IT 475: Open Source Software Lab

Final Assignment List

(Batch 1)

1. **Demonstrationof Various Linux Distributions OS's and their purpose with comparisons. (CentOs)**

   *Objective:- To install and demonstrate **Centos Linux Distributions** and their Purpose/comparison/differences.*

   Outcome: Self learning/lifelong learning (PO: b, k, l)

   Student ask to study at least 2 Linux Distros, with their comparisons and installation on Virtual Box.

   In Journal they have to write information of that distros, such as:-

   - **i.** Various versions of that distros with code name
   - **ii.** Default desktop GUI
   - **iii.** Main purpose of that
   - **iv.** Package management of that distros
   - **v.** List of Default Packages
   - **vi.** Screenshots of that distros

   Reference:-

   - **i.** List of Linux Distros:- http://distrowatch.com/
   - **ii.** For installation on Virtual Box:- http://www.psychocats.net/ubuntu/virtualbox

2. Use of Version Control System (GitLab).

Objective:- To use the online and offline Version Control System in Open Source/for their project work.

Outcome: lifelong learning (PO: b, c, k, l)

Students have to study GIT, SVN and Perforce and their working, with example on both Windows and Linux Platform

In Journal, They have to write Basic Information about GIT or SVN and their working with Commands

Reference:-

- **i.** GIT Official Documentation:- http://git-scm.com/documentation
- **ii.** SVN Official Documentation:- http://svnbook.red-bean.com/en/1.7/index.html

3.Development of new Open Source Software or contribution to existing Open Source Software(Calculator in java/pyth/perl/c/cpp/etc).

Objective:- To know how open source software is developed with Licensing

Outcome: Self learning/lifelong learning (PO: b, I, j, k, l)

Develop simple software for basic needs such as editor etc.

Use following:-

- **i.** Language:- C, Python or Perl
- **ii.** Version Control :- GIT or SVN
- **iii.** Package Building:- deb or rpm
- **iv.** Translation:- Marathi or Hindi
- **v.** Documentation:- Use Mallard for your Help

References:-

i. GIT version control Tutorial:- http://git-scm.com/documentation
ii. SVN :- http://michael-zamir.blogspot.in/2012/01/svn-tutorial.html
iii. Translation :- http://www.tuxamito.com/joomla/index.php/es/component/content/article/60-gettext- tutorial
iv. Using Malarad:- http://projectmallard.org/about/learn/tenminutes.html

In Journal you have to write the process in Brief.

4. Create of RPM or DEB packages

Objective:- To Create package building process in Linux
Outcome: (PO: b, I, j, k, l)

Students have to study RPM or DEB package building for their simple C, C++ or JAVA Codes. They must build an rpm or deb and install it through package manager such as YUM or APT-GET

Reference:-

i. Build Simple rpm package:- http://rhce.dposs.org/index.php?title=Build_a_simple_RPM_that_packages_a_single_file
ii. Fedora rpm doc:- http://fedoraproject.org/wiki/How_to_create_an_RPM_package
iii. Simple DEB package for your C code:- http://linuxconfig.org/easy-way-to-create-a-debian-package-and-local-package-repository
iv. Simple DEB build guide:- http://askubuntu.com/questions/90764/how-do-i-create-a-deb-package-for-a-single-python-script
v. Deb Package Build YouTube:- http://www.youtube.com/watch?v=nhoRyd2CEVs

In Journal you have to write the package building process.

5. Use of Various Open Source tools for Project Management (Sonar)

Objective:- To install and demonstrate the use of various open source softwares that used in day to day life of software engg.
Outcome: (PO: k, l)

Students have to study at last 3 various open source tools / softwares that they uses and their day to day life, with their installation and configuration on their system

In journal, they have to write information about that tool such as:-

i. Purpose behind that tool
ii. Various versions of that tools
iii. Installation and Configuration of that tool
iv. How to use that tool

Reference:-

i. http://www.sonarqube.org/

6. Use of Various Open Source tools for Bug Tracking

Objective:- To install and demonstrate the use of various open source softwares that used in day to day life of software engg.
Outcome: (PO: k, l)

Ex: **Trac**

Students have to study at last 3 various open source tools / softwares that they

uses and their day to day life, with their installation and configuration on their system

In journal, they have to write information about that tool such as:-

- **v.** Purpose behind that tool
- **vi.** Various versions of that tools
- **vii.** Installation and Configuration of that tool
- **viii.** How to use that tool

Reference:-

- **ii.** https://bitnami.com/stacks (https://bitnami.com/stack/trac)
- **iii.** Wikipedia List Of Softwares:-http://en.wikipedia.org/wiki/List_of_free_and_open-source_software_packages
- **iv.** Open Source Software Mega List :- http://www.datamation.com/open-source/open-source-software-the-mega-list-1.html

7.Comprehend the Open Source Software Development for CentOs (Topic 3rd in Syllabus):-

Objective:- To comprehend the open source software development.

