

OS LAB -5

Engr. Nauman

Create a Text File with touch command
filename.txt

Environment variables

- **Environment variables** are a set of dynamic named values that can affect the way running processes will behave on a computer.
- They can be said in some sense to create the operating environment in which a process runs. For example, an environment variable with a standard name can store the location that a particular computer system uses to store temporary files
- \$SHELL and \$PATHS are environment variable in Liniux

find

- **find -name 'mypage.htm'**
- In the above command the system would search for any file named mypage.htm in the current directory and any subdirectory.
- **find / -name 'mypage.htm'**
- In the above example the system would search for any file named mypage.htm on the root and all subdirectories from the root.
- **find -name 'file*'**
- In the above example the system would search for any file beginning with file in the current directory and any subdirectory.
- **find -name '*' -size +1000k**
- In the above example the system would search for any file that is larger than 1000k.

2k09

File Edit View Places Help



RollNo1.txt



RollNo2.txt



RollNo3.txt



RollNo4.txt



RollNo5.txt

```
nauman@localhost:~/Desktop/2k09
File Edit View Terminal Help
[nauman@localhost 2k09]$ find RollNo1.txt
RollNo1.txt
[nauman@localhost 2k09]$ find RollNo19.txt
find: `RollNo19.txt': No such file or directory
[nauman@localhost 2k09]$ find RollNo*.txt
RollNo1.txt
RollNo2.txt
RollNo3.txt
RollNo4.txt
RollNo5.txt
[nauman@localhost 2k09]$ find RollNo*.txt -size 1000k
[nauman@localhost 2k09]$ find RollNo*.txt -size 10k
[nauman@localhost 2k09]$ find RollNo*.txt -size 1k
RollNo1.txt
RollNo2.txt
RollNo3.txt
RollNo4.txt
RollNo5.txt
[nauman@localhost 2k09]$
```

2k09 5 items, Free space: 1.1 GB

nauman@localhost:~/... 2k09

Search in a file

The screenshot shows a Linux desktop environment. The top panel displays the system status, including the date and time (Sat Oct 1, 10:14 AM) and the user name (Mirza Nauman Baig). The main window is a text editor (gedit) editing a file named 'oslab.html' located on the Desktop. The editor's menu bar includes File, Edit, View, Search, Tools, Documents, and Help. The toolbar contains icons for Open, Save, Print, Undo, and other standard editing functions. The main text area shows the following HTML code:

```
<html>
<head>

<script>
document.write("Hello World<hr/>");
</script>

</head>
<body>
<h1>Welcome to OS Labs</h1>
</body>
</html>
```

The word "Hello" in the script tag is highlighted in pink. A search bar is visible at the top of the editor, showing the search term "Hello".

In the foreground, a terminal window is open, showing the following commands and output:

```
nauman@localhost:~/Desktop
File Edit View Terminal Help
[nauman@localhost Desktop]$ grep "Hello" oslab.html
document.write("Hello World<hr/>");
[nauman@localhost Desktop]$ grep "html" oslab.html
<html>
</html>
[nauman@localhost Desktop]$
```

