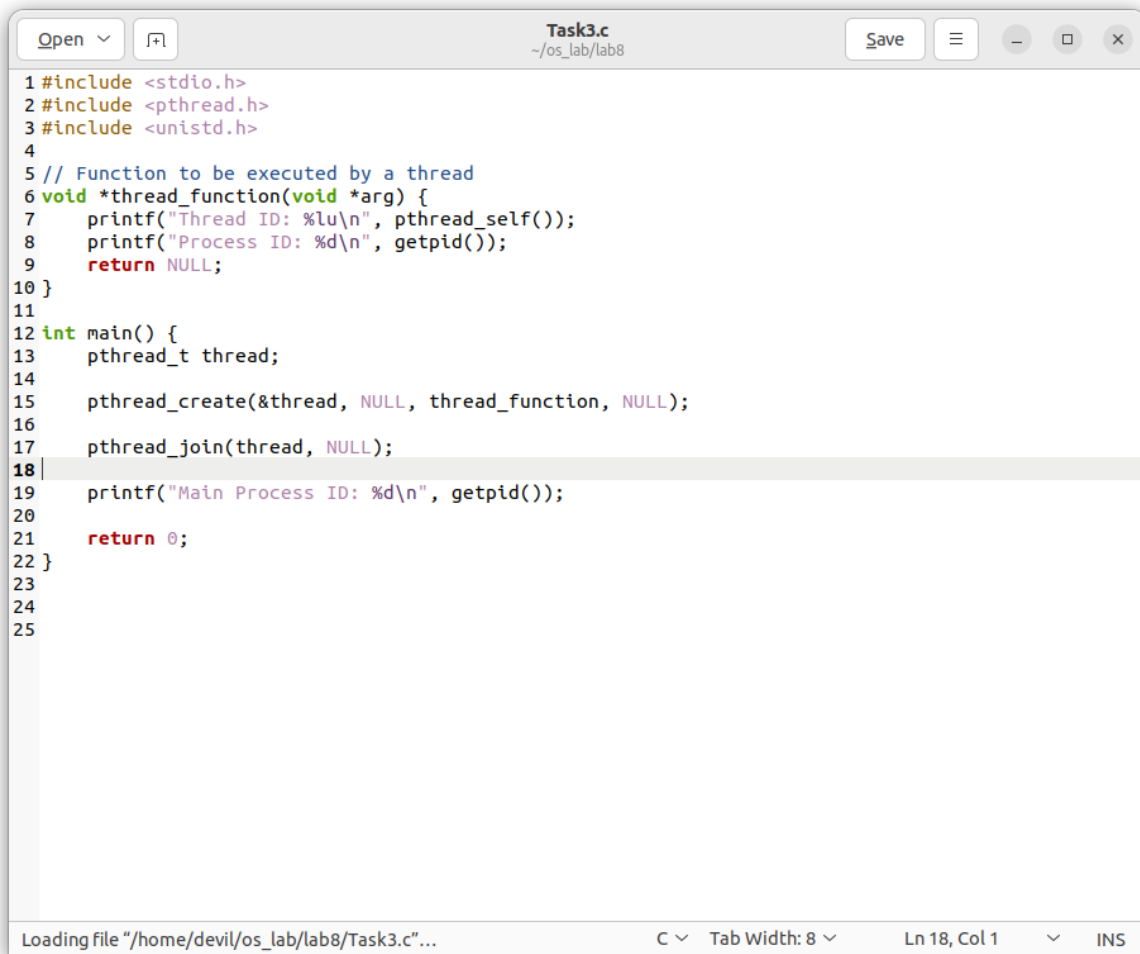
```
devil@Devil: ~/os_lab/lab8

Task2.c: In function 'makeChildThread':
Task2.c:9:70: warning: format '%d' expects argument of type 'int', but argument
3 has type 'pthread_t' {aka 'long unsigned int'} [-Wformat=]
9 | printf("Parent Thread Created Process id =%d and thread id =%d\n",getpid(
),pthread_self());
|                                     ~^
|
|
|                                     int
|                                     %ld
pthread_t {aka long unsigned int}

devil@Devil:~/os_lab/lab8$ ./Task2
Parent Thread Created Process id =7068 and thread id =-369101248
Child Thread Created Process Id = 7068 and thread id =-377493952

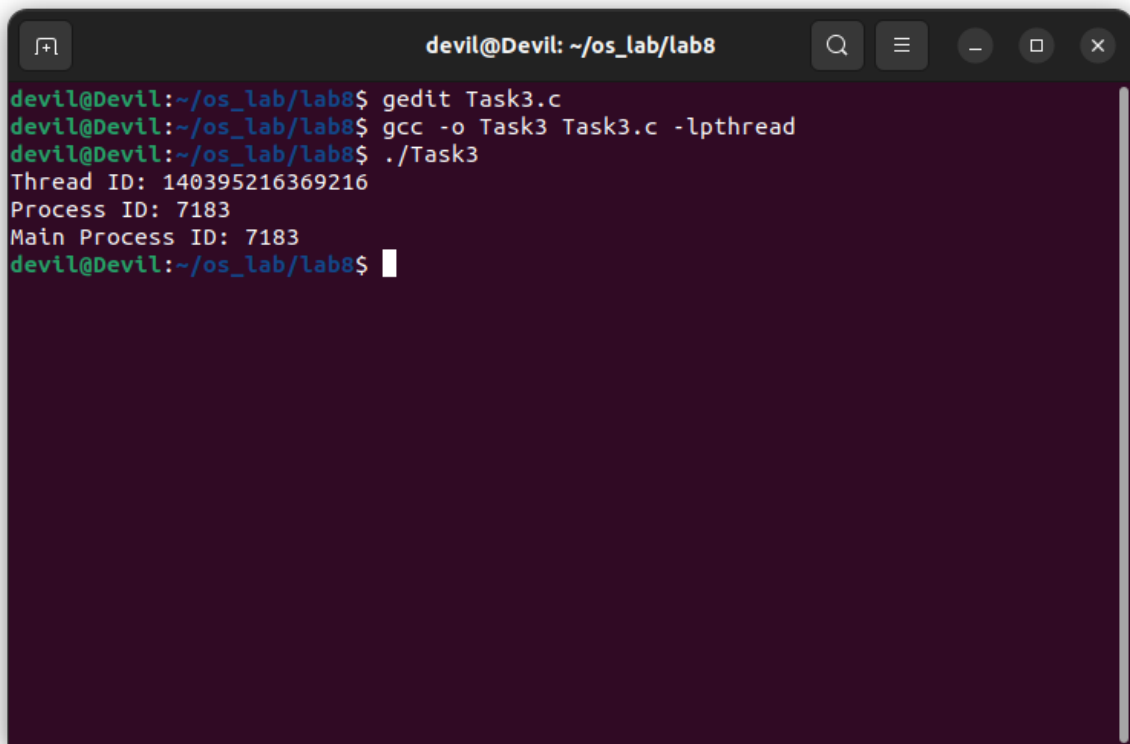
Terminating Thread
Terminating Parent Threaddevil@Devil:~/os_lab/lab8$
```