Outcome: Self learning/lifelong learning (PO: b, k, l)

In this student have to study open source software development process. They can choose any Linux tools for understanding,

Below is sample of CentOs Development:-

1. Development Communities:-https://www.centos.org/
2. Mailing List:-http://lists.centos.org/mailman/listinfo
3. IRC channels:- http://wiki.centos.org/irc
4. CentOs Wiki:- https://en.wikipedia.org/wiki/CentOS
5. CentOs Version Control:- http://wiki.centos.org/HowTos/Subversion
6. CentOs Bug Tracking:- https://www.atlassian.com/software/jira
7. CentOs Localization :- https://www.centos.org/forums/
8. CentOs Documentation:- http://wiki.centos.org/Documentation

8.Installation and Use of CMS softwares(Moodle)

Objective:- To comprehend the use of Content Management System and their Use for personal website/dept CMS.

Outcome: Self learning (PO: b, I, j, k, l)

Students have to study at least 1 CMS such as, word press. Moodle, Drupal, Joomala, MediaWiki, etc In Journal, They have to write,

- ***i.*** Installation On Linux Platform
- ***ii.*** How to Use
- ***iii.*** Screenshots

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References:-

- **i.** Moodle Tutorials:- http://docs.moodle.org/22/en/Moodle_video_tutorials

9.Compilation of various Linux Kernel Versions.

Objective:- To demonstrate how to compile Linux Kernel.

Outcome: Self learning (PO: k, l)

In this student have to learn compilation and installation of Linux Kernel on their system/VMware/Virtual box (CentOs in Lab).

Each batch have to install separate Linux Kernel

Reference:-

i. Installation Of Linux Kernel on CentOs:-

Latest kernel installation on Fedora and Cent OS:- http://www.tecmint.com/kernel-3-5- released-install-compile-in-redhat-centos-and-fedora/

In Journal you have to write the process steps.

10.Install and demonstrateof various Server based services and their Uses(NFS).

Objective:- To know server installations and Configurations on Linux Platform

Outcome: (PO: b, I, j, k, l)

Students are asked to install and configure at least 2 servers, such as FTP, HTTP, TELNET, NFS,NIS etc. All configurations must be done on Linux Platform

In Journal, they have to write installations, Configurations and Screenshots of server on which they worked

References:-

i. Server World:- http://www.server-world.info/en/
ii. Yolinux :- http://www.yolinux.com/

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11.Google drive and apps (any two)

Objective:- To use *Google drive and apps*

Outcome: Self learning/lifelong learning (PO: b, I, j, k, l)

a. On line Form creation

Create an online form for taking feedback/ test/ suggestion from your group of friends.

Steps:

i) Go to Google drive click on create option.
ii) Click on form
iii) Select template
iv) Edit form using given options
v) Publish form

Questions:

i) What type of questions we can create?
ii) How to assign mandatory field?
iii) How to get public link of form?
iv) How to get private link of form?

12.Mobile Application Development Using Android

References:- http://developer.android.com/index.html

Note:-

i. All Experiments Must Be in soft form, created using Lyx or Bacoma
ii. Submit all assignments to http://10.10.13.38 on time

Template of write-up (for word) (all in times new roman)

Assignment No: 1(a) (size 12)

Title: (size 12 bold) IPC: Shared Memory

Subtitle: (12 normal) write a program to perform IPC using shared memory to illustrate the passing of a simple piece of memory (a string) between the processes if running simultaneously.

Theory: (12 normal) text (12 normal)

Info of tool with Characteristic /feature/applications of tool etc

Steps of installation and or configuration

Flowcharts or steps of installation: (12 normal) server / client separately

Conclusions: (12 normal)

1. Learn to use

2. Learn the os nework interaction

3. Learn system call

4. Etc.

IT 475: Open Source Software Lab

Final Assignment List(Batch -4)

1. **Demonstrationof Various Linux Distributions OS's and their purpose with comparisons. (Mint)**

   Objective:- *To install and demonstrate Mint Linux Distributions and their Purpose/comparison/differences.*

   Outcome: *Self learning/lifelong learning (PO: b, k, l)*

   Student ask to study at least 2 Linux Distros, with their comparisons and installation on Virtual Box.

   In Journal they have to write information of that distros, such as:-

   i. Various versions of that distros with code name
   ii. Default desktop GUI
   iii. Main purpose of that
   iv. Package management of that distros
   v. List of Default Packages
   vi. Screenshots of that distros

   Reference:-

   i. List of Linux Distros:- http://distrowatch.com/
   ii. For installation on Virtual Box:- http://www.psychocats.net/ubuntu/virtualbox

2.Application of Version Control System used in Open Source Software Development. (Subversion)

Objective:- To use the online and offline Version Control System in Open Source/for their project work.

Outcome: lifelong learning (PO: b, c, k, l)

Students have to study GIT, SVN and Perforce and their working, with example on both Windows and Linux Platform

In Journal, They have to write Basic Information about GIT or SVN and their working with Commands

Reference:-

i. GIT Official Documentation:- http://git-scm.com/documentation
ii. SVN Official Documentation:- http://svnbook.red-bean.com/en/1.7/index.html

3.Development of new Open Source Software or contribution to existing Open Source Software.(Music Player)

Objective:- To know how open source software is developed with Licensing

Outcome: Self learning/lifelong learning (PO: b, I, j, k, l)

Develop simple software for basic needs such as
Calculator, editor etc.
Use following:-

i. Language:- C, Python or Perl
ii. Version Control :- GIT or SVN
iii. Package Building:- deb or rpm

iv. Translation:- Marathi or Hindi
v. Documentation:- Use Mallard for your Help

References:-

i. GIT version control Tutorial:- http://git-scm.com/documentation
ii. SVN :- http://michael-zamir.blogspot.in/2012/01/svn-tutorial.html
iii. Translation :- http://www.tuxamito.com/joomla/index.php/es/component/content/article/60-gettext- tutorial
iv. Using Malarad:- http://projectmallard.org/about/learn/tenminutes.html

In Journal you have to write the process in Brief.

