

[Linux]

Project No. 001 023

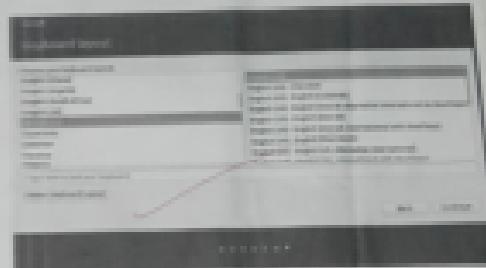
1. Linux Installation:
Install your choice of Linux distribution
(e.g. Ubuntu, Fedora, Debian)

2. Download the ISO or the Zip file on your PC. For download go to official site of (Ubuntu).
3. Download Universal iso installer to make a bootable USB stick.
4. Select an Ubuntu distribution from the dropdown to put your ISO file in the drive letter of USB to install Ubuntu.
5. Click Yes to install Ubuntu.
6. There will be two options showing on the screen viz By Usb and Install Ubuntu. Click on Install Ubuntu.
7. Configure the system as per your convenience.
8. Log in as the user by filling all the information such as Username, computer name, password etc.

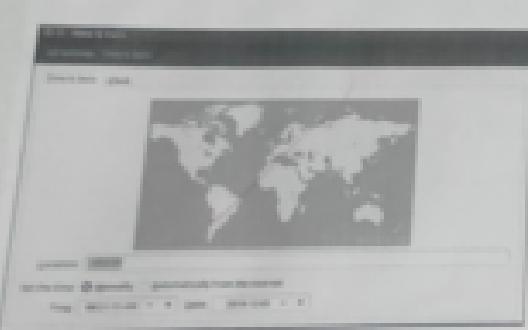
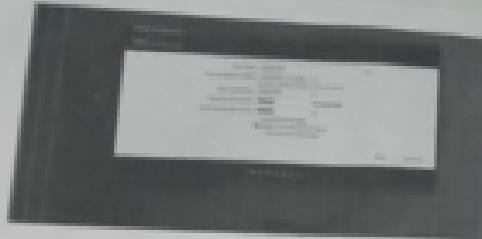
Now all about the installation of Ubuntu is all completed.

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- Customizing different desktop environment by changing default theme like desktop background, themes, screen-saver.
 - * Accessing Appearance Settings:
 - To access Appearance settings in Ubuntu, click on User menu at the top right corner on the top menu and select System settings.
 - A window will pop-up with an interface divided into Personal, Hardware and System options icon-side. First select the Appearance icon.
 - * Changing wallpaper picture:
 - Current wallpaper can be seen on left side of Background part.
 - Different wallpaper are present at right side. Select any one.
 - Click the dropdown menu above thumbnails to select your own pictures.



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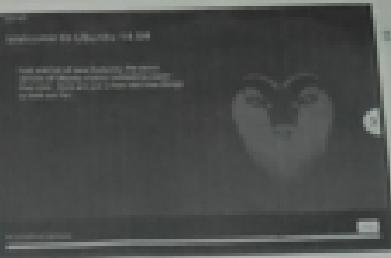
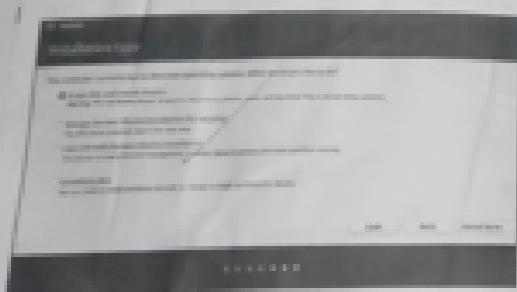
* Changing Ubuntu Theme:

- Ubuntu also has an option to change the entire look of your computer like the colors. Go to System Settings below the Wallpapers, Themes and choose between Ambiance, Radiance or High Contrast.
 - Ambiance is a light theme similar to Mac while Radiance is the darker brown theme used in Ubuntu by default.
- (*) Change Resolution/Select the current screen resolution for your desktop
- Change the size or rotation of the screen.
- You can change how big things appear on screen.
 - Click the icon on the very right of the menu bar and select System Settings
 - Open Screen Display
 - If you have multiple displays and they are not mirrored you can have different settings on each display. Select a display in the preview area.
 - Select your desired resolution and rotation.