TASK 3:



```
1 #include <stdio.h>
2 #include <pthread.h>
3 #include <unistd.h>
4
5 // Function to be executed by a thread
6 void *thread_function(void *arg) {
7     printf("Thread ID: %lu\n", pthread_self());
8     printf("Process ID: %d\n", getpid());
9     return NULL;
10 }
11
12 int main() {
13     pthread_t thread;
14
15     pthread_create(&thread, NULL, thread_function, NULL);
16
17     pthread_join(thread, NULL);
18
19     printf("Main Process ID: %d\n", getpid());
20
21     return 0;
22 }
23
24
25
```

Loading file "/home/devil/os_lab/lab8/Task3.c"... C Tab Width: 8 Ln 18, Col 1 INS

A terminal window with a dark background and light-colored text. The window title is "devil@Devil: ~/os_lab/lab8". The terminal shows a sequence of commands and their outputs. The first command is "gedit Task3.c", which opens a text editor. The second command is "gcc -o Task3 Task3.c -lpthread", which compiles the program. The third command is "./Task3", which runs the program. The output shows the thread ID, process ID, and main process ID. The terminal window has standard Linux window controls (minimize, maximize, close) and a search icon.

```
devil@Devil: ~/os_lab/lab8
devil@Devil:~/os_lab/lab8$ gedit Task3.c
devil@Devil:~/os_lab/lab8$ gcc -o Task3 Task3.c -lpthread
devil@Devil:~/os_lab/lab8$ ./Task3
Thread ID: 140395216369216
Process ID: 7183
Main Process ID: 7183
devil@Devil:~/os_lab/lab8$
```

TASK 4:

```

1 #include <stdio.h>
2 #include <pthread.h>
3
4 void *thread_function(void *args) {
5     int value1 = *((int *)args);
6
7
8     printf("Received argument: %d\n", value1);
9
10    return NULL;
11 }
12
13 int main() {
14     pthread_t thread;
15     int arg = 42;
16     pthread_create(&thread, NULL, thread_function, (void *)&arg);
17     pthread_join(thread, NULL);
18
19     return 0;
20 }
21

```

Loading File "/home/devil/os_lab/lab8/Task4.c"... C Tab Width: 8 Ln 21, Col 1 INS

```

devil@Devil: ~/os_lab/lab8
devil@Devil:~/os_lab/lab8$ gedit Task3.c
devil@Devil:~/os_lab/lab8$ gcc -o Task3 Task3.c -lpthread
devil@Devil:~/os_lab/lab8$ ./Task3
Thread ID: 140395216369216
Process ID: 7183
Main Process ID: 7183
devil@Devil:~/os_lab/lab8$ gedit Task3.c
devil@Devil:~/os_lab/lab8$ gedit Task4.c
devil@Devil:~/os_lab/lab8$ gedit Task4.c
devil@Devil:~/os_lab/lab8$ gcc -o Task4 Task4.c -lpthread
devil@Devil:~/os_lab/lab8$ ./Task4
Received argument: 42
devil@Devil:~/os_lab/lab8$

```