

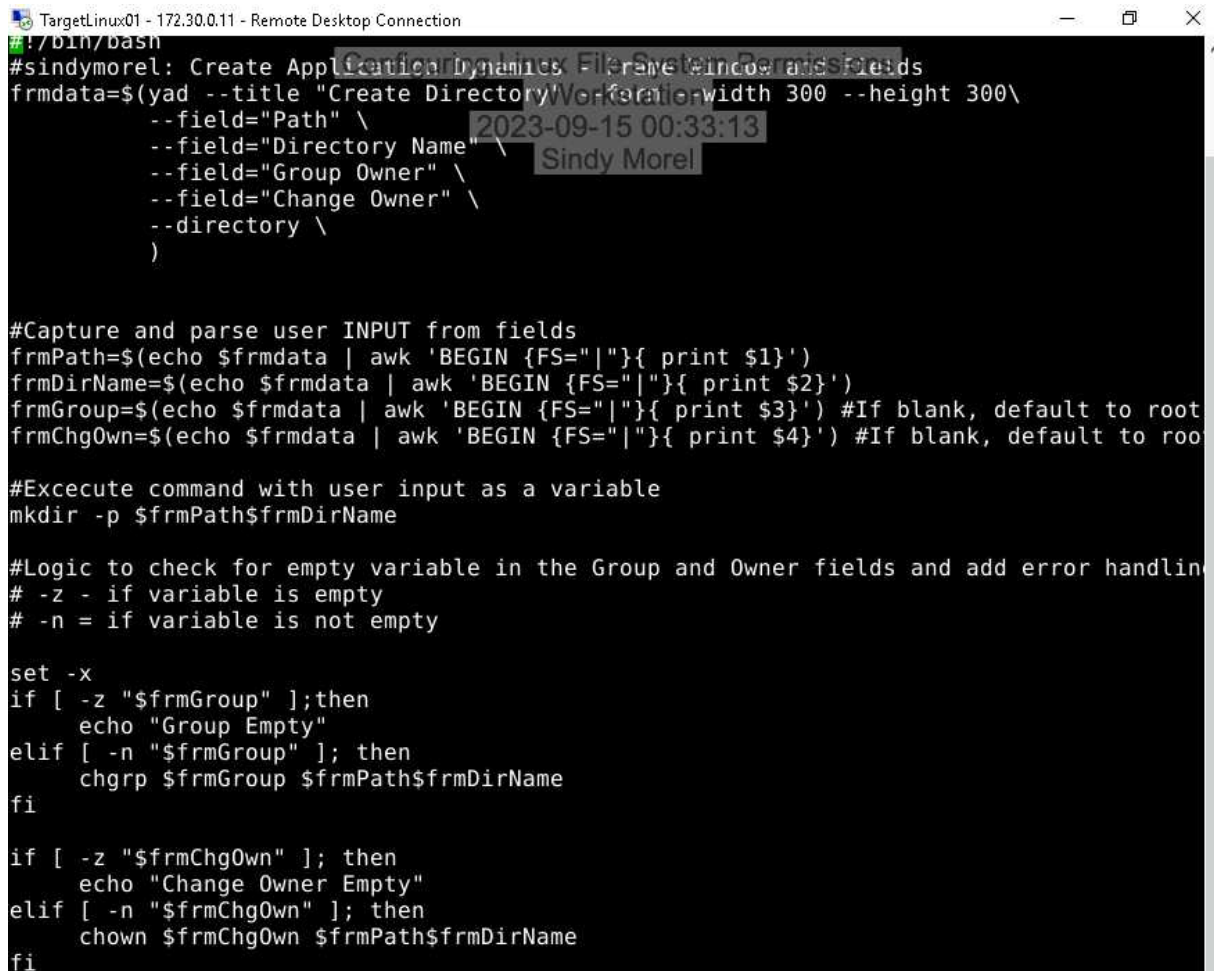
Lab 4: Screen Captures

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Section 2: Applied Learning

Part 1: Create New Directories and Ownership with a Program



The screenshot shows a terminal window titled "TargetLinux01 - 172.30.0.11 - Remote Desktop Connection". The user is logged in as "sindymorel". The script being executed is a shell script that takes user input for directory path, name, group owner, and change owner, and then uses these inputs to create a directory and set its permissions. The script includes comments for each step and uses conditional logic to handle empty or non-empty input fields.

```
#!/bin/bash
#sindymorel: Create Application File System Permissions
frmdata=$(yad --title "Create Directory Window" --width 300 --height 300 \
  --field="Path" \
  --field="Directory Name" \
  --field="Group Owner" \