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Aim/Objective: Use of online resources from Google drive/Apps

4. Create of RPM or DEB packages

Objective:- To Create package building process in Linux
Outcome: (PO: b, I, j, k, l)

Students have to study RPM or DEB package building for their simple C, C++ or JAVA Codes. They must build an rpm or deb and install it through package manager such as YUM or APT-GET

Reference:-

i. Build Simple rpm package:- http://rhce.dposs.org/index.php?title=Build_a_simple_RPM_that_packages_a_single_file
ii. Fedora rpm doc:- http://fedoraproject.org/wiki/How_to_create_an_RPM_package
iii. Simple DEB package for your C code:- http://linuxconfig.org/easy-way-to-create-a-debian-package-and-local-package-repository
iv. Simple DEB build guide:- http://askubuntu.com/questions/90764/how-do-i-create-a-deb-package-for-a-single-python-script
v. Deb Package Build YouTube:- http://www.youtube.com/watch?v=nhoRyd2CEVs

In Journal you have to write the package building process.

5. Use of Various Open Source tools for Project Mangement (Sonar).

Objective:- To install and demonstrate the use of various open source softwares that used in day to day life of software engg.
Outcome: (PO: k, l)

Ex: **OpenProject**

Students have to study at last 3 various open source tools / softwares that they uses and their day to day life, with their installation and configuration on their system
In journal, they have to write information about that tool such as:-
Purpose behind that tool
Various versions of that tools
Installation and Configuration of that tool
How to use that tool

Reference:-

http://www.sonarqube.org/

6. Use of Various Open Source tools for Bug Tracking.

Objective:- To install and demonstrate the use of various open source softwares that used in day to day life of software engg.
Outcome: (PO: k, l)

Ex: **4. Redmine**

Students have to study at last 3 various open source tools / softwares that they uses and their day to day life, with their installation and configuration on their system
In journal, they have to write information about that tool such as:-
Purpose behind that tool
Various versions of that tools
Installation and Configuration of that tool
How to use that tool

Reference:-

1. https://bitnami.com/stacks (https://bitnami.com/stack/redmine)
2. Wikipedia List Of Softwares:- http://en.wikipedia.org/wiki/List_of_free_and_open-
3. source_software_packages
4. Open Source Software Mega List :- http://www.datamation.com/open-source/open-
5. **source-software-the-mega-list-1.html**

7. Comprehend the Open Source Software Development for Mint (Topic 3rd in Syllabus):-

Objective:- To comprehend the open source software development.
Outcome: Self learning/lifelong learning (PO: b, k, l)

In this student have to study open source software development process. They can choose any Linux tools for understanding,

Below is sample of Ubuntu Development:-

1. Development Communities:- http://www.linuxmint.com/getinvolved.php
2. Mailing List:-http://community.linuxmint.com/idea/view/1196
3. IRC channels:-http://community.linuxmint.com/tutorial/view/12
4. Ubuntu Wiki:- https://en.wikipedia.org/wiki/Linux_Mint
5. mint Version Control http://community.linuxmint.com/software/view/subversion
6. Mint Bug Tracking:- http://forums.linuxmint.com/viewtopic.php?f=60&t=157099
7. Mint Localization :-http://www.linuxmint.com/communities.php
8. **Mint Documentation:-http://www.linuxmint.com/documentation.php**

8. Installation and Use of CMS softwares *(Joomla)*

Objective:- To comprehend the use of Content Management System and their Use for personal website/dept CMS.
Outcome: Self learning (PO: b, I, j, k, l)

Students have to study at least 1 CMS such as, word press. Moodle, Drupal, Joomala, MediaWiki, etc In Journal, They have to write,

i. Installation On Linux Platform

ii. How to Use
iii. Screenshots

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References:-

i. joomla ref:-https://bitnami.com/stack/joomla

9.Compilation of various Linux Kernel Versions.

Objective:- To demonstrate how to compile Linux Kernel.
Outcome: Self learning (PO: k, l)

In this student have to learn compilation and installation of Linux Kernel on their system/VMware/Virtual box for Mint

Each batch have to install separate Linux Kernel

Reference:-

i. Installation Of Linux Kernel on Mint:- http://community.linuxmint.com/tutorial/view/1928

10.Install and demonstrateof various Server based services and their Uses(FTP).

