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| Program- BTech-3rd Semester | Type- Sp. Core-I |
| Course Code- CSET213 | Course Name-Linux and Shell Programming |
| Year- 2024 | Semester- Odd |
| Date- 08/11/2024 | Batch- BXX-BXX (Cyber Security)   |  | | --- | |  | |

**Lab Assignment 9**

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| **Exp No** | **Name** | **CO1** | **CO2** | **CO3** |
| 9 | Shell programming File handling | - | 100+ Free Tick Mark & Tick Images - Pixabay | 100+ Free Tick Mark & Tick Images - Pixabay |

**Objective**: To use shell scripting for processing the files, and user management.

**Outcomes:** After executing this assignment, thestudents will be able to

1. understand the file creation,
2. reading and writing data from/into files,
3. modifying file permissions,
4. sharing files
5. user management (adding, modifying, and deleting users)

**Hands-on Learning on operators (40 minutes)**

1. **Reading and writing data from/into files:** Using read and redirection operators

Example1: Script to read file character by character

#!/bin/bash

read -p "Enter file name : " filename

while read -n1 character

do

echo $character

done < $filename

Example2: Script to read file line by line

#!/bin/bash

read -p "Enter file name : " filename

while read line

do

echo $line

done < $filename

1. **Files Sharing:** when you create a new file, Linux assigns the file permissions of the new file using your default UID and GID. To allow others access to the file, you need to either change the security permissions for the everyone security group or assign the file a different default group that contains other users.

*Use $chmod permission filename*

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1. **User Management:** using commands- id, useradd, passwd, userdel, usermod

Example:

# for u in bob joe ; do

useradd $u

echo '$u:Password1' | chpasswd

passwd -e $u

done

**Scripting Problems for Assessment (60 Minutes)**

1. Write a shell script to create 1000 text files, and copy the content of a file available on the link <https://lms.bennett.edu.in/mod/assign/view.php?id=62476> (10 Minutes)
2. Write a shell script to change the permissions on the files created in Q1 as read, write, and execute (7) permission for owner, read, and execute permission (5) for group and read permission for others. (15 Minutes)
3. Write a shell script to create the users Ram, Shyam, Swasti, Bhoomi, Nutan, Virat, Aayush, Udbhav, Yashi, Kulwinder, Rahim, Bob, Alice using for loop and store the information of these users in the file /etc/shadow. Also print the content of /etc/shadow. (30 Minutes)

**Submission Instructions:**

1. Submission requires the screen shots of all the incurred steps to execute a shell script or a video showing the whole process.
2. All these files are in single zip folder.
3. Use the naming convention: Prog\_CourseCode\_RollNo\_LabNo.docx (Example: BTech3rdSem\_CSET213\_ E21CSEU002\_Lab1.1)
4. Submission is through LMS only