

Operating System Lab
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122CS0107
Assignment – 1

C Programs
Q1. WAP to Add 2 Numbers
Code:

```
#include <stdio.h>

int main() {
    int a;
    int b;

    printf("Enter First Number: ");
    scanf("%d", &a);
    printf("Enter Second Number: ");
    scanf("%d", &b);

    a += b;
    printf("%d is the sum.\n", a);
    return 0;
}
```

Output:

```
nitr@nitr-HP-Compaq-Elite-8300-SFF:~/Downloads/122CS0107/OperatingSystem$ gedit add2.c
^C
nitr@nitr-HP-Compaq-Elite-8300-SFF:~/Downloads/122CS0107/OperatingSystem$ gcc add2.c
nitr@nitr-HP-Compaq-Elite-8300-SFF:~/Downloads/122CS0107/OperatingSystem$ ./a.out
Enter First Number: 19
Enter Second Number: 29
48 is the sum.
nitr@nitr-HP-Compaq-Elite-8300-SFF:~/Downloads/122CS0107/OperatingSystem$
```

Q2. WAP to check if a number is prime or not
Code:

```
#include <stdio.h>

int main() {
    int num;
    printf("Enter Number: ");
    scanf("%d", &num);

    for (int i = 2; i < num; i++) {
        if (num % i == 0) {
            printf("Not Prime\n");
            return 0;
        }
    }
    printf("Prime\n");
    return 0;
}
```

Output:

```
48 is the sum.
nitr@nitr-HP-Compaq-Elite-8300-SFF:~/Downloads/122CS0107/OperatingSystem$ gedit prime.c
^C
nitr@nitr-HP-Compaq-Elite-8300-SFF:~/Downloads/122CS0107/OperatingSystem$ gcc prime.c
nitr@nitr-HP-Compaq-Elite-8300-SFF:~/Downloads/122CS0107/OperatingSystem$ ./a.out
Enter Number: 31
Prime
nitr@nitr-HP-Compaq-Elite-8300-SFF:~/Downloads/122CS0107/OperatingSystem$
```

Commands (any 5)

1. date

date command is used to display the system date and time. date command is also used to set date and time of the system. By default the date command displays the date in the time zone on which unix/linux operating system is configured. You must be the super-user (root) to change the date and time.

```
nitr@nitr-HP-Compaq-Elite-8300-SFF:~/Downloads/122CS0107/OperatingSystem$ date
Mon Aug  5 09:16:49 IST 2024
nitr@nitr-HP-Compaq-Elite-8300-SFF:~/Downloads/122CS0107/OperatingSystem$
```

2. who

The who command is a simple and effective way to display information about currently logged-in users. By typing who in the terminal, you will receive a list of usernames, terminal IDs, login times, and originating IP addresses if applicable.

```
nitr@nitr-HP-Compaq-Elite-8300-SFF:~/Downloads/122CS0107/OperatingSystem$ who
nitr      :0                2024-08-05 08:08 (:0)
nitr@nitr-HP-Compaq-Elite-8300-SFF:~/Downloads/122CS0107/OperatingSystem$
```

3. lsb_release -a

The **lsb_release** command prints certain LSB (Linux Standard Base) and Distribution information.

If no options are given, the -v option is assumed.

-a displays all of the above information.

```
nitr@nitr-HP-Compaq-Elite-8300-SFF:~/Downloads/122CS0107/OperatingSystem$ lsb_release -a
No LSB modules are available.
Distributor ID: Ubuntu
Description:    Ubuntu 18.04.6 LTS
Release:        18.04
Codename:       bionic
```

4. time

time command in Linux is used to execute a command and prints a summary of real-time, user CPU time and system CPU time spent by executing a command when it terminates.

'real' time is the time elapsed wall clock time taken by a command to get executed, while 'user' and 'sys' time are the number of CPU seconds that command uses in user and kernel mode respectively.

```
nitr@nitr-HP-Compaq-Elite-8300-SFF:~/Downloads/122CS0107/OperatingSystem$ time

real    0m0.000s
user    0m0.000s
sys     0m0.000s
nitr@nitr-HP-Compaq-Elite-8300-SFF:~/Downloads/122CS0107/OperatingSystem$
```

5. touch

The **touch** command is a standard command used in the UNIX/Linux operating system which is used to create, change and modify the timestamps of a file.

```
nit@nit-HP-Compaq-Elite-8300-SFF:~/Downloads/122CS0107/OperatingSystem$ touch test.c
nit@nit-HP-Compaq-Elite-8300-SFF:~/Downloads/122CS0107/OperatingSystem$ ls
add2.c  a.out  prime.c  test.c
nit@nit-HP-Compaq-Elite-8300-SFF:~/Downloads/122CS0107/OperatingSystem$
```