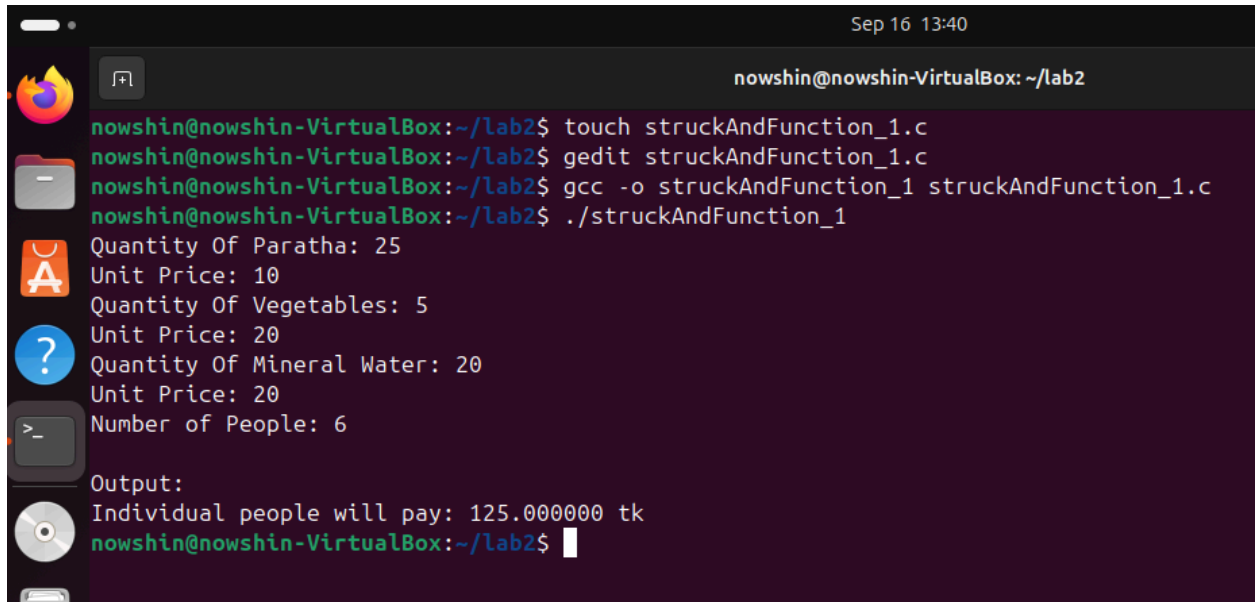


## Assignment:02

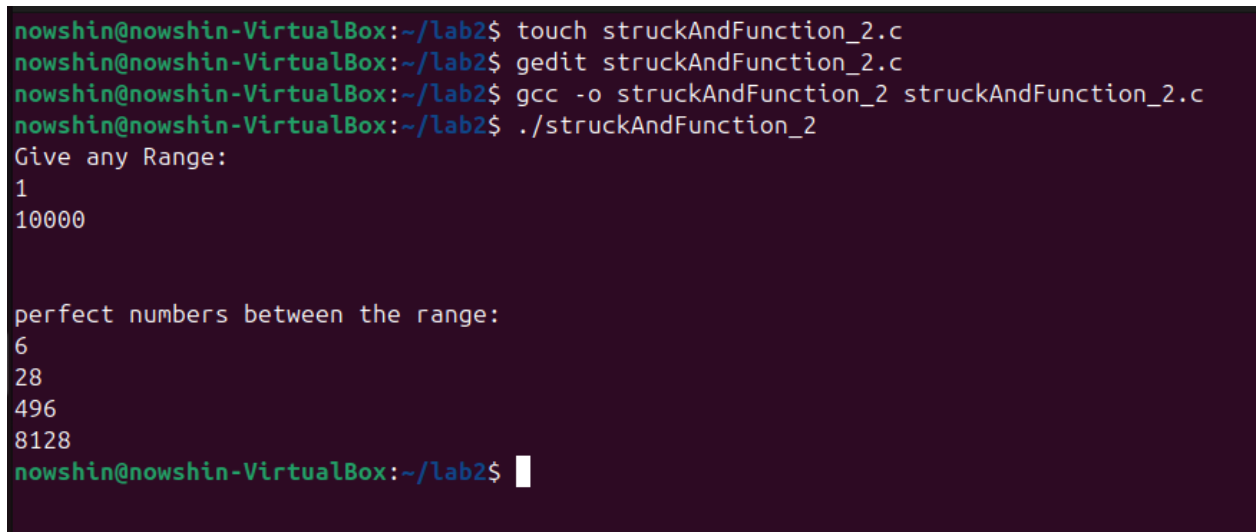
The following questions are related to C programming (struct and function):