Objective:- To know server installations and Configurations on Linux Platform
Outcome: (PO: b, I, j, k, l)

Students are asked to install and configure at least 2 servers, such as FTP, HTTP, TELNET, NFS,NIS etc. All configurations must be done on Linux Platform
In Journal, they have to write installations, Configurations and Screenshots of server on which they worked

References:-

i. Server World:- http://www.server-world.info/en/
ii. Yolinux :- http://www.yolinux.com/

11.Google drive and apps (any two)

Objective:- To use *Google drive and apps*
Outcome: Self learning/lifelong learning (PO: b, I, j, k, l)

a. Lucidchart Diagrams – Online drawing and documentation / or any other chart & diagram drawing software
   a) Create, open and share Lucidchart documents from Drive
   b) View, open and edit Microsoft Visio documents from Drive
   c) Export Lucidchart documents as a PNG, JPG or PDF to be stored in Drive
   d) Initiate daily or weekly backups of all of your Lucidchart documents to be stored in Drive

Steps

i. Choose from hundreds of shapes
ii. Autoprompt for quickly adding and connecting objects
iii. Drag new lines out of any object
iv. Drag and drop to add your own images
v. Export to (vector) PDF, PNG, and JPG

vi. Embed diagrams in blogs or wikis
vii. Interactive mockups with hotspots and states
viii. Import documents from Microsoft Visio (.vsd, .vsdx and .vdx)
ix. Export documents to Microsoft Visio (.vdx)

b.Other apps as per your need or choice

12.Mobile Application Development using Android

ref:-http://developer.android.com/index.html

Note:-

i. All Experiments Must Be in soft form, created using Lyx or Bacoma
ii. Submit all assignments to http://10.10.13.38 on time

IT 475: Open Source Software Lab

Final Assignment List(Batch 3)

1. **Demonstrationof Various Linux Distributions OS's and their purpose with comparisons. (Fedora)**

   Objective:- To install and demonstrate Fedora Linux Distributions and their Purpose/comparison/differences.

   Outcome: Self learning/lifelong learning (PO: b, k, l)

   Student ask to study at least 2 Linux Distros, with their comparisons and installation on Virtual Box.

   In Journal they have to write information of that distros, such as:-

   - **i.** Various versions of that distros with code name
   - **ii.** Default desktop GUI
   - **iii.** Main purpose of that
   - **iv.** Package management of that distros
   - **v.** List of Default Packages
   - **vi.** Screenshots of that distros

   Reference:-

   - **i.** List of Linux Distros:- http://distrowatch.com/
   - **ii.** For installation on Virtual Box:- http://www.psychocats.net/ubuntu/virtualbox

2. Application of Version Control System used in Open Source Software Development(GitLab).

Objective:- To use the online and offline Version Control System in Open Source/for their project work.

Outcome: lifelong learning (PO: b, c, k, l)

Students have to study GIT, SVN and Perforce and their working, with example on both Windows and Linux Platform

In Journal, They have to write Basic Information about GIT or SVN and their working with Commands

Reference:-

- **i.** GIT Official Documentation:- http://git-scm.com/documentation
- **ii.** SVN Official Documentation:- http://svnbook.red-bean.com/en/1.7/index.html

3.Development of new Open Source Software or contribution to existing Open Source Software(Calculator).

Objective:- To know how open source software is developed with Licensing

Outcome: Self learning/lifelong learning (PO: b, I, j, k, l)

Develop simple software for basic needs such as editor etc.

Use following:-

- **i.** Language:- C, Python or Perl
- **ii.** Version Control :- GIT or SVN
- **iii.** Package Building:- deb or rpm

iv. Translation:- Marathi or Hindi
v. Documentation:- Use Mallard for your Help

References:-

i. GIT version control Tutorial:- http://git-scm.com/documentation
ii. SVN :- http://michael-zamir.blogspot.in/2012/01/svn-tutorial.html
iii. Translation :- http://www.tuxamito.com/joomla/index.php/es/component/content/article/60-gettext- tutorial
iv. Using Malarad:- http://projectmallard.org/about/learn/tenminutes.html

In Journal you have to write the process in Brief.

Assignment on Google Drive

Aim/Objective: Use of online resources from Google drive/Apps

4. Create of RPM or DEB packages

Objective:- To Create package building process in Linux
Outcome: (PO: b, I, j, k, l)

Students have to study RPM or DEB package building for their simple C, C++ or JAVA Codes. They must build an rpm or deb and install it through package manager such as YUM or APT-GET

Reference:-

i. Build Simple rpm package:- http://rhce.dposs.org/index.php?title=Build_a_simple_RPM_that_packages_a_single_file
ii. Fedora rpm doc:- http://fedoraproject.org/wiki/How_to_create_an_RPM_package
iii. Simple DEB package for your C code:- http://linuxconfig.org/easy-way-to-create-a-debian-package-and-local-package-repository
iv. Simple DEB build guide:- http://askubuntu.com/questions/90764/how-do-i-create-a-deb-package-for-a-single-python-script
v. Deb Package Build YouTube:- http://www.youtube.com/watch?v=nhoRyd2CEVs

In Journal you have to write the package building process.

