

Assignment 3 - 7

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1 Manual for GUI

1.1 Prerequisites

1.1.1 *Python3*

```
sudo apt-get update  
sudo apt-get install python3
```

1.1.2 *Tkinter*

```
sudo apt-get install python python3-tk
```

1.1.3 *Pandas*

```
sudo apt-get install python3-pandas
```

1.1.4 *matplotlib.pyplot*

```
sudo apt-get install python3-plotly
```

1.2 Execution of GUI

```
Python3 GUI.py
```

2 How to Use this GUI

After execution of GUI.py file, the GUI will be shown. In this GUI you can find Five Tabs with some sub tabs in it which are :

1. Booting and Shutting Down
2. User Management
 - (a) Single User Management
 - (b) Batch User Management
3. Controlling and periodic Processes
 - (a) Users Memory and CPU usage
 - (b) Nice Values
4. File Permissions
 - (a) Umask calculator
 - (b) Access Control List
 - (c) Default Permissions
5. Syslog and Log Files
 - (a) Managing Log Files
 - (b) Log Rotation

For Running the Operations present in GUI, you need to login with root password of your linux machine.

2.1 Assignment 3: Booting and Shutting Down

This Assignment is about Booting and Shutdown. We have 6 functions, You can see these in following blue boxes in GUI.

2.1.1 Change the order of OS's shown in the GRUB

You need to select the OS option from *dropdown* and *Press Change Button* to make that OS as your Default OS.