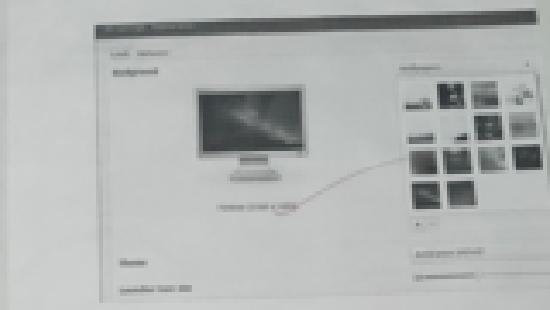


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- (b) Now Change the Time Zone of your system to (to New York Time).
- If you are currently in Indian Time
 - After noting the time change, change the time zone back to your local time zone.
 - Just click on the click on the top bar. Choose Time and Date windows open automatically. So you change the time and date manually; otherwise choose your time zone from the map, and choose Automatic.



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Practical 2

on installing and removing software
of your package, Verify that it runs and
then remove it.

Step 1:
First type 'apt-get' to know if you have
already installed the package or not. If
the output is blank, then it means that
you don't have the package.

Step 2:
Type 'sudo apt-get install gcc'. After
typing the following command installations
will take place.

Step 3:
Type 'sudo apt-get install build-essential'.
This will install all the libraries required
for C and C++ programming language.



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How TO UNINSTALL GCC COMPILER

In GCC 5.0 although there is no explicit uninstall target, some directories do have it, in particular gcc. So you can do

Type: cd build/gcc
and make uninstall.

This does not remove everything that was installed, but it removes major parts like gcc.gdb, .cpp, contained in the directory.

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Practical use 2

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4. New Utilization of Graph from Command-line Documentation:

- ④ Finding info documentation from the command line : Using up the info page for the grep command. Bring up the page ~~using~~ To find info about any command "info command" command is used - the first letter of info command - is " i " info command is used.

We are going to find the info about the 'group' command:

type: `info` the terminal (`Ctrl + Alt + T`) and
`grep`.

After typing this command following output will be displayed onto your screen.

You can also scroll through pages using (Space - up) & (Space - down).

- b) Finding man pages from the command line:
Bring up the man page for the 'ls' command. Scroll down to examples section.
 - c) To use the 'man' command, simply type
`man [command name].`

PGO

Now we are going to find the manual for 'ls' command.

Simply type: 'man ls'

- ① Finding man pages by topic: what man pages are available that document all comprises
- Try 'zip' age. Some man pages which are available for document file compression.

man zip
man tree

MAN

→ finding man page by section from the output bring up the man page for the 'println' function which manual page set are library function found?

- The number corresponds to what set of the manual page is from; 1 is user command, while 8 is sysadmin stuff.



660 MANUAL SECTIONS

1. User Commands.
2. System Calls
3. C Library Functions.
4. Devices and Special Files.
5. File Formats and Conventions.
6. Games et al.
7. Miscellaneous !

Distributions customize the manual section to their specific, which often include additional sections.

\$ man 1 printp

\$ man 3 printf

\$ man -a printf

\$ man -k "printf"

printf

(1) - format and print data.

(2) - write formatted output.

(3) - formatted output.

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ANSWER
There are certain terms that have different pages in different sections (equivalent to a command appears in several sections); in cases like that you can pass the section no.

You can tell what sect a term falls in with 'man -k' (equivalent to a proper command). If you do a searching matches has to go you need to use 'man -k' to limit it.

Q] Command-Line Help What the available option for the manx command? How do you do that?