5. Use of Various Open Source tools for Project Management

Objective:- To install and demonstrate the use of various open source softwares that used in day to day life of software engg.
Outcome: (PO: k, l)

Ex: **Open Atrium**

Students have to study at last 3 various open source tools / softwares that they uses and their day to day life, with their installation and configuration on their system

In journal, they have to write information about that tool such as:-

i. Purpose behind that tool
ii. Various versions of that tools
iii. Installation and Configuration of that tool
iv. How to use that tool

Reference:-

i. https://bitnami.com/stacks (https://bitnami.com/stack/openatrium)
ii. Wikipedia List Of Softwares:- http://en.wikipedia.org/wiki/List_of_free_and_open-

source_software_packages

iii. Open Source Software Mega List :- http://www.datamation.com/open-source/open-source-software-the-mega-list-1.html

6. Use of Various Open Source tools for Bug Tracking

Objective:- To install and demonstrate the use of various open source softwares that used in day to day life of software engg.

Outcome: (PO: k, l)

Ex: **Phabricator**

Students have to study at last 3 various open source tools / softwares that they uses and their day to day life, with their installation and configuration on their system

In journal, they have to write information about that tool such as:-

v. Purpose behind that tool
vi. Various versions of that tools
vii. Installation and Configuration of that tool
viii. How to use that tool

Reference:-

iv. https://bitnami.com/stacks (https://bitnami.com/stack/phabricator)
v. Wikipedia List Of Softwares:-http://en.wikipedia.org/wiki/List_of_free_and_open-source_software_packages

vi. Open Source Software Mega List :- http://www.datamation.com/open-source/open-source-software-the-mega-list-1.html

7.Comprehend the Open Source Software Development for Fedora(Topic 3rd in Syllabus):-

Objective:- To comprehend the open source software development.

Outcome: Self learning/lifelong learning (PO: b, k, l)

In this student have to study open source software development process. They can choose any Linux tools for understanding,

Below is sample of CentOs Development:-

1. Development Communities:-https://getfedora.org/
2. Mailing List:-https://lists.fedoraproject.org/mailman/listinfo
3. IRC channels:- https://fedoraproject.org/wiki/IRC
4. Fedora Wiki:- https://en.wikipedia.org/wiki/Fedora
5. FedoraVersionControl:- https://fedoraproject.org/wiki/Infrastructure/VersionControl
6. Fedora Bug Tracking:- https://fedoraproject.org/wiki/Bugzilla
7. Fedora Localization :- https://fedoraproject.org/wiki/Category:Localization
8. Fedora Documentation:- https://docs.fedoraproject.org/en-US/index.html

8.Installation and Use of CMS softwares(WordPress)

Objective:- To comprehend the use of Content Management System and their Use for personal website/dept CMS.

Outcome: Self learning (PO: b, I, j, k, l)

Students have to study at least 1 CMS such as, word press. Moodle, Drupal,

Joomala, MediaWiki, etc In Journal, They have to write,

i. Installation On Linux Platform
ii. How to Use
iii. Screenshots

References:-

i. WordPress Tutorials:- https://bitnami.com/stack/wordpress

9.Compilation of various Linux Kernel Versions.

Objective:- To demonstrate how to compile Linux Kernel.
Outcome: Self learning (PO: k, l)

In this student have to learn compilation and installation of Linux Kernel on their system/VMware/Virtual box (Fedora in Lab).

Each batch have to install separate Linux Kernel

Reference:-

i. Installation Of Linux Kernel on CentOs:-
Latest kernel installation on Fedora and Cent OS:- http://www.tecmint.com/kernel-3-5- released-install-compile-in-redhat-centos-and-fedora/

In Journal you have to write the process steps.

10.Install and demonstrateof various Server based services and their Uses(NIS).

Objective:- To know server installations and Configurations on Linux Platform
Outcome: (PO: b, I, j, k, l)

Students are asked to install and configure at least 2 servers, such as FTP, HTTP, TELNET, NFS,NIS etc. All configurations must be done on Linux Platform
In Journal, they have to write installations, Configurations and Screenshots of server on which they worked

References:-

i. Server World:- http://www.server-world.info/en/
ii. Yolinux :- http://www.yolinux.com/

11.Google drive and apps (any two)

Objective:- To use *Google drive and apps*
Outcome: Self learning/lifelong learning (PO: b, I, j, k, l)

a. Google Drawings- Create shapes and diagrams

Add some color to your documents, presentations, and websites with easy to create charts and diagrams.

Steps:

Build charts, layout diagrams, create flow charts
Then easily add them to other documents or embed them on a website.

12.Mobile Application Development Using Android

References:- http://developer.android.com/index.html

Note:-

i. All Experiments Must Be in soft form, created using Lyx or Bacoma
ii. Submit all assignments to http://10.10.13.38 on time

IT 475: Open Source Software Lab

Final Assignment List(Batch -4)

1. **Demonstrationof Various Linux Distributions OS's and their purpose with comparisons. (Suse)**

   Objective:- To install and demonstrate Suse Linux Distributions and their Purpose/comparison/differences.

   Outcome: Self learning/lifelong learning (PO: b, k, l)

   Student ask to study at least 2 Linux Distros, with their comparisons and installation on Virtual Box.

   In Journal they have to write information of that distros, such as:-

   i. Various versions of that distros with code name
   ii. Default desktop GUI
   iii. Main purpose of that
   iv. Package management of that distros
   v. List of Default Packages
   vi. Screenshots of that distros

   Reference:-

   i. List of Linux Distros:- http://distrowatch.com/
   ii. For installation on Virtual Box:- http://www.psychocats.net/ubuntu/virtualbox

2. **Application of Version Control System used in Open Source Software Development. (gitorious)**

   Objective:- To use the online and offline Version Control System in Open Source/for their project work.