### Answer to the question no : 01

A terminal window titled 'nowshin@nowshin-VirtualBox: ~/lab2' with a timestamp of 'Sep 16 13:40'. The terminal shows the execution of a C program named 'struckAndFunction\_1.c'. The program prompts for several inputs: 'Quantity Of Paratha: 25', 'Unit Price: 10', 'Quantity Of Vegetables: 5', 'Unit Price: 20', 'Quantity Of Mineral Water: 20', 'Unit Price: 20', and 'Number of People: 6'. The output of the program is displayed as 'Output: Individual people will pay: 125.000000 tk'.

```
nowshin@nowshin-VirtualBox:~/lab2$ touch struckAndFunction_1.c
nowshin@nowshin-VirtualBox:~/lab2$ gedit struckAndFunction_1.c
nowshin@nowshin-VirtualBox:~/lab2$ gcc -o struckAndFunction_1 struckAndFunction_1.c
nowshin@nowshin-VirtualBox:~/lab2$ ./struckAndFunction_1
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
Output:
Individual people will pay: 125.000000 tk
nowshin@nowshin-VirtualBox:~/lab2$
```

### Answer to the question no : 02

A terminal window titled 'nowshin@nowshin-VirtualBox: ~/lab2' showing the execution of a C program named 'struckAndFunction\_2.c'. The program prompts for a range: 'Give any Range: 1 10000'. The output of the program is displayed as 'perfect numbers between the range: 6 28 496 8128'.

```
nowshin@nowshin-VirtualBox:~/lab2$ touch struckAndFunction_2.c
nowshin@nowshin-VirtualBox:~/lab2$ gedit struckAndFunction_2.c
nowshin@nowshin-VirtualBox:~/lab2$ gcc -o struckAndFunction_2 struckAndFunction_2.c
nowshin@nowshin-VirtualBox:~/lab2$ ./struckAndFunction_2
Give any Range:
1
10000

perfect numbers between the range:
6
28
496
8128
nowshin@nowshin-VirtualBox:~/lab2$
```

The following questions are related to system call :

Answer to the question no : 01

```
nowshin@nowshin-VirtualBox:~$ cd lab2
nowshin@nowshin-VirtualBox:~/lab2$ touch systemCall_1.c
nowshin@nowshin-VirtualBox:~/lab2$ gedit systemCall_1.c
nowshin@nowshin-VirtualBox:~/lab2$ gcc -o systemCall_1 systemCall_1.c
nowshin@nowshin-VirtualBox:~/lab2$ ./systemCall_1 output2_1.txt
enter a string: nowshin
enter a string: sumaiya
enter a string: yen
enter a string: assignment2
enter a string: done
enter a string: -1
nowshin@nowshin-VirtualBox:~/lab2$ cat output2_1.txt
nowshin

sumaiya

yen

assignment2

done

nowshin@nowshin-VirtualBox:~/lab2$
```

Answer to the question no : 02

```
nowshin@nowshin-VirtualBox:~/lab2$ touch systemcall_2.c
nowshin@nowshin-VirtualBox:~/lab2$ gedit systemcall_2.c
nowshin@nowshin-VirtualBox:~/lab2$ gcc -o systemcall_2 systemcall_2.c
```

```
nowshin@nowshin-VirtualBox:~/lab2$ ./syscall_2
I am Grandchild
I am Child
I am Parent
nowshin@nowshin-VirtualBox:~/lab2$
```