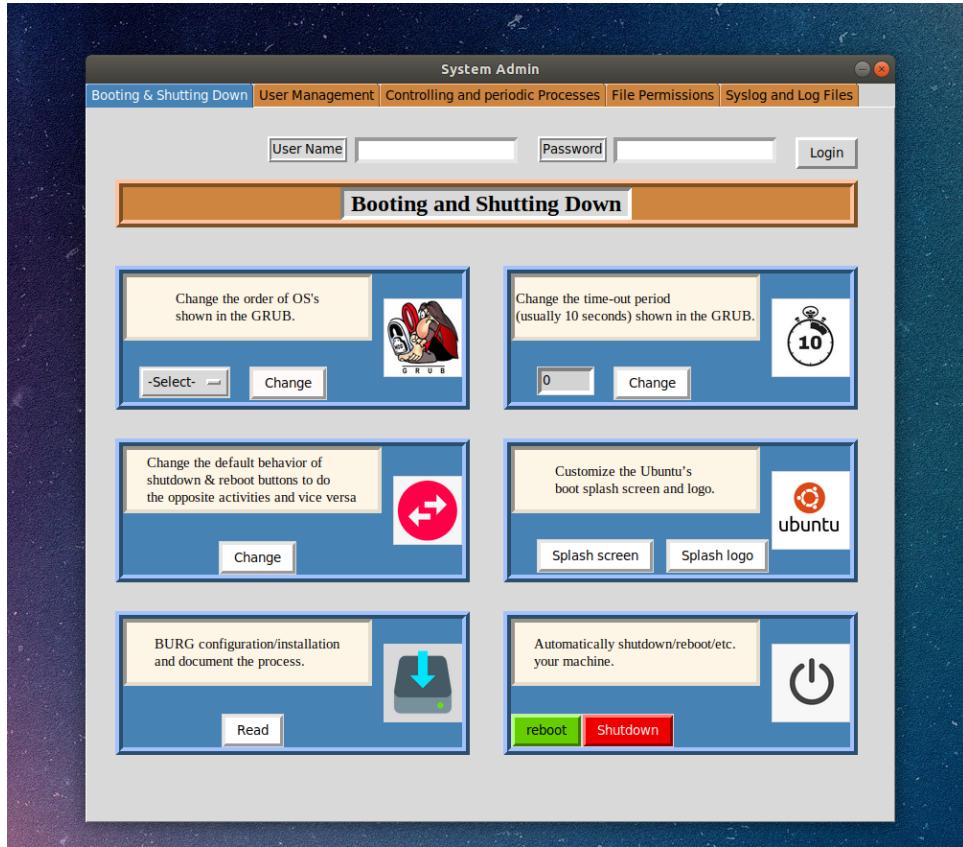


Figure 1: GUI

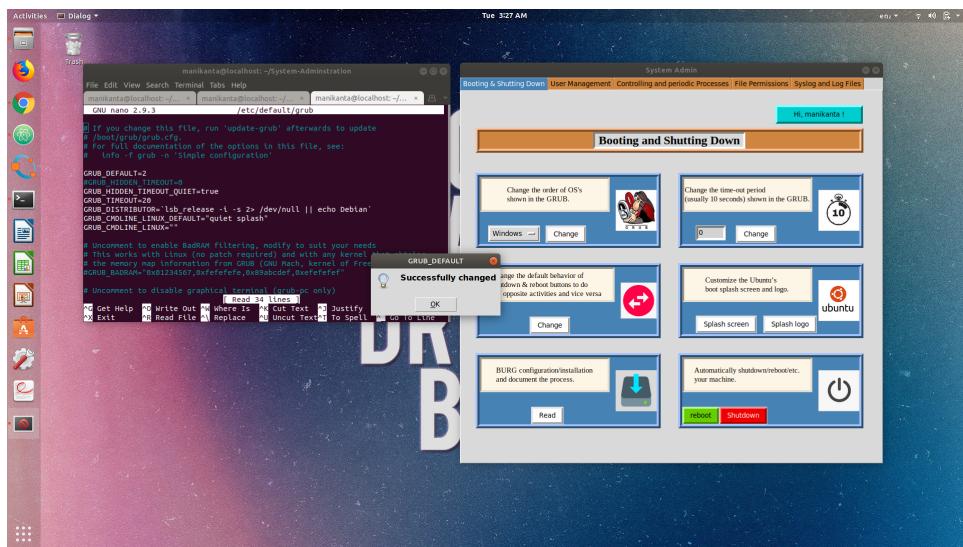


Figure 2: Grub Order

2.1.2 Change the time-out period (usually 10 seconds) shown in the GRUB

You need to enter the time-out value in given *text box* and *Press Change Button* to change your time-out period of your Grub.

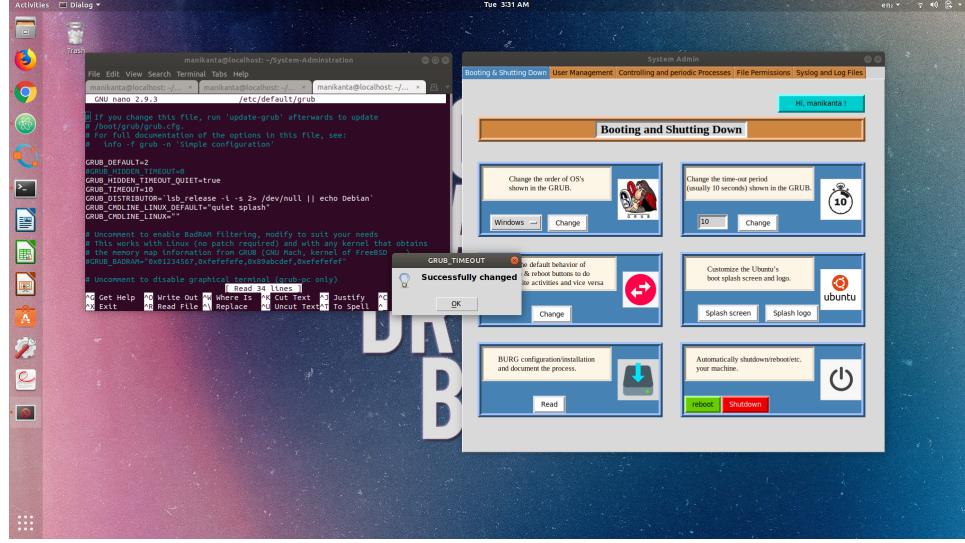


Figure 3: Grub Timeout

2.1.3 Customize the Ubuntu's boot splash screen and logo

Press *Splash screen Button*, You'll get *colour picker* and select one colour to change your background of your splash screen.

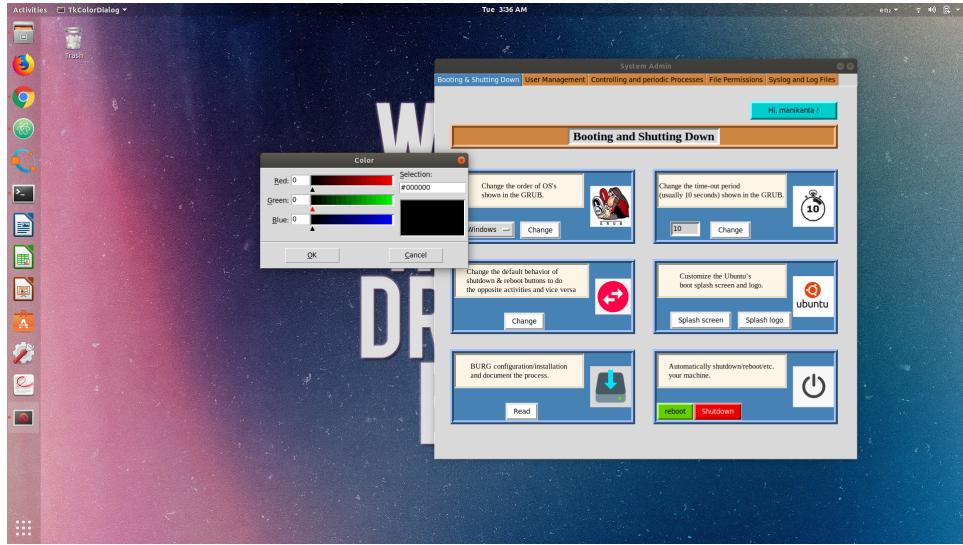


Figure 4: Change Splash screen

Press *Splash logo Button*, You'll get *file dialog* and select any image to change your background of your splash screen logo.