   Outcome: lifelong learning (PO: b, c, k, l)

   Students have to study GIT, SVN and Perforce and their working, with example on both Windows and Linux Platform

   In Journal, They have to write Basic Information about GIT or SVN and their working with Commands

   Reference:-

   i. GIT Official Documentation:- http://git-scm.com/documentation
   ii. SVN Official Documentation:- http://svnbook.red-bean.com/en/1.7/index.html
   iii. https://bitnami.com/stack/gitorious

3. **Development of new Open Source Software or contribution to existing Open Source Software.(Text Editor)**

   Objective:- To know how open source software is developed with Licensing

   Outcome: Self learning/lifelong learning (PO: b, I, j, k, l)

   Develop simple software for basic needs such as Calculator, editor etc.

   Use following:-

   i. Language:- C, Python or Perl
   ii. Version Control :- GIT or SVN

iii. Package Building:- deb or rpm
iv. Translation:- Marathi or Hindi
v. Documentation:- Use Mallard for your Help

References:-

i. GIT version control Tutorial:- http://git-scm.com/documentation
ii. SVN :- http://michael-zamir.blogspot.in/2012/01/svn-tutorial.html
iii. Translation :- http://www.tuxamito.com/joomla/index.php/es/component/content/article/60-gettext- tutorial
iv. Using Malarad:- http://projectmallard.org/about/learn/tenminutes.html

In Journal you have to write the process in Brief.

"ÄÄ¿⁴ Á ½ . Â !(ÂÂ⁴,½!%.. ¿Æ½

Aim/Objective: Use of online resources from Google drive/Apps

4. Create of RPM or DEB packages

Objective:- To Create package building process in Linux
Outcome: (PO: b, I, j, k, l)

Students have to study RPM or DEB package building for their simple C, C++ or JAVA Codes. They must build an rpm or deb and install it through package manager such as YUM or APT-GET

Reference:-

i. Build Simple rpm package:- http://rhce.dposs.org/index.php?title=Build_a_simple_RPM_that_packages_a_single_file
ii. Fedora rpm doc:- http://fedoraproject.org/wiki/How_to_create_an_RPM_package
iii. Simple DEB package for your C code:- http://linuxconfig.org/easy-way-to-create-a-debian-package-and-local-package-repository
iv. Simple DEB build guide:- http://askubuntu.com/questions/90764/how-do-i-create-a-deb-package-for-a-single-python-script
v. Deb Package Build YouTube:- http://www.youtube.com/watch?v=nhoRyd2CEVs

In Journal you have to write the package building process.

5. Use of Various Open Source tools for Project Mangement.

Objective:- To install and demonstrate the use of various open source softwares that used in day to day life of software engg.
Outcome: (PO: k, l)
Ex: **openProject** 3.
Students have to study at last 3 various open source tools / softwares that they uses and their day to day life, with their installation and configuration on their system
In journal, they have to write information about that tool such as:-
Purpose behind that tool
Various versions of that tools
Installation and Configuration of that tool
How to use that tool

Reference:-
shttps://bitnami.com/stack (https://bitnami.com/stack/openproject)
Wikipedia List Of Softwares:- http://en.wikipedia.org/wiki/List_of_free_and_open-source_software_packages
4.
Open Source Software Mega List :- http://www.datamation.com/open-source/open-source-software-the-mega-list-1.html

6. Use of Various Open Source tools for Bug Tracking.

Objective:- To install and demonstrate the use of various open source softwares that used in day to day life of software engg.
Outcome: (PO: k, l)
Ex:5**youtrack**
Students have to study at last 3 various open source tools / softwares that they uses and their day to day life, with their installation and configuration on their system
In journal, they have to write information about that tool such as:-
Purpose behind that tool
Various versions of that tools
Installation and Configuration of that tool
How to use that tool

Reference:-
https://bitnami.com/stacks (https://bitnami.com/stack/youtrack)
Wikipedia List Of Softwares:- http://en.wikipedia.org/wiki/List_of_free_and_open-source_software_packages
6.
Open Source Software Mega List :- http://www.datamation.com/open-source/open-source-software-the-mega-list-1.html

7. Comprehend the Open Source Software Development for Suse (Topic 3rd in Syllabus):-

Objective:- To comprehend the open source software development.
Outcome: Self learning/lifelong learning (PO: b, k, l)

In this student have to study open source software development process. They can choose any Linux tools for understanding,

Below is sample of Ubuntu Development:-

1. Development Communities:-https://www.suse.com/company/open-source/
2. Mailing List:-http://lists.opensuse.org/
3. IRC channels:-https://en.opensuse.org/openSUSE:IRC_list
4. Suse Wiki:- https://en.wikipedia.org/wiki/SUSE_Linux_distributions
5. suse Version Control https://en.opensuse.org/Git
6. Suse BugTracking:-https://en.opensuse.org/openSUSE:Submitting_bug_reports
7. Suse Localization :-https://i18n.opensuse.org/
8. **suse Documentation:-https://www.suse.com/documentation/**

8. Installation and Use of CMS softwares *(Drupal)*

Objective:- To comprehend the use of Content Management System and their Use for personal website/dept CMS.
Outcome: Self learning (PO: b, I, j, k, l)

Students have to study at least 1 CMS such as, word press. Moodle, Drupal, Joomala, MediaWiki, etc In Journal, They have to write,

i. Installation On Linux Platform
ii. How to Use
iii. Screenshots

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References:-

i. https://bitnami.com/stack/drupal

9.Compilation of various Linux Kernel Versions.