  --field="Change Owner" \
  --directory \
)

#Capture and parse user INPUT from fields
frmPath=$(echo $frmdata | awk 'BEGIN {FS="|"}{ print $1}')
frmDirName=$(echo $frmdata | awk 'BEGIN {FS="|"}{ print $2}')
frmGroup=$(echo $frmdata | awk 'BEGIN {FS="|"}{ print $3}') #If blank, default to root
frmChgOwn=$(echo $frmdata | awk 'BEGIN {FS="|"}{ print $4}') #If blank, default to root

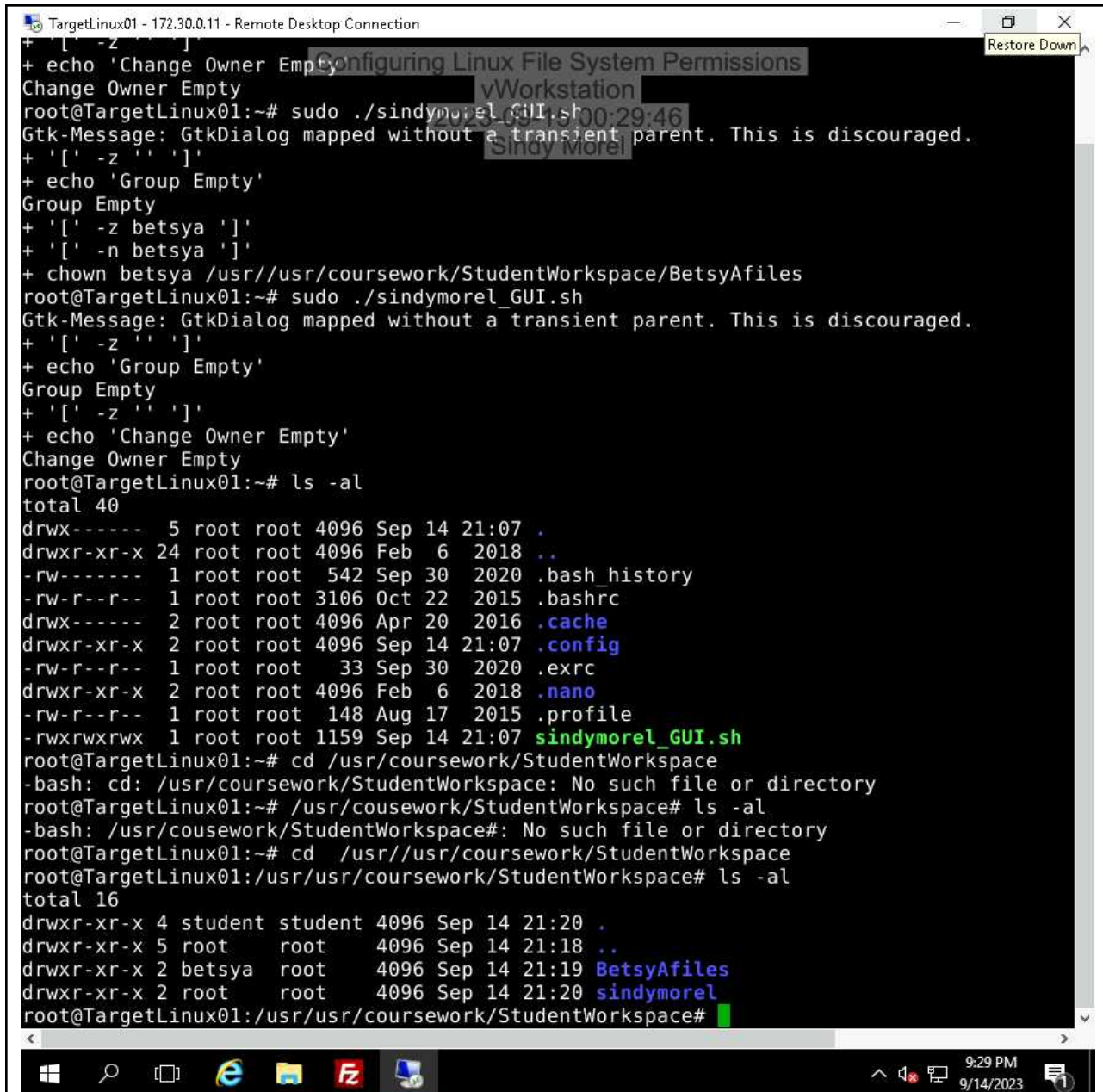
#Execute command with user input as a variable
mkdir -p $frmPath$frmDirName

#Logic to check for empty variable in the Group and Owner fields and add error handling
# -z - if variable is empty
# -n = if variable is not empty

set -x
if [ -z "$frmGroup" ];then
  echo "Group Empty"
elif [ -n "$frmGroup" ]; then
  chgrp $frmGroup $frmPath$frmDirName
fi

if [ -z "$frmChgOwn" ]; then
  echo "Change Owner Empty"
elif [ -n "$frmChgOwn" ]; then
  chown $frmChgOwn $frmPath$frmDirName
fi
```