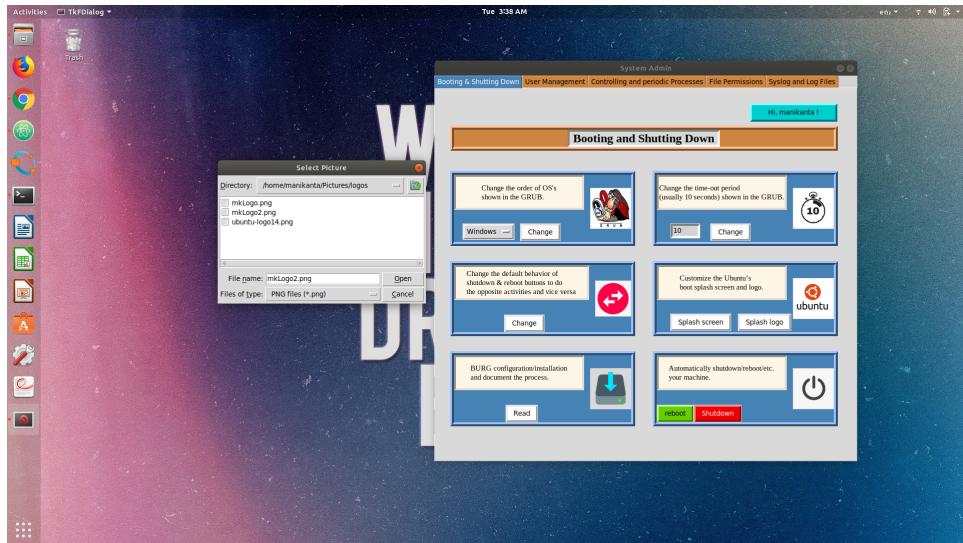


Figure 5: change Splash logo

2.1.4 BURG configuration/installation and document the process

Press *Read Button*, you'll get the table about installation of Burg in your system. You can run those commands to install Burg in your system.



Figure 6: Burg Install

2.1.5 Automatically shutdown/reboot/etc your machine

Press *Reboot Button* to Reboot your system. And *Shutdown Button* to Shutdown your machine. It takes 60 sec to shutdown or Reboot.