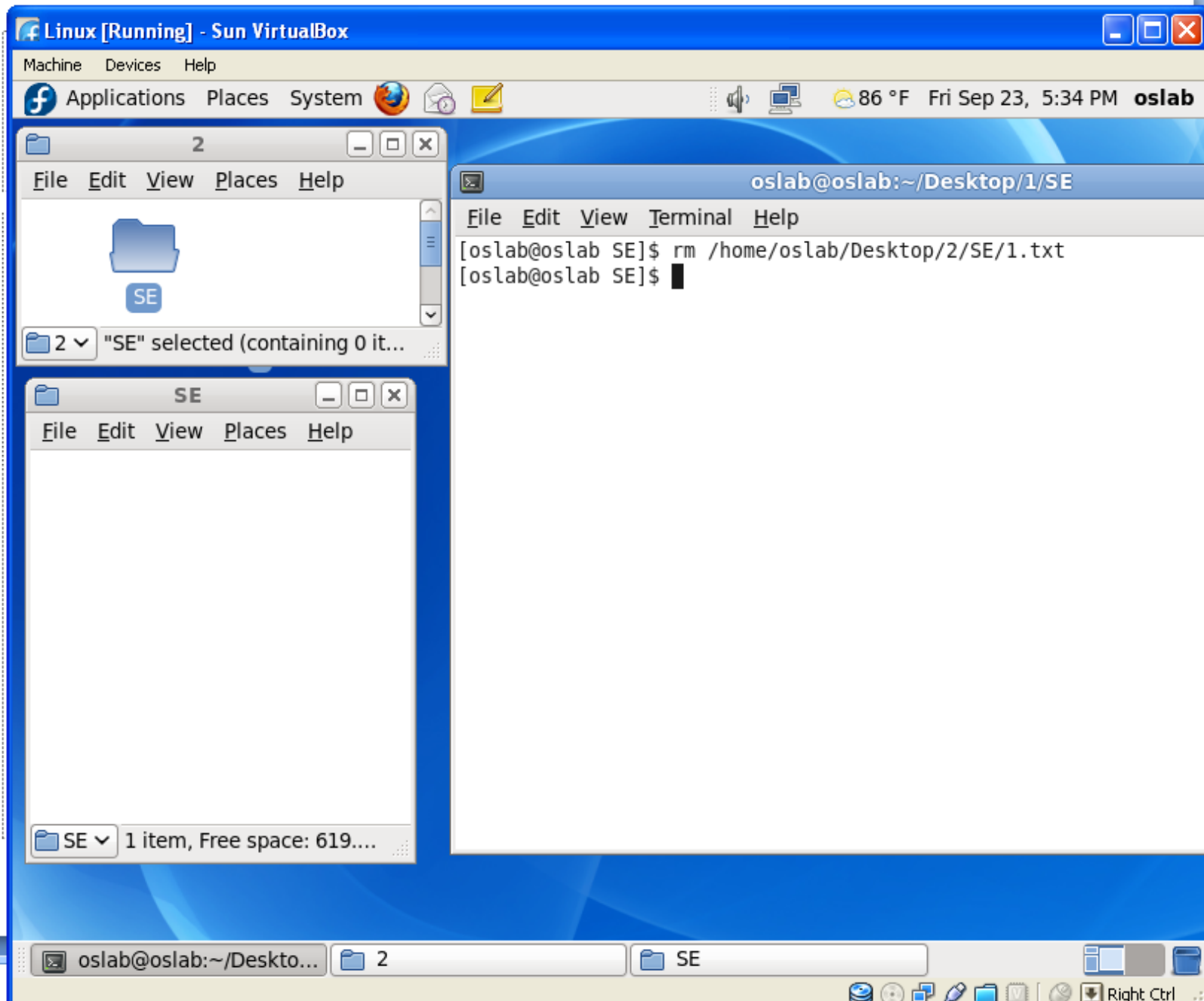
The terminal window title is 'nauman@localhost:~/Desktop'. The status bar at the bottom of the editor shows 'HTML', 'Tab Width: 8', 'Ln 12, Col 8', and 'INS'.

sort

```
Applications Places System Sat Oct 1, 10:54 AM Mirza Nauman Baig
file.txt (~/Desktop) - gedit
File Edit View Search Tools Documents Help
Open Save Undo
file.txt x
x
7
a
1
3
2
c
b
nauman@localhost:~/Desktop
File Edit View Terminal Help
[nauman@localhost Desktop]$ sort file.txt
1
2
3
7
a
b
c
x
[nauman@localhost Desktop]$ sort -r file.txt
x
c
b
a
7
3
2
1
[nauman@localhost Desktop]$
Plain Text Tab Width: 8 Ln 8, Col 2 INS
nauman@localhost:~/... file.txt (~/Desktop) - g...
```