Completed program script



```
TargetLinux01 - 172.30.0.11 - Remote Desktop Connection
+ '[' -z '' -a ]
+ echo 'Change Owner Empty'
Change Owner Empty
root@TargetLinux01:~# sudo ./sindymorel_GUI.sh
Gtk-Message: GtkDialog mapped without a transient parent. This is discouraged.
+ '[' -z '' -a ]
+ echo 'Group Empty'
Group Empty
+ '[' -z betsy ']'
+ '[' -n betsy ']'
+ chown betsy /usr//usr/coursework/StudentWorkspace/BetsyAfiles
root@TargetLinux01:~# sudo ./sindymorel_GUI.sh
Gtk-Message: GtkDialog mapped without a transient parent. This is discouraged.
+ '[' -z '' -a ]
+ echo 'Group Empty'
Group Empty
+ '[' -z '' -a ]
+ echo 'Change Owner Empty'
Change Owner Empty
root@TargetLinux01:~# ls -al
total 40
drwx----- 5 root root 4096 Sep 14 21:07 .
drwxr-xr-x 24 root root 4096 Feb  6 2018 ..
-rw----- 1 root root  542 Sep 30 2020 .bash_history
-rw-r--r-- 1 root root 3106 Oct 22 2015 .bashrc
drwx----- 2 root root 4096 Apr 20 2016 .cache
drwxr-xr-x 2 root root 4096 Sep 14 21:07 .config
-rw-r--r-- 1 root root   33 Sep 30 2020 .exrc
drwxr-xr-x 2 root root 4096 Feb  6 2018 .nano
-rw-r--r-- 1 root root  148 Aug 17 2015 .profile
-rwxrwxrwx 1 root root 1159 Sep 14 21:07 sindymorel_GUI.sh
root@TargetLinux01:~# cd /usr/coursework/StudentWorkspace
-bash: cd: /usr/coursework/StudentWorkspace: No such file or directory
root@TargetLinux01:~# /usr/cousework/StudentWorkspace# ls -al
-bash: /usr/cousework/StudentWorkspace#: No such file or directory
root@TargetLinux01:~# cd /usr//usr/coursework/StudentWorkspace
root@TargetLinux01:/usr/usr/coursework/StudentWorkspace# ls -al
total 16
drwxr-xr-x 4 student student 4096 Sep 14 21:20 .
drwxr-xr-x 5 root      root    4096 Sep 14 21:18 ..
drwxr-xr-x 2 betsy    root    4096 Sep 14 21:19 BetsyAfiles
drwxr-xr-x 2 root     root    4096 Sep 14 21:20 sindymorel
root@TargetLinux01:/usr/usr/coursework/StudentWorkspace#
```

Displaying the file permissions for the /usr/courseworks/StudentWorkspace directory and paste it into the Lab Reports file.

Part 2: Change File Permissions with a Program



```
TargetLinux01 - 172.30.0.11 - Remote Desktop Connection
+ chmod o-rx /usr/usr/coursework/FacultyNotes
chmod: changing permissions of '/usr/usr/coursework/FacultyNotes': Operation not permitted
student@TargetLinux01:~$ ./Perm.sh
(yad:1522): Gtk-WARNING **: Unable to open server bookmarks: Failed to open file '/home/student/.con
rmission denied
(yad:1522): Gtk-WARNING **: Unable to open server bookmarks: Failed to open file '/home/student/.con
rmission denied
Gtk-Message: GtkDialog mapped without a transient parent. This is discouraged.
+ '[' -z /usr/usr/coursework/LecureSlides ']'
+ '[' -n /usr/usr/coursework/LecureSlides ']'
+ echo 'Directory /usr/usr/coursework/LecureSlides selected'
Directory /usr/usr/coursework/LecureSlides selected
+ '[' -z "$frmPerm" | "$frmSelect" ']'
+ '[' -n "$frmPerm" | "$frmSelect" ']'
+ chmod o-x /usr/usr/coursework/LecureSlides
chmod: changing permissions of '/usr/usr/coursework/LecureSlides': Operation not permitted
student@TargetLinux01:~$ ./Perm.sh
(yad:1550): Gtk-WARNING **: Unable to open server bookmarks: Failed to open file '/home/student/.con
rmission denied
(yad:1550): Gtk-WARNING **: Unable to open server bookmarks: Failed to open file '/home/student/.con
rmission denied
Gtk-Message: GtkDialog mapped without a transient parent. This is discouraged.
+ '[' -z ' ' ']'
+ echo 'Directory Not Selected'
Directory Not Selected
+ '[' -z "$frmPerm" | "$frmSelect" ']'
+ '[' -n "$frmPerm" | "$frmSelect" ']'
+ chmod
chmod: missing operand
Try 'chmod --help' for more information.
student@TargetLinux01:~$ cd /usr//usr/coursework/StudentWorkspace
student@TargetLinux01:/usr/usr/coursework/StudentWorkspaces$ ls -al
total 16
drwxr-xr-x 4 student student 4096 Sep 14 21:32 .
drwxr-xr-x 5 root root 4096 Sep 14 21:18 ..
drwxr-xr-x 2 betsy root 4096 Sep 14 21:19 BetsyAfiles
drwxr-xr-x 2 root root 4096 Sep 14 21:20 sindymorel
-rw-r--r-- 1 root root 0 Sep 14 21:32 sindymorel GUI.sh
student@TargetLinux01:/usr/usr/coursework/StudentWorkspaces$
```

Displaying the updated file permissions for the coursework directory and paste it into the Lab Report file.