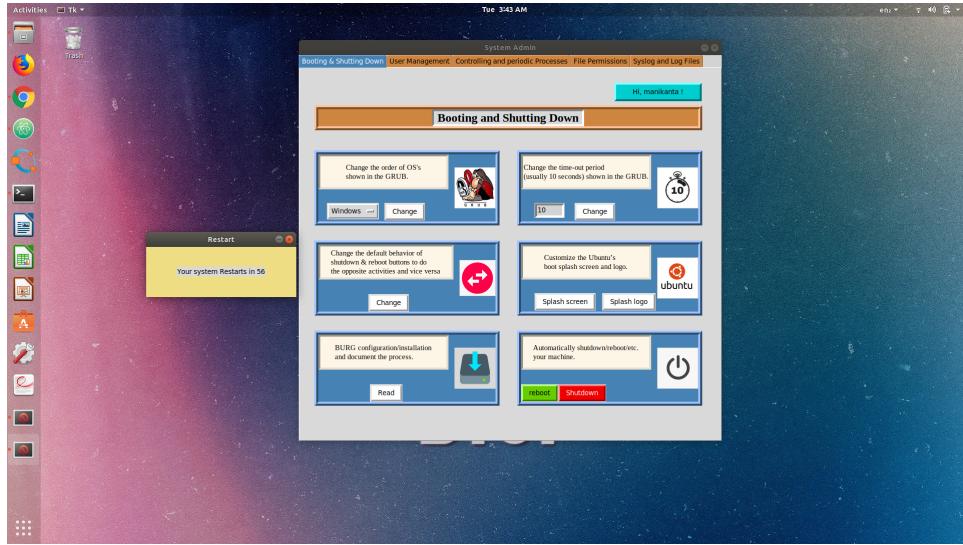


Figure 7: Automatically reboot

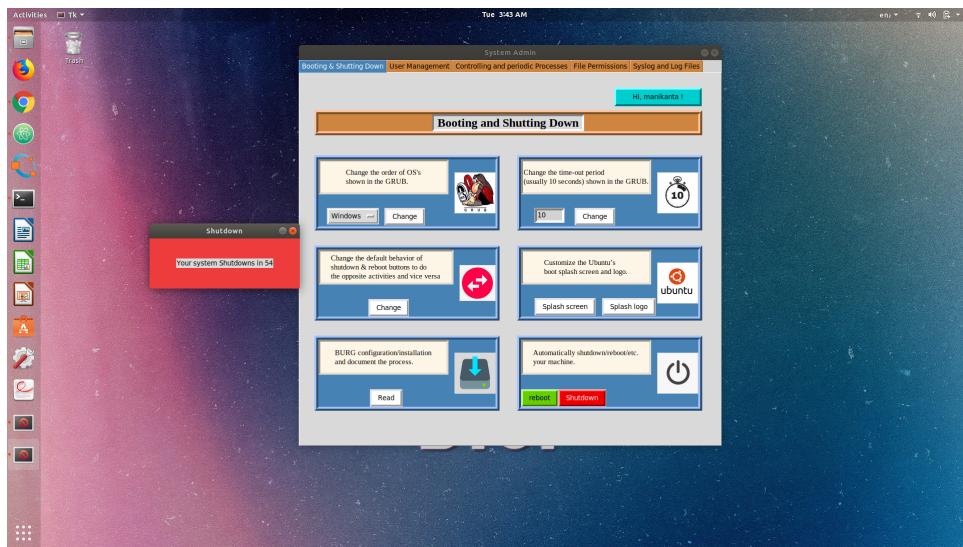


Figure 8: Automatically shutdown

2.2 Assignment 4: User Management- Single User

This section is about User Management in Single User Mode. You'll find several operations like Create, delete etc., for Single User mode in this section.

2.2.1 CREATE USER

You need fill up all details and Press *Create Button* to Create a new user.

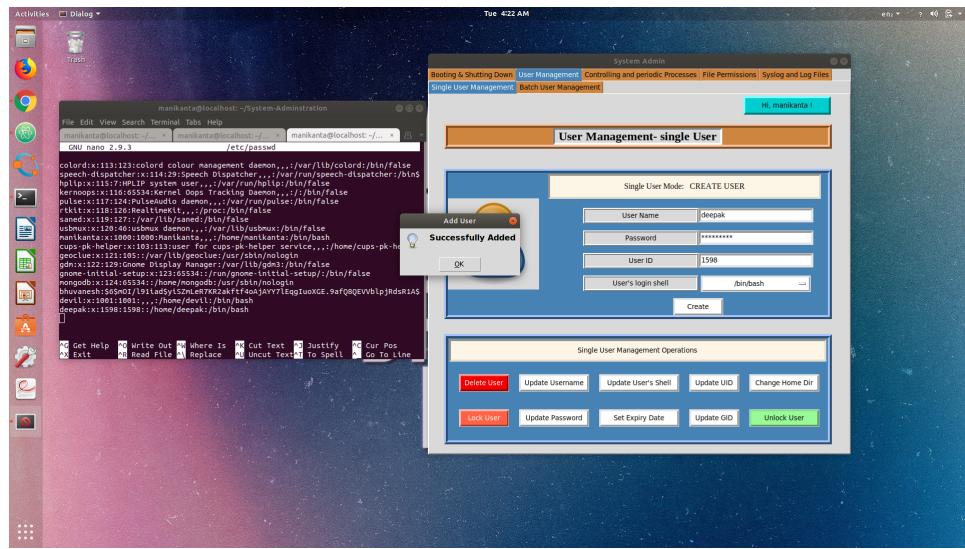


Figure 9: Create user

2.2.2 Delete User

Press *Delete User Button* to delete a User. Just you need to enter the user name for delete his account.