\$ manx -m a -h or directoryname

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Q) Find the location of ls, ps, bash, rm
binaries in pc.

Ans: /usr/bin/share/man/man1/ls.1.gz
binaries in pc.

ps/aux/pwd/bin/share/man/man1/ps.1.gz
Share/man/man1/ps.1.gz.

where is bash.

bash:/bin/bash/etc/shell/bashrc.bash/
share/man/man1/bash.1.gz

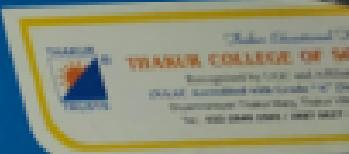
Practical 6: cd

Q) Loptop mounted file system on your computer.

Ans: 204



a) what are the different ways of exploring
mounted file system on Linux?
→ mount

A screenshot of a terminal window showing the output of the "mount" command. The screen is filled with a large amount of text, which appears to be a list of currently mounted file systems on the system. The text is in a monospaced font and is mostly illegible due to its size.

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Command line operat.

i) Install new package on your
sudo apt-get install (package)

ii) Remove the package installed.

sudo apt-get remove (package)

iii) Find the passwd file involving user
find / -name passwd

/ var/lib/nslcd/mapping/passwd

/ user/bin/passwd

/etc/pam.d/passwd

/etc/passwd.

iv) Find the directory passwd file
root and 2 level down file

find / -maxdepth 3 -name passwd

/usr/bin/passwd

/etc/pam.d/passwd.

/etc/passwd.

Find the password file like who ^{sshd} who-doesnt
level 2 & in

find -maxdepth 2 -name passwd

/var/lib/nslcd

/etc/pam.d/passwd.

Create a symbolic link to the file you
found in last step.

wl -s file1 file2

Create an empty file example.txt

touch example.txt

llow example.txt/imp.

del the file moved to Imp in
previous step by alternate method.

rm example.txt

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- 3] Copying the file from one directory to another directory using cp command.

```
cp -r /home/username/Desktop/Project1 /home/username/Desktop/Project2
```

- 4] Archiving and backup the work directory using tar, gzip and bzip2 command.

Ans: tar -cf filename.tar
tar -czf filename.tar.gz

```
tar -czf Project1.tar.gz /home/username/Desktop/Project1
```

- 5] Use diff command to create diff of two files.
→ diff filename1 filename2

```
diff file1 file2
```



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Use patch command to patch a file again.

1

```
    if (i < 0) {  
        return null;  
    }  
    else if (i >= this.size) {  
        return null;  
    }  
    else {  
        return this.get(i);  
    }  
}  
  
public int size() {  
    return this.size;  
}  
  
public void add(int index, Object element) {  
    if (index < 0) {  
        throw new IndexOutOfBoundsException("Index is negative");  
    }  
    else if (index > this.size) {  
        throw new IndexOutOfBoundsException("Index is greater than size");  
    }  
    else {  
        Object[] temp = new Object[this.size + 1];  
        System.arraycopy(this.elements, 0, temp, 0, index);  
        temp[index] = element;  
        System.arraycopy(this.elements, index, temp, index + 1, this.size - index);  
        this.elements = temp;  
        this.size++;  
    }  
}  
  
public void remove(int index) {  
    if (index < 0) {  
        throw new IndexOutOfBoundsException("Index is negative");  
    }  
    else if (index > this.size) {  
        throw new IndexOutOfBoundsException("Index is greater than size");  
    }  
    else {  
        Object[] temp = new Object[this.size - 1];  
        System.arraycopy(this.elements, 0, temp, 0, index);  
        System.arraycopy(this.elements, index + 1, temp, index, this.size - index - 1);  
        this.elements = temp;  
        this.size--;  
    }  
}
```

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Display file/directory file using cat command and understand the importance of tabular letters in front them passed file.