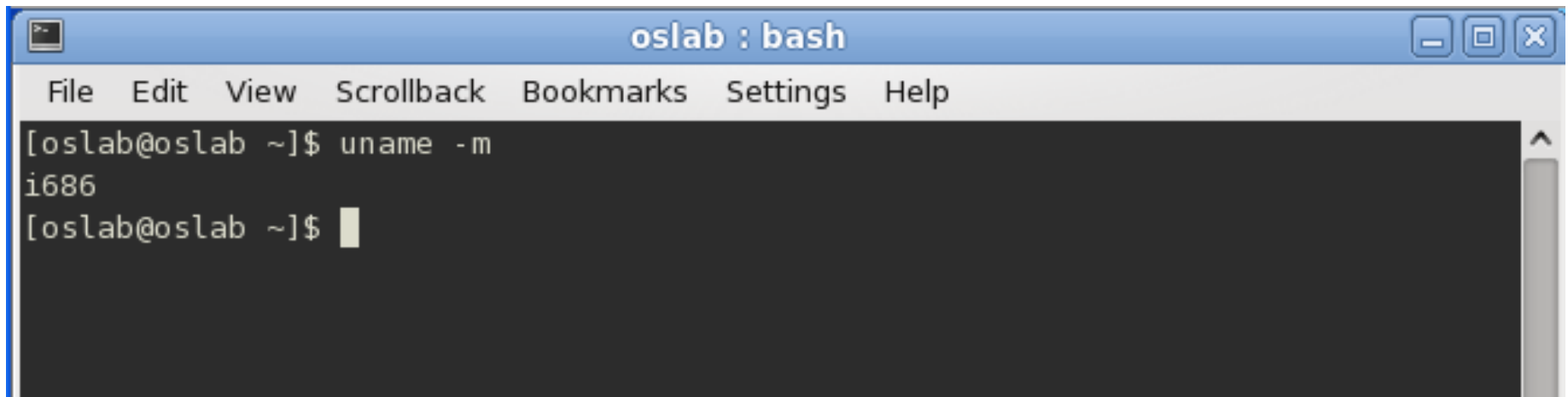
Other commands

- Rename folder
- Rename file
- Delete folder having files in it
- Free
- History



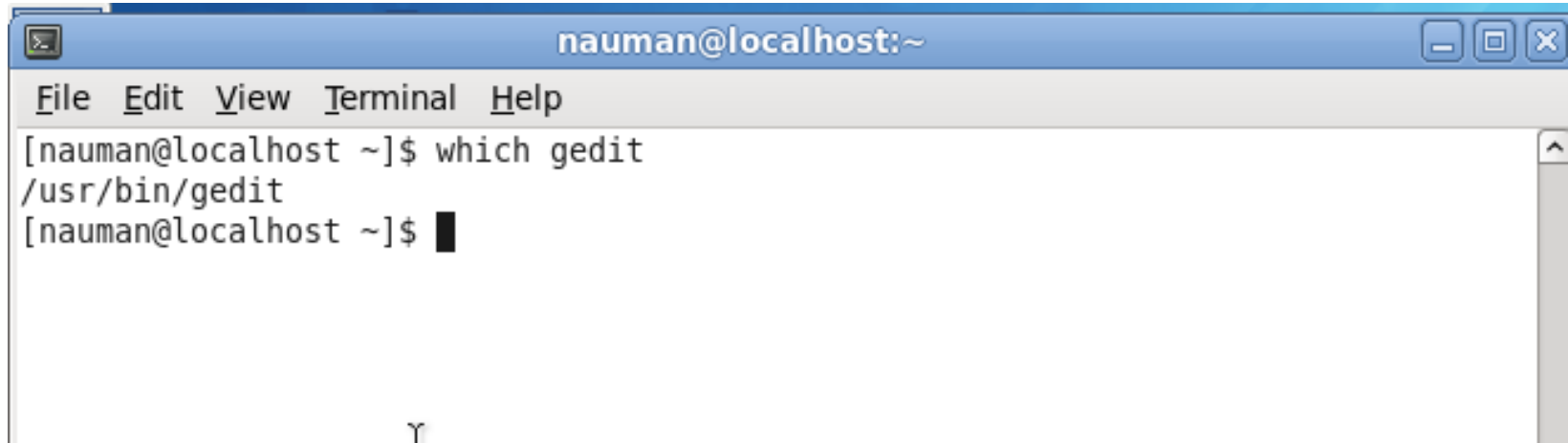
uname -m

- x86_64 when it is an kernel 64 bits
- i686 for 32 bits kernel

A terminal window titled "oslab : bash" with a menu bar containing "File", "Edit", "View", "Scrollback", "Bookmarks", "Settings", and "Help". The terminal content shows the command "[oslab@oslab ~]\$ uname -m" being executed, resulting in the output "i686". The prompt "[oslab@oslab ~]\$" is followed by a cursor.

```
[oslab@oslab ~]$ uname -m
i686
[oslab@oslab ~]$
```