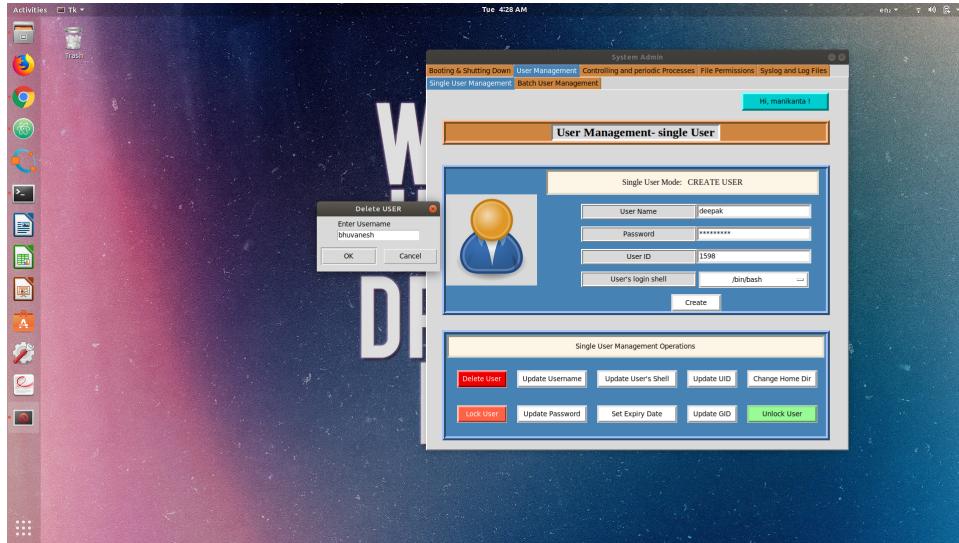


Figure 10: Delete user

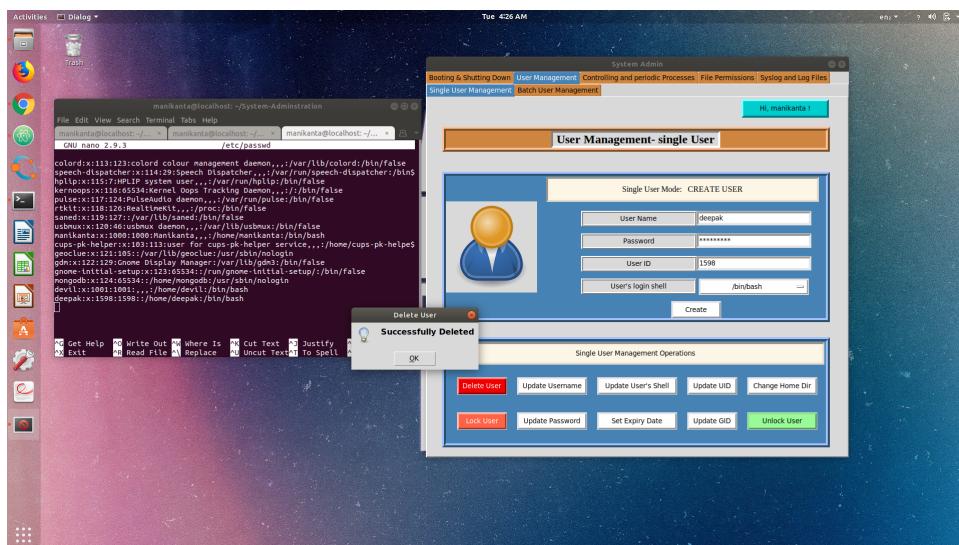


Figure 11: Deleted user Succesfully

2.2.3 Update Username

Press *Update Username* Button to a update Username of an user. Just you need to enter the user name and new username to update.