[cat/eat/Spanish](#)

As with the passed file, each field in the shadow file is also separated with colon characters and are as follows:

• A meeting had been planned before the

```
    if (m_pFile->GetFileHeader() == NULL) {  
        return FALSE;  
    }  
    else {  
        m_pFile->ReadFileHeader();  
        return TRUE;  
    }  
}
```

path field to a general entry it is associated with other characters, one as follows:

~~• *After* *the* *war* *in* *the* *area* *population* *of* *people* *was* *reduced* *by* *the* *conflict* *the*~~

• Diagnostic group 1A.

For example, if we take the real part, the maximum length

- ③ Graft ^{REG} from something else there.
Any plant?

(d) Be given different ways of getting command history from the command line previously selected before it.

- ③ Create alias to most commonly used command
→ alias label = "command"

```
jehajje@jehajje-VirtualBox:~$ alias m="ls -a"
jehajje@jehajje-VirtualBox:~$ m
jehajje@jehajje-VirtualBox:~$ ls
Desktop  Downloads  Music  Pictures  TongLan's
Documents  Page1  desktop  .mav  Public  Videos
jehajje@jehajje-VirtualBox:~$
```

© Building 24

- ③ Create, modify, search and manage a file editor.

(cont'd., page 2, line 1)

To create a file on the command type
of followed by Return.

- modifying the file
Not modifying a file in the workspace

- 3) Search in a file
To find a word (Forward search) Press 'F'
by the word to search.

- ### 3. Winnipeg:

Wu-chen-shih in Yen-ching-sheng.

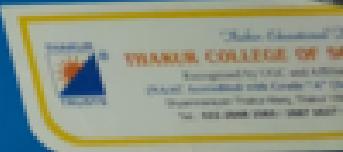
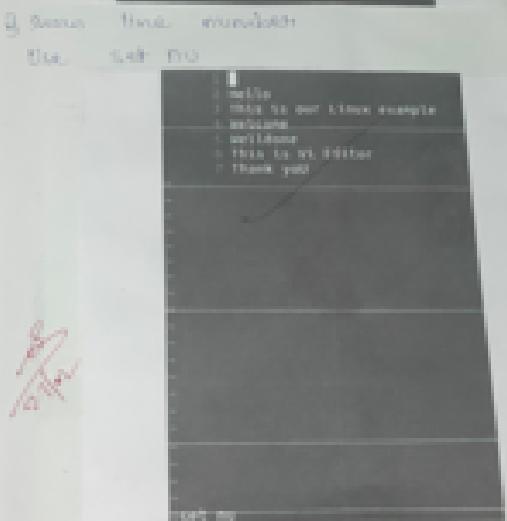
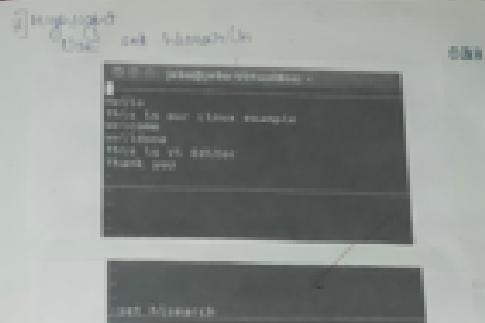
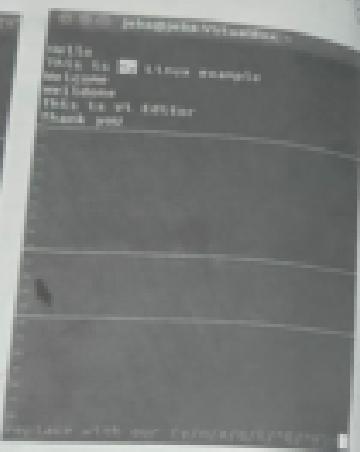
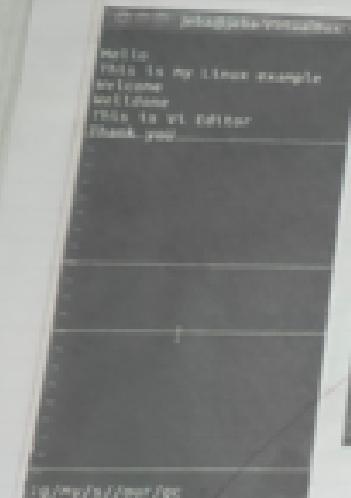
Key	Action
w	Move up
s	Move down
a	Move left
d	Move right

