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Practical No-1

Aim- To study and implement Linux commands

s/w - Linux Terminal.

Theory :-

Command- A Linux command is a program or utility that runs on the command line.

There were a lot of commands to handle the work but we will see some important from them.

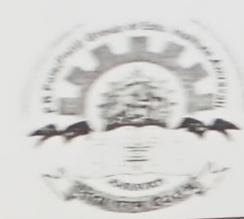
1) ls :- The most frequently use command in Linux to list Directories

The ls command is used to list files and directories in the current working directory. This is going to be one of the most frequently used Linux commands you must know it.

2) pwd command.

- The pwd command is used to display the location of the current working directory.





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syntax: `pwd`

3) mkdir command:

The `mkdir` command is used to create a new directory under any directory.

syntax: `mkdir <directory name>`

4) rmdir command

The `rmdir` command is used to delete a directory

syntax: ~~`rmdir <directory name>`~~

5) cd command

The `cd` command is used to change the current directory.

syntax: `cd <directory name>`

Now, Linux file command.

6) touch command

The `touch` command is used to create empty files. We can create multiple empty files by executing it once.

syntax: `touch <file name>`

`touch <file1> <file2>...`



7) cat command

The cat command is multi-purpose utility in the Linux system. It can be used to create a file, display content of the file, copy the content of the file to another file and more.

syntax : cat [OPTION]... [FILE]

8) rm command

The rm command is used to remove a file.

syntax : rm <file name>

9) cp command

The cp command is used to copy a file or directory.

syntax : cp <existing file name> <new file name>
To copy in diff directory.

10) mv Command:

The mv command is used to move a file or a directory from one location to another location.

syntax : mv <filenames> <directory path>



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11) rename command

The rename command is used to rename files. It is useful for renaming a large group of files.

Syntax: rename 's/old-name/new-name/' file

Now linux file content commands.

12) head command

The head command is used to display the content of a file. It displays the first 10 lines of a file.

Syntax: head <file name>

13) tail command

The tail command is similar to the head command. It displays the last ten lines of the file content. It is useful for reading the error message.

Syntax: tail <file name>

14) tac command

The tac command is the reverse of cat command as its name specified. It displays the file content in reverse order.

Syntax: tac <file name>



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Conclusion - Thus we are implement diff linux commands

Assessment Scheme

Pre-lab test	In-lab perform	post-lab Test	Record	Total
(2)	(5)	(3)	(5)	(15)
02	03	03	03	11 @4



Practical No-2

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Aim:- To study practical on Installation of java.
Software Req:- Browsers.

Theory :-

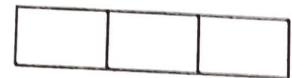
step by step installation of JDK Before installing the latest JDK version, It is recommended to check our system for any old JDK version and uninstall them. through we can have more than one JDK it is easier to set path and to work with the latest one.

~~Step 1: Download JDK from the site.~~

- Go to the oracle site and open the java SE download page under the latest version of Java platform, standard Edition, click on the jdk download button edition. click on the accept license Agreement button and choose your version of Java for windows (32 bit or 64 bit) to proceed with downloading the JDK executable file

~~Step 2: Install the Environment variable exe file~~

- We will need to update our system's Environment variable with our installed JDK bin path to run the java program the commands prompt will look for the complete JDK bin path



Step 3 :- check the directory

- JDK get installed in the c directory of our system by default having path "C:\Program Files\Java\jdk-1.8.0" if we make any change to this path at all we need to make a note of it as it will be required in the upcoming steps.

Step-4:- update the environment variable.

- we will need to update our system's environment variable with our installed JDK bin path to run the java program because while executing the program the command prompt will look for the complete JDK bin path.

If we do not set the path variable we will specify the full path to the jdk bin every time we run a program

Step-5 verify the java installation.

- open the command prompt and enter the command "java -version" and if it runs successfully java has been successfully installed
- Now that we have seen that steps to install JDK, let's see the programming being



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Conclusion : Hence we performed various Linux con how to installed JDK and set the path.

Assesmen Table

Prelab	In-lab	Post lab	Record	Total
Test (2) (2)	Performance (5)	Test (3)	(5)	(15)
02	08	03	03	12 <u>Good</u>



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Practical no - 11

Aim of the Practical:- To setup and configure Jenkins

Software Required: Browsers.