Objective:- To demonstrate how to compile Linux Kernel.
Outcome: Self learning (PO: k, l)

In this student have to learn compilation and installation of Linux Kernel on their system/VMware/Virtual box for Mint

Each batch have to install separate Linux Kernel

Reference:-

i. Installation Of Linux Kernel on Suse:-https://en.opensuse.org/Kernel

In Journal you have to write the process steps.

10.Install and demonstrate of various Server based services and their Uses(Telnet).

Objective:- To know server installations and Configurations on Linux Platform
Outcome: (PO: b, I, j, k, l)

Students are asked to install and configure at least 2 servers, such as FTP, HTTP, TELNET, NFS,NIS etc. All configurations must be done on Linux Platform
In Journal, they have to write installations, Configurations and Screenshots of server on which they worked

References:-

i. Server World:- http://www.server-world.info/en/
ii. Yolinux :- http://www.yolinux.com/

11.Google drive and apps (any two)

Objective:- To use *Google drive and apps*
Outcome: Self learning/lifelong learning (PO: b, I, j, k, l)

a. fsProject - Professional Online Project Scheduling / or any other open source project management software

b. Create a hierarchical breakdown of tasks of your project scope.
c. Link the tasks for a work flow and fsProject calculates the Gantt chart using the critical path.
d. Assign resources and let fsProject calculate your budget.
e. Steps:

f. Store and share schedules in Google Drive.
g. Import and export Microsoft Project files.
h. Publish schedule in HTML.
i. Publish milestones in Google Calendar.
j. Customization possible based on Google Apps script.
k. Help desk contact direct from application.

b.Other apps as per your need or choice

12.Mobile Application Development using Android

ref:-http://developer.android.com/index.html

Note:-

i. All Experiments Must Be in soft form, created using Lyx or Bacoma
ii. **Submit all assignments to http://10.10.13.38 on time**

IT 475: Open Source Software Lab

Final Assignment List(Batch 5)

1. **Demonstrationof Various Linux Distributions OS's and their purpose with comparisons. (Ubuntu)**

   Objective:- To install and demonstrate Ubuntu Linux Distributions and their Purpose/comparison/differences.

   Outcome: Self learning/lifelong learning (PO: b, k, l)

   Student ask to study at least 2 Linux Distros, with their comparisons and installation on Virtual Box.

   In Journal they have to write information of that distros, such as:-

   - **i.** Various versions of that distros with code name
   - **ii.** Default desktop GUI
   - **iii.** Main purpose of that
   - **iv.** Package management of that distros
   - **v.** List of Default Packages
   - **vi.** Screenshots of that distros

   Reference:-

   - **i.** List of Linux Distros:- http://distrowatch.com/
   - **ii.** For installation on Virtual Box:- http://www.psychocats.net/ubuntu/virtualbox

2. Application of Version Control System used in Open Source Software Development(Subversion).

Objective:- To use the online and offline Version Control System in Open Source/for their project work.

Outcome: lifelong learning (PO: b, c, k, l)

Students have to study GIT, SVN and Perforce and their working, with example on both Windows and Linux Platform

In Journal, They have to write Basic Information about GIT or SVN and their working with Commands

Reference:-

- **i.** GIT Official Documentation:- http://git-scm.com/documentation
- **ii.** SVN Official Documentation:- http://svnbook.red-bean.com/en/1.7/index.html

3.Development of new Open Source Software or contribution to existing Open Source Software(Text Editor).

Objective:- To know how open source software is developed with Licensing

Outcome: Self learning/lifelong learning (PO: b, I, j, k, l)

Develop simple software for basic needs such as editor etc.

Use following:-

- **i.** Language:- C, Python or Perl
- **ii.** Version Control :- GIT or SVN
- **iii.** Package Building:- deb or rpm

iv. Translation:- Marathi or Hindi
v. Documentation:- Use Mallard for your Help

References:-

i. GIT version control Tutorial:- http://git-scm.com/documentation
ii. SVN :- http://michael-zamir.blogspot.in/2012/01/svn-tutorial.html
iii. Translation :- http://www.tuxamito.com/joomla/index.php/es/component/content/article/60-gettext- tutorial
iv. Using Malarad:- http://projectmallard.org/about/learn/tenminutes.html

In Journal you have to write the process in Brief.

Assignment on Google Drive

Aim/Objective: Use of online resources from Google drive/Apps

4. Create of RPM or DEB packages

Objective:- To Create package building process in Linux
Outcome: (PO: b, I, j, k, l)

Students have to study RPM or DEB package building for their simple C, C++ or JAVA Codes. They must build an rpm or deb and install it through package manager such as YUM or APT-GET

Reference:-

i. Build Simple rpm package:- http://rhce.dposs.org/index.php?title=Build_a_simple_RPM_that_packages_a_single_file
ii. Fedora rpm doc:- http://fedoraproject.org/wiki/How_to_create_an_RPM_package
iii. Simple DEB package for your C code:- http://linuxconfig.org/easy-way-to-create-a-debian-package-and-local-package-repository
iv. Simple DEB build guide:- http://askubuntu.com/questions/90764/how-do-i-create-a-deb-package-for-a-single-python-script
v. Deb Package Build YouTube:- http://www.youtube.com/watch?v=nhoRyd2CEVs

In Journal you have to write the package building process.

