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struct and function

Task-1

```
Activities Terminal Thu 12 Sep 15:13:17
hp@hp-HP-280-Pro-G6-Microtower-PC: ~
hp@hp-HP-280-Pro-G6-Microtower-PC:~$ gedit restaurant_bill.c
^?^C
hp@hp-HP-280-Pro-G6-Microtower-PC:~$ gcc -o restaurant_bill restaurant_bill.c
hp@hp-HP-280-Pro-G6-Microtower-PC:~$ ./restaurant_bill
Quantity Of Paratha: 25
Unit Price: 10
Quantity Of Vegetables: 5
Unit Price: 20
Quantity Of Mineral Water: 20
Unit Price: 20
Number of People: 6
Individual people will pay: 125.00 tk
hp@hp-HP-280-Pro-G6-Microtower-PC:~$
```

Task-2

```
Activities Terminal Thu 12 Sep 15:58:17
hp@hp-HP-280-Pro-G6-Microtower-PC: ~
hp@hp-HP-280-Pro-G6-Microtower-PC:~$ touch perfect_numbers.c
hp@hp-HP-280-Pro-G6-Microtower-PC:~$ gedit perfect_numbers.c
hp@hp-HP-280-Pro-G6-Microtower-PC:~$ gcc -o perfect_numbers perfect_numbers.c
hp@hp-HP-280-Pro-G6-Microtower-PC:~$ ./perfect_numbers
Enter lower limit: 1
Enter higher limit: 1000
Perfect number between this interval 6
Perfect number between this interval 28
Perfect number between this interval 496
hp@hp-HP-280-Pro-G6-Microtower-PC:~$
```

system call

Task-1

```
Activities Terminal Thu 12 Sep 16:27:57
hp@hp-HP-280-Pro-G6-Microtower-PC: ~
hp@hp-HP-280-Pro-G6-Microtower-PC:~$ touch file_writer.c
hp@hp-HP-280-Pro-G6-Microtower-PC:~$ gedit file_writer.c
hp@hp-HP-280-Pro-G6-Microtower-PC:~$ gcc file_writer.c -o file_writer
hp@hp-HP-280-Pro-G6-Microtower-PC:~$ ./file_writer
Do you want to open a file and write in it? [Y/n]
Y
^C
hp@hp-HP-280-Pro-G6-Microtower-PC:~$ ./file_writer fdjsd
Do you want to open a file and write in it? [Y/n]
i am
hp@hp-HP-280-Pro-G6-Microtower-PC:~$ gedit fdjsd
hp@hp-HP-280-Pro-G6-Microtower-PC:~$ gcc file_writer.c -o file_writer
hp@hp-HP-280-Pro-G6-Microtower-PC:~$ ./file_writer
Usage: ./file_writer <filename>
hp@hp-HP-280-Pro-G6-Microtower-PC:~$ ./file_writer reza
Enter strings to write to the file (type '-1' to stop):
I am reza s
jgh
-1
Finished writing to the file.
hp@hp-HP-280-Pro-G6-Microtower-PC:~$
```

Task-2

```
Activities Terminal Thu 12 Sep 16:30:56
hp@hp-HP-280-Pro-G6-Microtower-PC: ~
hp@hp-HP-280-Pro-G6-Microtower-PC:~$ gedit process_order.c
hp@hp-HP-280-Pro-G6-Microtower-PC:~$ gcc -o process_order process_order.c
hp@hp-HP-280-Pro-G6-Microtower-PC:~$ ./process_order
I am grandchild
I am parent
hp@hp-HP-280-Pro-G6-Microtower-PC:~$
```

Task 3

```
Activities Terminal Sep 26 15:18

To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

hp@gang:~$ gedit syscall_task3.c
hp@gang:~$ gcc -o syscall_task3 syscall_task3.c
hp@gang:~$ ./syscall_task3
Value of a: 37783
Value of b: 37784
Value of c: 37786
Total number of processes created: 4
hp@gang:~$
```

Task 4

```
Activities Terminal Sep 26 16:52

To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

hp@gang:~$ gcc -o process process.c
hp@gang:~$ gcc -o oddeven oddeven.c
hp@gang:~$ gcc -o sort sort.c
hp@gang:~$ ./process 10 5 8 7 6 3 54
Sorted array in descending order from child process:
54 10 8 7 6 5 3
10 is even
5 is odd
8 is even
7 is odd
6 is even
3 is odd
54 is even
hp@gang:~$
```

Task 5

```
Activities  Terminal  Sep 26 16:59

Terminal

To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

hp@gang:~$ gcc -o syscall_task5 syscall_task5.c
hp@gang:~$ ./syscall_task5
1. Parent process ID: 40958
1. Child process ID: 40959
2. Grand Child process ID: 40960
2. Grand Child process ID: 40961
2. Grand Child process ID: 40962
hp@gang:~$
```

Threading

Task 1

```
hp@gang:~$ gedit threading_task1.c
Compiled and Running
** (gedit:41001): WARNING **: 17:01:54.838: Set document metadata failed: Unable to set metadata key
** (gedit:41001): WARNING **: 17:01:54.841: Set document metadata failed: Unable to set metadata key
** (gedit:41001): WARNING **: 17:01:57.235: Set document metadata failed: Unable to set metadata key
hp@gang:~$ gcc -o threading_task1 threading_task1.c
hp@gang:~$ ./threading_task1
thread-1 running
thread-1 closed
thread-2 running
thread-2 closed
thread-3 running
thread-3 closed
thread-4 running
thread-4 closed
thread-5 running
thread-5 closed
hp@gang:~$
```

Task 2

```
Activities  Terminal  Sep 26 17:08

Terminal

To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

hp@gang:~$ gcc -o threading_task2 threading_task2.c
hp@gang:~$ ./threading_task2
Thread 0 prints 1
Thread 2 prints 11
Thread 2 prints 12
Thread 2 prints 13
Thread 2 prints 14
Thread 2 prints 15
Thread 0 prints 2
Thread 0 prints 3
Thread 0 prints 4
Thread 0 prints 5
Thread 1 prints 6
Thread 1 prints 7
Thread 1 prints 8
Thread 1 prints 9
Thread 3 prints 16
Thread 3 prints 17
Thread 3 prints 18
Thread 3 prints 19
Thread 3 prints 20
Thread 1 prints 10
Thread 4 prints 21
Thread 4 prints 22
Thread 4 prints 23
Thread 4 prints 24
Thread 4 prints 25
hp@gang:~$
```

Task 3

```
Activities  Terminal  Sep 26 17:19

Terminal  Terminal  Terminal

** (gedit:41403): WARNING **: 17:17:51.679: Set document metadata failed: Unable to set metadata key
** (gedit:41403): WARNING **: 17:17:51.685: Set document metadata failed: Unable to set metadata key
** (gedit:41403): WARNING **: 17:17:52.916: Set document metadata failed: Unable to set metadata key
hp@gang:~$ gcc -o threading_task3 threading_task3.c -pthread
hp@gang:~$ ./threading_task3
Enter Your Name:
Saiful
Enter Your Name:
Islam
Enter Your Name:
Reza
Hasta la vista
hp@gang:~$ ./threading_task3
Enter Your Name:
Saiful
Enter Your Name:
Islam
Enter Your Name:
Saiful
Miracle
hp@gang:~$ ./threading_task3
Enter Your Name:
Reza
Enter Your Name:
Reza
Enter Your Name:
Reza
Youreka
hp@gang:~$
```