Answer to the question no : 03

```
nowshin@nowshin-VirtualBox:~/lab2$ gcc -o syscall_3 syscall_3.c
nowshin@nowshin-VirtualBox:~/lab2$ ./syscall_3
total processes without Parent: 3
total processes with Parent: 4
nowshin@nowshin-VirtualBox:~/lab2$
```

Answer to the question no : 04

```
nowshin@nowshin-VirtualBox:~/lab2/systemcall_task4$ gcc -o syscall_4 syscall_4.c
nowshin@nowshin-VirtualBox:~/lab2/systemcall_task4$ gcc -o oddeven oddeven.c
nowshin@nowshin-VirtualBox:~/lab2/systemcall_task4$ gcc -o sort sort.c
nowshin@nowshin-VirtualBox:~/lab2/systemcall_task4$ ./oddeven
Odd Numbers:
Even Numbers:
nowshin@nowshin-VirtualBox:~/lab2/systemcall_task4$ ./sort
Sorted in descending Orders:
```

```
nowshin@nowshin-VirtualBox:~/lab2/systemcall_task4$ ./systemcall_4 100 4 8 3 1 201
Sorted in descending Order:
201
100
8
4
3
1
odd Numbers are:
3
1
201
even Numbers are:
100
4
8
nowshin@nowshin-VirtualBox:~/lab2/systemcall_task4$
```

Answer to the question no : 05

```
nowshin@nowshin-VirtualBox:~$ cd lab2
nowshin@nowshin-VirtualBox:~/lab2$ touch systmCall_5.c
nowshin@nowshin-VirtualBox:~/lab2$ gedit systemCall_5.c
nowshin@nowshin-VirtualBox:~/lab2$ gcc -o systemCall_5 systemCall_5.c
nowshin@nowshin-VirtualBox:~/lab2$ systemCall_5
systemCall_5: command not found
nowshin@nowshin-VirtualBox:~/lab2$ ./systemCall_5
1. Parent Process ID: 3231
2. Child Process ID: 3232
3. Grand Child Process ID: 3233
4. Grand Child Process ID: 3234
5. Grand Child Process ID: 3235
```

The following questions are related to Threading

Answer to the question no : 01

```
nowshin@nowshin-VirtualBox:~/lab2$ gcc -o thread_1 thread_1.c
nowshin@nowshin-VirtualBox:~/lab2$ ./thread_1
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
nowshin@nowshin-VirtualBox:~/lab2$
```

Answer to the question no : 02

```
nowshin@nowshin-VirtualBox:~/lab2$ gcc -o threading_2 threading_2.c
nowshin@nowshin-VirtualBox:~/lab2$ ./threading_2
Thread 0 prints 1
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 1 prints 10
Thread 2 prints 11
Thread 2 prints 12
Thread 2 prints 13
Thread 2 prints 14
Thread 2 prints 15
Thread 3 prints 16
Thread 3 prints 17
Thread 3 prints 18
Thread 3 prints 19
Thread 3 prints 20
Thread 4 prints 21
Thread 4 prints 22
Thread 4 prints 23
Thread 4 prints 24
Thread 4 prints 25
```

Answer to the question no : 03

```
nowshin@nowshin-VirtualBox:~$ cd lab2
nowshin@nowshin-VirtualBox:~/lab2$ gcc -o threading_3 threading_3.c
nowshin@nowshin-VirtualBox:~/lab2$ ./threading_3
Enter the name:
nowshin
Enter the name:
sumaiya
Enter the name:
yen
Hasta La Vista
nowshin@nowshin-VirtualBox:~/lab2$ gcc -o threading_3 threading_3.c
nowshin@nowshin-VirtualBox:~/lab2$ ./threading_3
Enter the name:
yen
Enter the name:
yen
Enter the name:
yen
Youreka
nowshin@nowshin-VirtualBox:~/lab2$
```