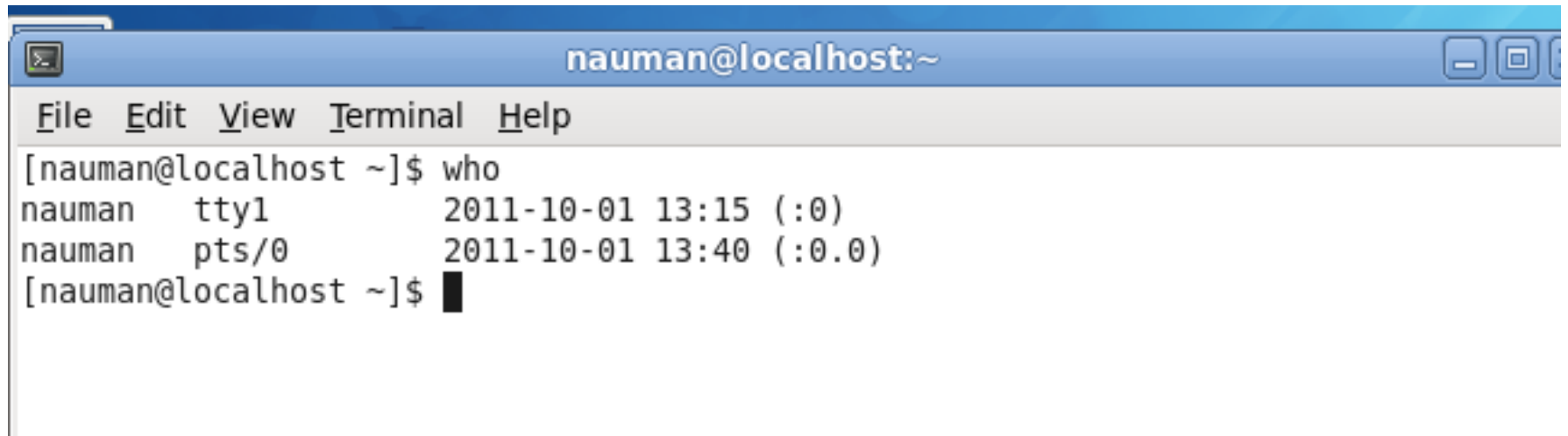
which



A terminal window titled "nauman@localhost:~" with a menu bar containing "File", "Edit", "View", "Terminal", and "Help". The terminal shows the command "which gedit" being executed, resulting in the output "/usr/bin/gedit". The prompt "[nauman@localhost ~]" is followed by a cursor.

```
[nauman@localhost ~]$ which gedit
/usr/bin/gedit
[nauman@localhost ~]$ █
```

who



A terminal window titled "nauman@localhost:~" with a menu bar containing "File", "Edit", "View", "Terminal", and "Help". The terminal shows the command "who" being executed, resulting in two lines of output: "nauman tty1 2011-10-01 13:15 (:0)" and "nauman pts/0 2011-10-01 13:40 (:0.0)". The prompt "[nauman@localhost ~]\$" is shown at the end of the output, followed by a black cursor block.

```
[nauman@localhost ~]$ who
nauman  tty1      2011-10-01 13:15 (:0)
nauman  pts/0      2011-10-01 13:40 (:0.0)
[nauman@localhost ~]$ █
```