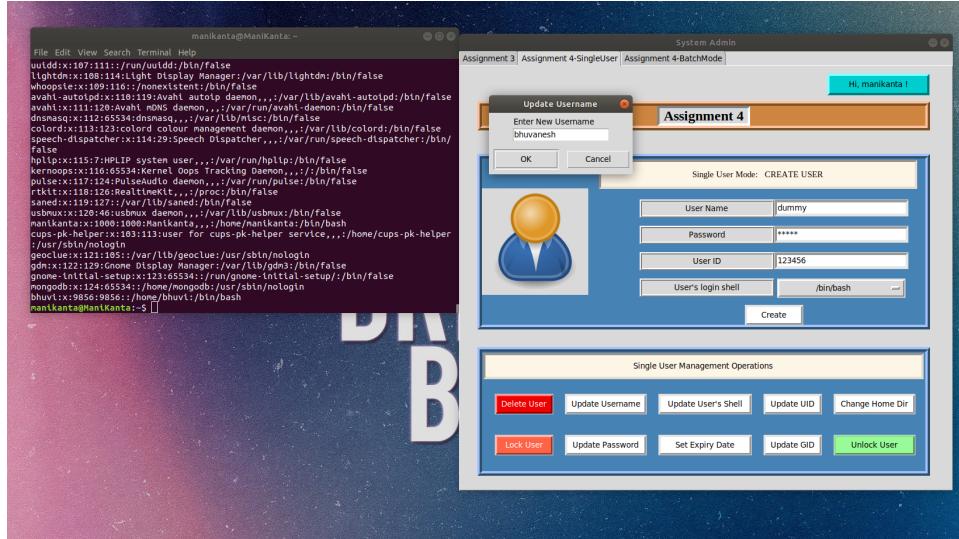


Figure 12: Update username

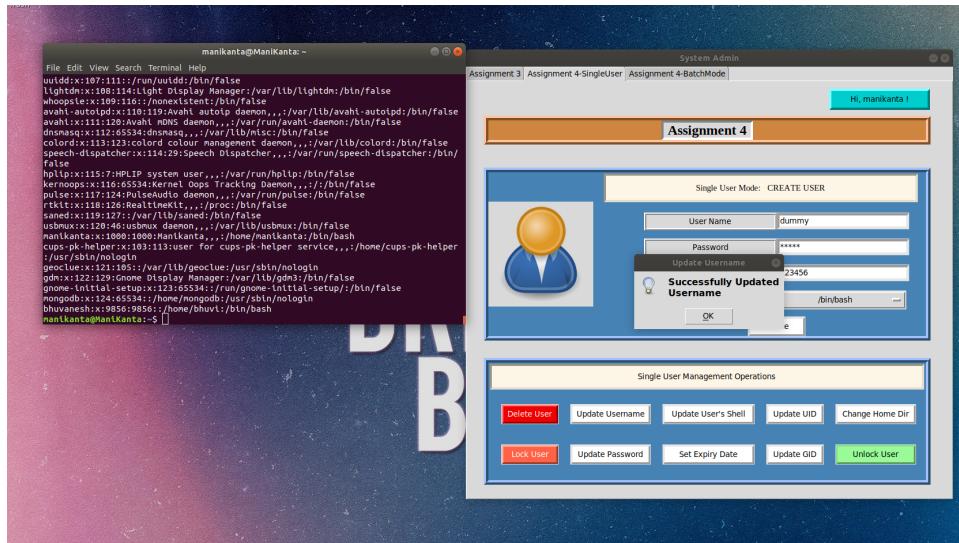


Figure 13: Updated username Successfully

2.2.4 Update User's shell

Press *Update User's shell Button* to update the shell of an user. Just you need to enter the user name and new shell to update.

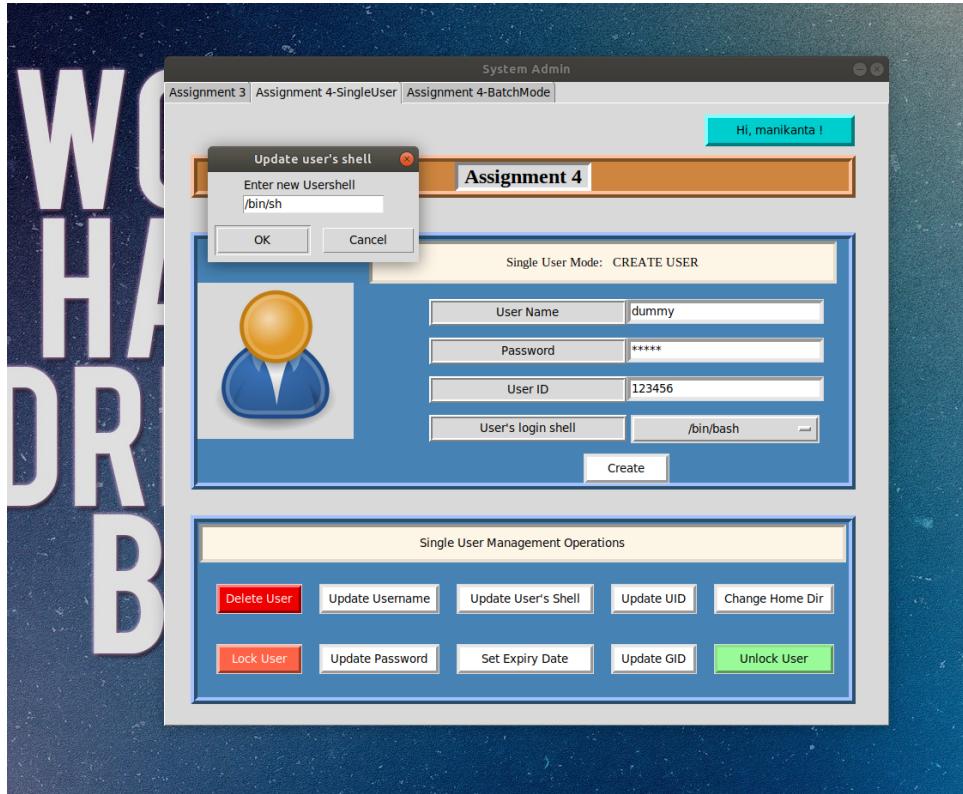


Figure 14: Update user's shell

2.2.5 Update UID

Press *Update UID Button* to update the User ID of an user. Just you need to enter the user name and new UID to update.