4. ~~Word - Main Settings~~

Key	Action
Ctrl + f	Scroll forward
Ctrl + b	Scroll backward
Ctrl + d	Scroll half page
Ctrl + u	Scroll half page backward

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4) Learn all essential commands. We can do
highlight, show & line numbers.
3. Default
syntax highlighted to be replaced by new one.



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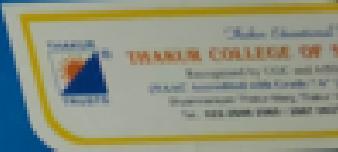
- ④ Use of ~~TED~~ such to change role privileges to
Create an user named ~~user~~

To give some more test privileges edit /etc/group
using vi/vim. Enter new lines as highlighted
below.

- ⑤ Identify species that may be contributing.

3. Notify expiration date for food items to avoid
perished ageing.

- Expiration date
 - Minimum number of days before password change
 - Maximum number of days password is valid
 - If account blocked
 - Number of days of warning before a password change is required



三

Number of passengers per trip	1000
Number of passengers per flight	1000
Number of passenger changes (from 00-01-2011 to 01-01-2012)	1000
Passenger flight distance (km)	1000
Average flight duration (min)	1000
Average flight distance (km) (from 00-01-2011 to 01-01-2012)	1000
Passenger flight duration (min) (from 00-01-2011 to 01-01-2012)	1000
Passenger changes	1000
Passenger explores	1000
Passenger travel time	1000
Passenger engine	1000
Maximum number of days between passenger change	1000
Max number of days between passenger change	1000
Number of days off working before passenger explores	1000
Passenger flight distance (km)	1000

Number of days between issuance and last change of (1) number or name or (2) name and address (or both) - 0 (no change) or 1 (one)	
last previous change	Jan 01, 2004
current address	Apr 01, 2004
Resident Tax File	May 01, 2004
Account number	May 01, 2004
Number of days between previous change and current address - 0 (no change) or 1 (one)	0
Number of days between previous change and current account number - 0 (no change) or 1 (one)	0
Number of days between last previous change and current account number - 0 (no change) or 1 (one)	0

[Delete](#) [a user](#)

```
[root@jekya-virtualbox ~]# jekya-jekya-virtualbox:~$ sudo useradd user1  
[sudo] password for jekya:  
[root@jekya-virtualbox ~$ ls -l /etc/passwd  
no passwd entry for user "user1"  
[root@jekya-virtualbox ~]$
```

graphing linear equations

www.johnwiley.com/go/teachingandlearning

Price and Commodity

Product	Description	Category	Supplier	Unit Price	Stock Level	Order Qty	Unit	Unit Price	Stock Level	Order Qty	Unit
100-100	Standard Product A	Electronics	Supplier A	\$100.00	100	50	Box	\$100.00	100	50	Box
100-200	Standard Product B	Electronics	Supplier B	\$200.00	50	30	Box	\$200.00	50	30	Box

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geheimschreiber- und handschriften -> hekt. ->
hekt. handschriften
geheimschreiberhandschriften -> ■

10

1. **What is the primary purpose of the study?**

Use of subject command and library functions

11

The Shell Script

* Shell Scripting

Basic of Shell Scripting

- a) To get a shell, you need to start a terminal.
- b) To see what shell you have, run the command `whoami`.
- c) In fact, the default shell you have is the login shell.
- d) The command just above returns your type in.
- e) Echo of shell.



- * vi filename.sh
#!/bin/bash
echo This is about .

```
vi filename.sh
#!/bin/bash
echo This is about .
```

Step to write and execute a shell script.