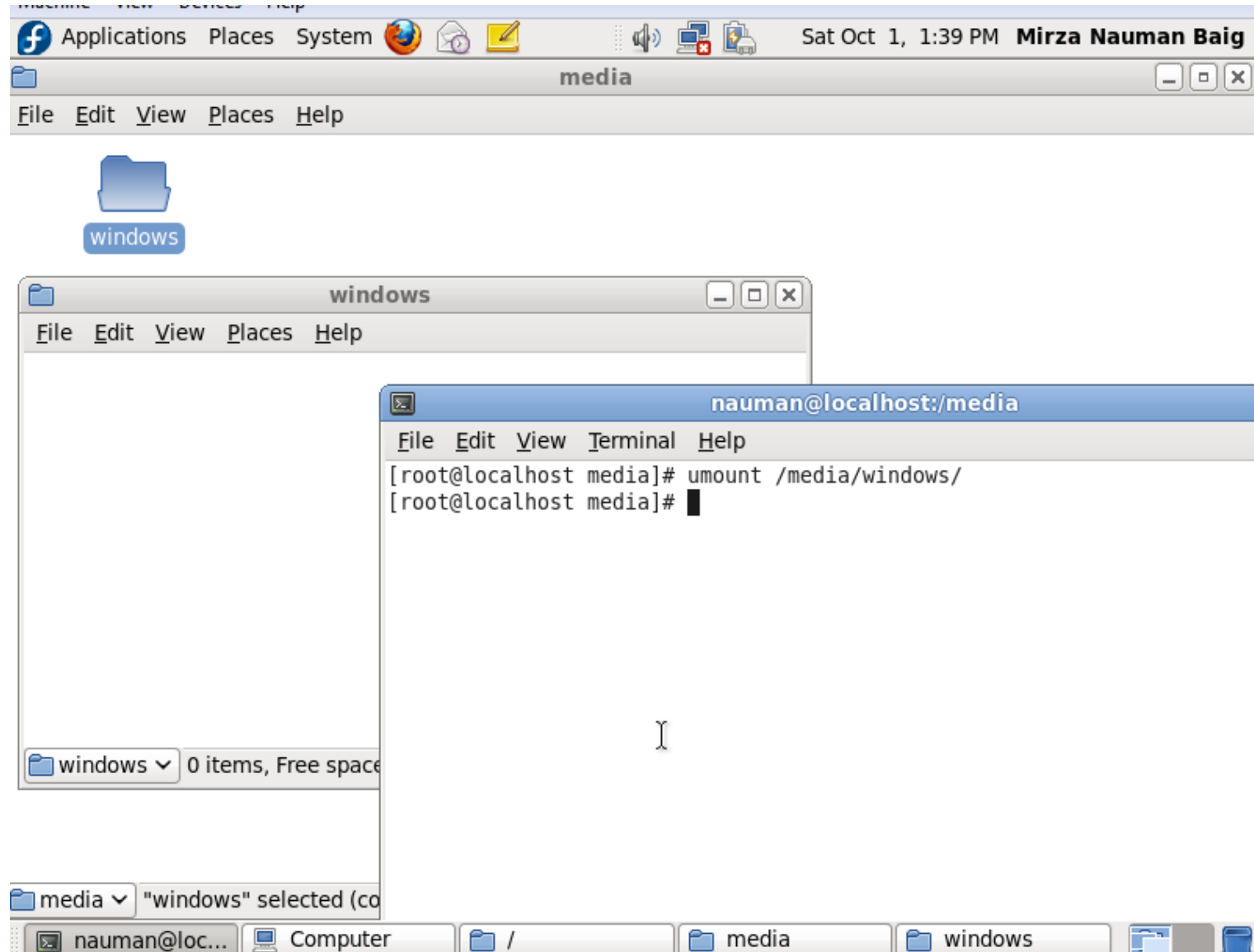
mount/unmount

- su root
- ls /dev
- fdisk -l
- Making a mount point
- mkdir /mnt/windows/
- mkdir /media/windows/ (ubuntu)
- mount /dev/sda1 /media/windows/
- umount /media/windows/

mount

The screenshot displays a Linux desktop environment. At the top, the system tray shows the date and time as "Sat Oct 1, 1:37 PM" and the user name "Mirza Nauman Baig". The desktop background is a light blue color. A file manager window titled "windows" is open, showing a directory containing several files and folders: "efi", "grub", "lost+found", "config-2.6.31.5-127.fc12.i686", "initramfs-2.6.31.5-127.fc12.i686.img", "System.map-2.6.31.5-127.fc12.i686", and "vmlinuz-127.fc12.i686". A terminal window titled "nauman@localhost:/media" is open in the foreground, showing the command `mount /dev/sda1 /media/windows/` being executed. The terminal output is empty. The desktop environment includes a panel at the bottom with icons for "nauman@loc...", "Computer", "/", "media", and "windows".

umount



Process / kill

- gedit
- gedit &
- For running processes
- ps
- Kill PID

Applications Places System 33 °C Sat Oct 1, 2:49 PM Mirza Nauman Baig

nauman@localhost:~

File Edit View Terminal Help

```
[nauman@localhost ~]$ gedit &
[1] 2508
[nauman@localhost ~]$ ps
  PID TTY          TIME CMD
 2421 pts/0    00:00:00 bash
 2508 pts/0    00:00:00 gedit
 2509 pts/0    00:00:00 ps
[nauman@localhost ~]$ kill 2508
[nauman@localhost ~]$ ps
  PID TTY          TIME CMD
 2421 pts/0    00:00:00 bash
 2510 pts/0    00:00:00 ps
[1]+  Terminated                  gedit
[nauman@localhost ~]$
```

nauman@localhost:~

Programming C complier

- `touch helloworld.c`
- `gedit helloworld.c &`
- Write simple hello world c code
- `gcc helloworld.c -o HELLO`
- `./ HELLO`

```
#include<stdio.h>
void main()
{
    printf("Hello World.... !\n");
}
```

HELLO helloworld.c

- Write code for even/odd numbers
- Prime Numbers
- Factorial
- C code to write in a text file
- Read from a text file