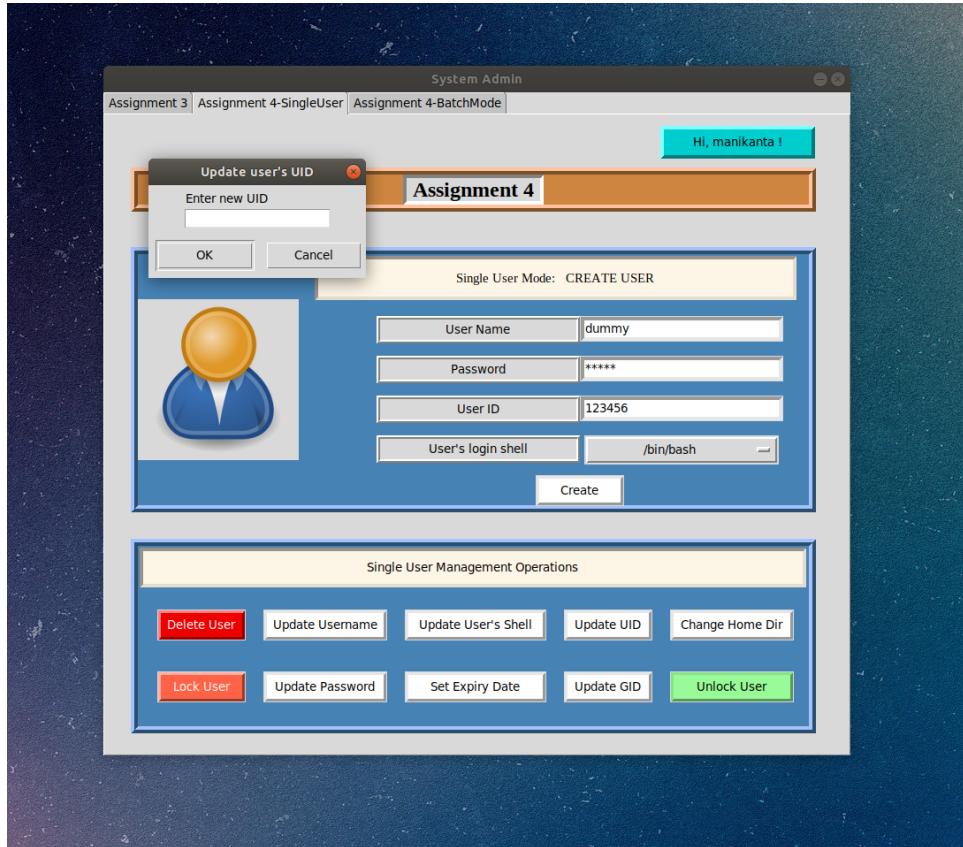


Figure 15: Update user's UID

2.2.6 Change Home Dir

Press *Change Home Dir Button* to update the Home Directory of an User. Just you need to enter the user name and Directory Path to update his Home directory.

