Tech Module Exercises: 24/24

UNIX

* Mini Projects
  + In this TECH Module, you are expected to complete the below Mini- Project(s)

|  |  |  |
| --- | --- | --- |
| S.No. | Mini-project Description | Topics Covered |
| 1 |  |  |
| 2 |  |  |

* Topics to Learn

To complete the above project, you will need to learn the below technical topics-

* + Unix
    - Learning Material for Unix

Below is the learning material that you are expected to read along with completion of the hands-on assignments. The material is mentioned in the order in which it should be read.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| No. | Material Title | Material Location | Type of Material | Classification |
|  | Introduction to Unix | Unix Operating system.pdf | PDF | Mandatory |
|  | Introduction to Unix | https://www.tutorialspoint.com/unix/unix-getting-started.htm | Web | Mandatory |
|  | Introduction to Unix operating system | https://www.tutorialspoint.com/unix/unix-getting-started.htm | Web | Mandatory |
|  | Understanding Unix command set | https://www.tutorialspoint.com/unix/unix-useful-commands.htm | Web | Mandatory |
|  | GREP PIPES and Filters | https://www.tutorialspoint.com/unix/unix-pipes-filters.htm | Web | Mandatory |
|  | The vi editor | https://www.tutorialspoint.com/unix/unix-vi-editor.htm | Web | Mandatory |
|  | Files and Directories | https://www.tutorialspoint.com/unix/unix-file-management.htm | Web | Mandatory |
|  | Files and Directories | https://www.tutorialspoint.com/unix/unix-directories.htm | Web | Mandatory |
|  | Files and Directories | https://www.tutorialspoint.com/unix/unix-file-permission.htm | Web | Mandatory |
|  | Understanding Process management | Process management.pdf | PDF | Mandatory |
|  | Understanding Process management | https://www.tutorialspoint.com/unix/unix-useful-commands.htm | Web | suggestive |

* + - Hands on Assignment for Unix

Complete the below hands-on assignment before proceeding with the next Topic.

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| --- | --- | --- | --- |
| No. | Hands-on Assignment | Topics Covered | Status |
| 1 | Create an empty file test123 using touch command and remove write permission to group and others. | Introduction Unix operating system |  |
| 2 | Create directory named newdir and change permissions such that read, write & execute permissions are given only to the owner. | Introduction Unix operating system |  |
| 3 | Use touch command to create files a, b and c. Copy them into directory newdir. | Introduction Unix operating system |  |
| 4 | Move the files a, b and c into the directory newdir. | Introduction Unix operating system |  |
| 5 | Create a softlink named test123-sl to the file test123. | Introduction Unix operating system |  |
| 6 | Is the inode number of test123 and test123-sl same? | Introduction Unix operating system |  |
| 7 | Create a hardlink named test123-hl to the file test123. | Introduction Unix operating system |  |
| 8 | Is the inode number of test123 and test123-hl same? | Introduction Unix operating system |  |
| 9 | Create a softlink named newdir-sl to the directory newdir | Introduction Unix operating system |  |
| 10 | Is the inode number of newdir and newdir-sl same? | Introduction Unix operating system |  |
| 11 | Define umask such that any file or directory created has no permission for others, and test if it works? | Introduction Unix operating system |  |
| 12 | List the files whose inode number is 1 on your system | Files and Directories |  |
| 13 | List the files other than regular files and directories in /bin directory. | Files and Directories |  |
| 14 | Run commands to do the following operations | Files and Directories |  |
| 15 | List files in ascending order of their creation time. | Files and Directories |  |
| 16 | List files in descending order of their creation time. | Files and Directories |  |
| 17 | List only the directories in the root directory. | Files and Directories |  |
| 18 | List hidden files in the root directory. | Files and Directories |  |
| 19 | When a directory is created it has two links. | Files and Directories |  |
| 20 | Identify which are the files represented by the two links? | Files and Directories |  |
| 21 | Compress files in the current directory, and then uncompress the files. | Files and Directories |  |
| 22 | Create a tar file for all the files whose name begin with any of the characters a to k (both inclusive) | Files and Directories |  |
| 23 | List files whose file name is exactly 5 characters, from the current directory. | Files and Directories |  |
| 24 | List all the files from the root directory and its subdirectories captured into a file. | Files and Directories |  |

* Learning Outcomes
  + Upon completion of this TECH Module, you should be able to:
    - Understand Evaluation of Unix Operating System
    - Understand Features of Unix OS
    - Architecture of Unix OS
    - What are Functionalities of Kernel and Shell
    - What File system of Unix OS
    - Describe Internal Command set of UNIX OS
    - Understand File Permissions
    - How to Create / Delete directories
    - What is Umask
    - Use of Vi editor
    - Use of Pipes & Filters
    - Use of Search patterns
* Sample Questions
  + After gaining knowledge of the above module, below are the possible interview questions that you should be able to confidently answer.

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