5. Use of Various Open Source tools for Project Management

Objective:- To install and demonstrate the use of various open source softwares that used in day to day life of software engg.
Outcome: (PO: k, l)

Ex: **Open Atrium**

Students have to study at last 3 various open source tools / softwares that they uses and their day to day life, with their installation and configuration on their system

In journal, they have to write information about that tool such as:-

i. Purpose behind that tool
ii. Various versions of that tools
iii. Installation and Configuration of that tool
iv. How to use that tool

Reference:-

i. https://bitnami.com/stacks (https://bitnami.com/stack/openatrium)
ii. Wikipedia List Of Softwares:- http://en.wikipedia.org/wiki/List_of_free_and_open-

source_software_packages

iii. Open Source Software Mega List :- http://www.datamation.com/open-source/open-source-software-the-mega-list-1.html

6. Use of Various Open Source tools for Bug Tracking

Objective:- To install and demonstrate the use of various open source softwares that used in day to day life of software engg.

Outcome: (PO: k, l)

Ex: **youtrack**

Students have to study at last 3 various open source tools / softwares that they uses and their day to day life, with their installation and configuration on their system

In journal, they have to write information about that tool such as:-

v. Purpose behind that tool
vi. Various versions of that tools
vii. Installation and Configuration of that tool
viii. How to use that tool

Reference:-

iv. https://bitnami.com/stacks (https://bitnami.com/stack/mantis)
v. Wikipedia List Of Softwares:-http://en.wikipedia.org/wiki/List_of_free_and_open-source_software_packages

vi. Open Source Software Mega List :- http://www.datamation.com/open-source/open-source-software-the-mega-list-1.html

7. Comprehend the Open Source Software Development for Ubuntu (Topic 3rd in Syllabus):-

Objective:- To comprehend the open source software development.

Outcome: Self learning/lifelong learning (PO: b, k, l)

In this student have to study open source software development process. They can choose any Linux tools for understanding,

Below is sample of Ubuntu Development:-

1. Development Communities:- http://www.ubuntu.com/community/
2. Mailing List:- https://lists.ubuntu.com/
3. IRC channels:- https://wiki.ubuntu.com/IRC/ChannelList
4. Ubuntu Wiki:- https://wiki.ubuntu.com/
5. Ubuntu Version Control:- https://code.launchpad.net/ubuntu
6. Ubuntu Bug Tracking:- https://bugs.launchpad.net/ubuntu
7. Ubuntu Localization :- https://translations.launchpad.net/ubuntu

8.Ubuntu Documentation:- https://help.ubuntu.com/community

8.Installation and Use of CMS softwares(XOOPS)

Objective:- To comprehend the use of Content Management System and their Use for personal website/dept CMS.

Outcome: Self learning (PO: b, I, j, k, l)

Students have to study at least 1 CMS such as, word press. Moodle, Drupal, Joomala, MediaWiki, etc In Journal, They have to write,

i. Installation On Linux Platform

ii. How to Use
iii. Screenshots

References:-

i. XOOPS Tutorials:-https://bitnami.com/stack/xoops

9.Compilation of various Linux Kernel Versions.

Objective:- To demonstrate how to compile Linux Kernel.
Outcome: Self learning (PO: k, l)

In this student have to learn compilation and installation of Linux Kernel on their system/VMware/Virtual box (**Ubuntu** in Lab).

Each batch have to install separate Linux Kernel

Reference:-

i. Installation Of Linux Kernel on **Ubuntu**:-
Latest kernel installation on :- http://www.backtrack-linux.org/forums/showthread.php?t=49347

In Journal you have to write the process steps.

10.Install and demonstrate of various Server based services and their Uses(FTP).

Objective:- To know server installations and Configurations on Linux Platform
Outcome: (PO: b, I, j, k, l)

Students are asked to install and configure at least 2 servers, such as FTP, HTTP, TELNET, NFS,NIS etc. All configurations must be done on Linux Platform
In Journal, they have to write installations, Configurations and Screenshots of server on which they worked

References:-

i. Server World:- http://www.server-world.info/en/
ii. Yolinux :- http://www.yolinux.com/

11.Google drive and apps (any two)

Objective:- To use *Google drive and apps*
Outcome: Self learning/lifelong learning (PO: b, I, j, k, l)

a. Google Drawings- Create shapes and diagrams

Add some color to your documents, presentations, and websites with easy to create charts and diagrams.

Steps:

Build charts, layout diagrams, create flow charts
Then easily add them to other documents or embed them on a website.

12.Mobile Application Development Using Android

References:- http://developer.android.com/index.html

Note:-

i. All Experiments Must Be in soft form, created using Lyx or Bacoma
ii. Submit all assignments to http://10.10.6.3 on time
iii.