- a) Open terminal.
- b) Navigate to the place where you want to create script using cd command.



Script

Q No. 10
classmate

classmate.c

Output: classmate (the existing code
is executable)

*Program to display your name.

Author:

Author: your name

Read name

Print "My name is <name>"

```
classmate.c
#include <cs50.h>
#include <stdio.h>
#include <string.h>
#include <ctype.h>
#include <cs50.h>

int main()
{
    string name = get_string("What is your name? ");
    printf("Hello %s!\n", name);
}
```

Q10

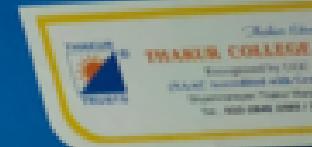
Program to find sum of two numbers

```
#include <cs50.h>
#include <stdio.h>
#include <string.h>
#include <ctype.h>
#include <cs50.h>
```

```
int main()
{
    string num1 = get_string("First number: ");
    string num2 = get_string("Second number: ");
    int sum = atoi(num1) + atoi(num2);
    printf("Sum is %d\n", sum);
}
```

Program to find the sum of two numbers
(values passed using function).

```
#include <cs50.h>
#include <stdio.h>
#include <string.h>
#include <ctype.h>
#include <cs50.h>
```



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Display partial text of a file
with scroll bar can view only part of file
without scrolling whole file.

and

Red command or Screen Editor is very good
very useful by Linux system. It is
mainly used tool for distinguishing &
replace but it can perform other
functions.

Consider following text file.

1. Search and replace.

Subjects offered in up
University
Database management
Linux
operating system
graphics tools
networking
Java
calculator
computer basics

1. Displaying partial text of a file
with scroll bar can view only part of file
without scrolling whole file.

Display partial text of a file
with scroll bar can view only part of file
without scrolling whole file.

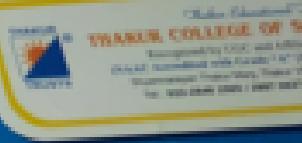
Subjects offered in up
University
Database management
Linux
operating system
graphics tools
networking
Java
calculator
computer basics

2. Deleting a line

1. Deleting a line
Delete selected text
Delete selected line
Delete selected word
Delete selected character
Delete selected block

3. Search and replacing a string.

Search and replace a string
Search selected text
Replace selected text
Replace selected line
Replace selected word
Replace selected character
Replace selected block



⑥ add a new occurrence
To add a new line with same
refers to existing pattern

```
1. To change a whole line to a new  
line with same refines  
option 'c'.
```

```
Database Management  
Python  
Java  
C/C++  
Data Structures  
Computer Basics  
Computer Application 3
```

To add a new line with same
content instead, use 'a'.

```
Computer Application 3 and 2017 "Data Science" edition  
Data Science  
Subjects offered in CB  
Data Structures  
Database Management  
Linux  
Python  
Java  
C/C++  
Data Structures  
Computer Basics  
Computer Application 3
```

the modified line
with same refines
remain static

649

To change a whole line with modified
pattern?

To change a whole line to a new
line with a match pattern, switch
use 'a'.

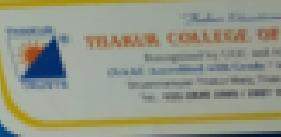
```
1. To change a whole line to a new  
line with same refines  
option 'c'.
```

```
Database Management  
Python  
Java  
C/C++  
Data Structures  
Computer Basics  
Computer Application 3
```

⑦ Appending lines:

```
1. To add a new line at the end of a file  
with same refines  
option 'a'.
```

```
Database Management  
Python  
Java  
C/C++  
Data Structures  
Computer Basics  
Computer Application 3
```



6] Replace a string on a particular line.
To replace a string on a particular line, use line number with 's' option.

```
tcscgtcsc-VirtualBox:~$ sed '6 s/cs/computer system /' cs.txt
subjects offered in cs
datastructure
database management
linux
python
green tech
softskill
stats
calculus
computer basic
```