Theory : The simplest way to install Jenkins is to use the Jenkins windows installer. That program will install Jenkins window service using 64 bit JVM chosen by the user. Keep in mind that to run Jenkins as a service, the account that runs Jenkins must have permission to access

Step 1: Setup wizard

On opening the windows installer, an Installer, an Installation Step wizard appears, click next to the setup wizard to start your installation.

Step - 2. Select destination folder.

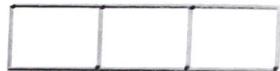
Select the destination folder to store your Jenkins installation and click next to continue.

Step 3: Service login credentials.

When installing Jenkins, it is recommended to install & run Jenkins as an windows using a local domain user as it is much safer than running Jenkins using local system will grant Jenkins full access to your machine & service

Step 4: Port selection

Test port button to validate whether the specified port is free on your machine or not.



Step 5: Select java directory.

The installation process checks for java on your machine and prefixes the dialog with java home directory. If the java is not installed on your machine, you will be prompted to install it.

Step 6: custom setup

Select other services that need to be installed with jenkins and click on next

Step 7: Install jenkins

Click on the install button to start the installation of jenkins

Step 8: Finish jenkins installation

Once the installation completion, click on finish to complete the installation.

Pre-lab Question

1. what is Jenkins?

Ans: Jenkins is an open source continuous integration known as delivery & development (CD|CI) automation software DevOps tool written in Java programming language

2. what is use of Jenkins in CI?

Ans: Jenkins CI helps in test automation, provide faster feedback, reduces the development cycle & streamlines the continuous integration of code

3. what are the two types of Jenkins?

Ans: There are two types of Jenkins i) Declarative ii) Scripted.

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Post lab Question

1. what are the basic concept of Jenkins ?
 Ans:- Jenkins core concept are:-
 i) Jenkins controller iii) Jenkins Node vi) Jenkins pipeline
 ii) Jenkins Agent iv) Jenkins project vii) Jenkins pipeline
2. Is Jenkins a build tool?
 Ans:- Jenkins is an open automation tool written in Java with plugin built for continuous integration.
3. Is Jenkins is a CI/CD pipeline?
 → Jenkins is a platform for creating a continuous integration continuous Deployment (CI/CD) environment.

Conclusion: Thus we have setup and configure Jenkins

Assessment Scheme:

Prelab Test (2)	In-lab perform (6)	Post-lab perform (3)	Record (5)	Total (15)
02	03	03	04	12



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Practical No. 12

Aim of the Practical : To create job and manage it using Jenkins

S/W Required : Browser

Theory :

Step 1 : Go to the Jenkins dashboard and click on New item.

Step 2 : In the next screen, enter the item name. In the case, we have named it Helloworld choose 'freestyle project' open.

Step 3 : The following screen will come up in which you can specify the details of the job.

Step 4 : We need to specify the location of files which need to be built. In this example, we will assume that a logical git repository (E:\program) has been setup which contains a Helloworld.java file.

Step 5 : Now go to the Build section and click on Add build step execute windows batch command.

Step 6 : In the command window enter the following and then click on the save button.

Step 7 : Once saved, you can click on the build now option to see if you have successfully defined the job.



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Step 8: Once the build is scheduled, it will run, the following build history section shows that a build is in progress

Step 9: Once the build is completed, a status on the build will show if the build was successful or not.

Step 10: Click on the console output link to see details of the build.

Pre-lab Questions:

1. What is Jenkins used for?

Ans: Jenkins is an open source automation tool written in Java with plug-ins built for continuous integration.

2. What is a job of Jenkins?

Ans: Any automated process that is implemented in Jenkins is a Jenkins job.

3. What is CI/CD in Jenkins?

Ans: Jenkins is an open source automation tool for continuous Integration (CI) and continuous deployment (CD).

Part lab Questions

1. Why Jenkins is used in automation?

Ans: It provides numerous plug-ins for interaction with multiple test automation tools and flows into a test pipeline.

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" How do I manage Jenkins jobs?

Ans. To manage Jenkins click on the "Manage Jenkins" option from the left hand menu side.

" How do I create a job inside Hoder in Jenkins?

Ans. By clicking New item from the Jenkins dashboard and then giving the item a name.

Conclusion: Thus we have studied and created job and manage it using Jenkins.

Assessment scheme,

Prelab	Inlab	Post lab	Record	Total (15)
Test (2)	Perform (5)	Test (3)	(5)	
02	03	03	04	12