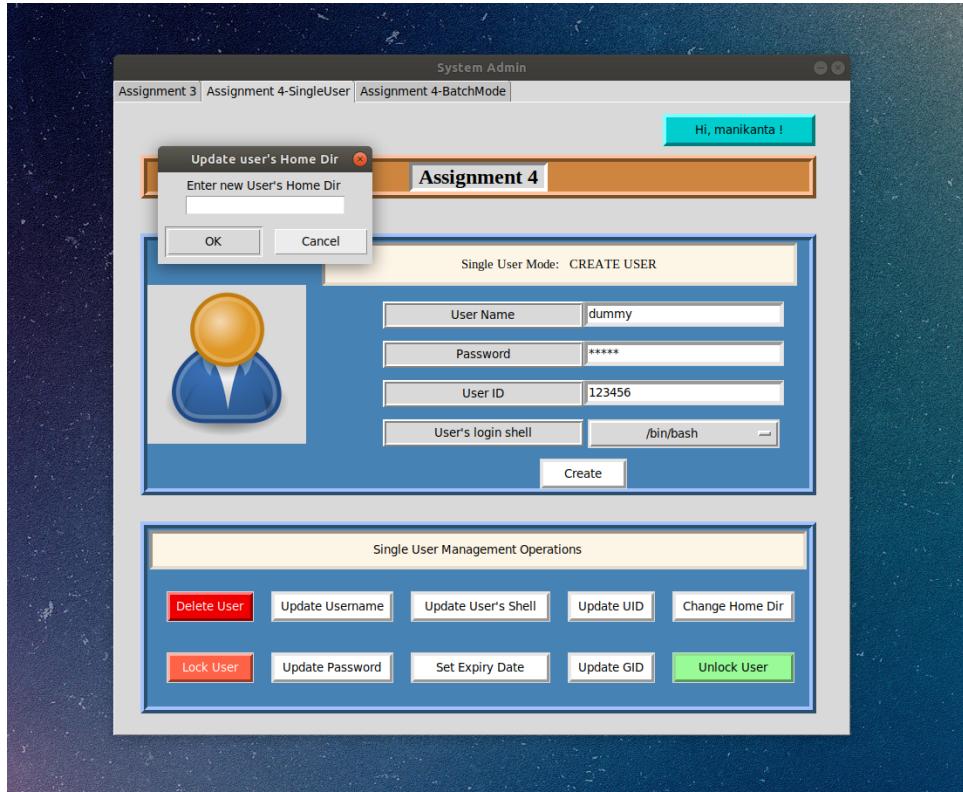


Figure 16: Update user's home Dir

2.2.7 Lock User

Press *Lock User Button* to Lock the User. Just you need to enter the user name to disable his account.

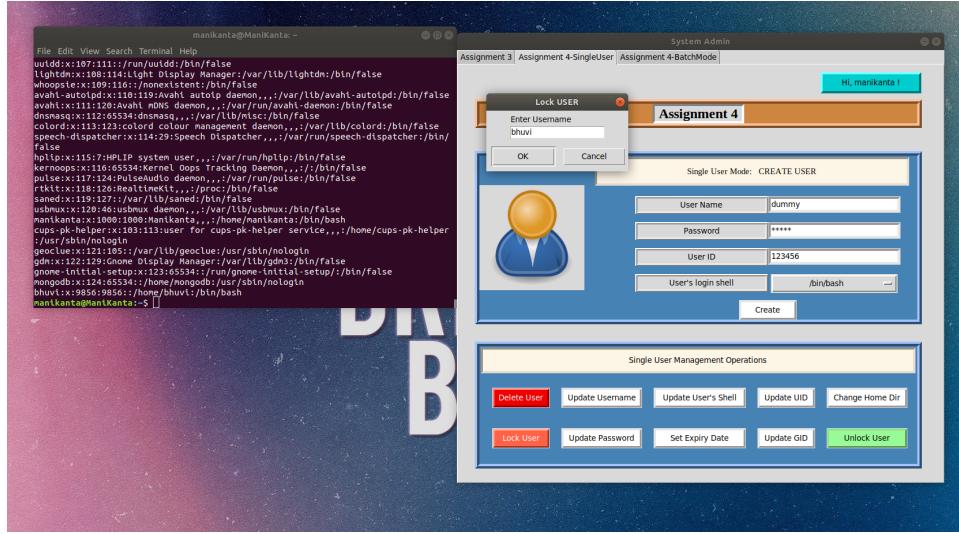


Figure 17: Lock User

2.2.8 Update Password

Press *Update Password Button* to update the Password of an user. Just you need to enter the user name and new Password to update.

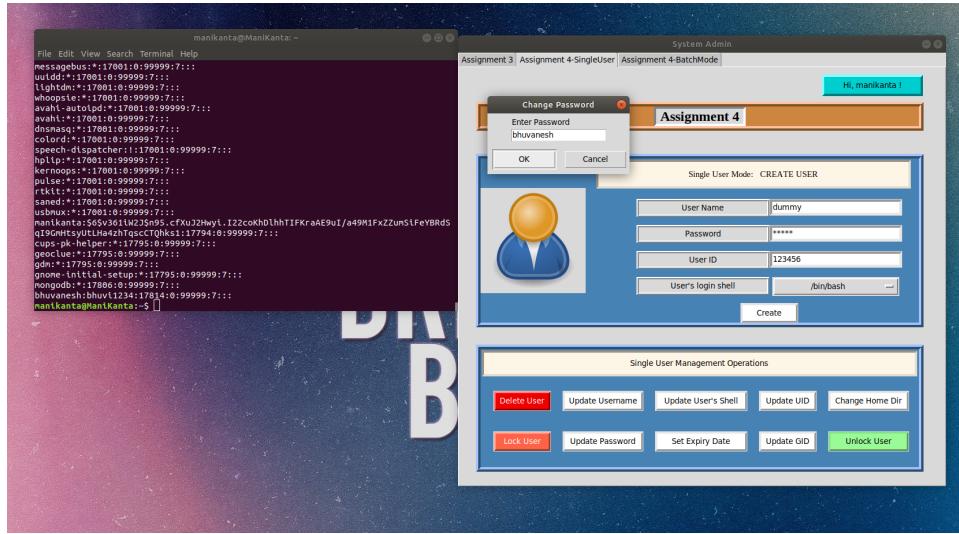


Figure 18: Update password

2.2.9 Set Expiry Date

Press *Set Expiry Date Button* to set Expiry date for an User. Just you need to enter the user name and Date in yyyy-mm-dd form to set expiry date.

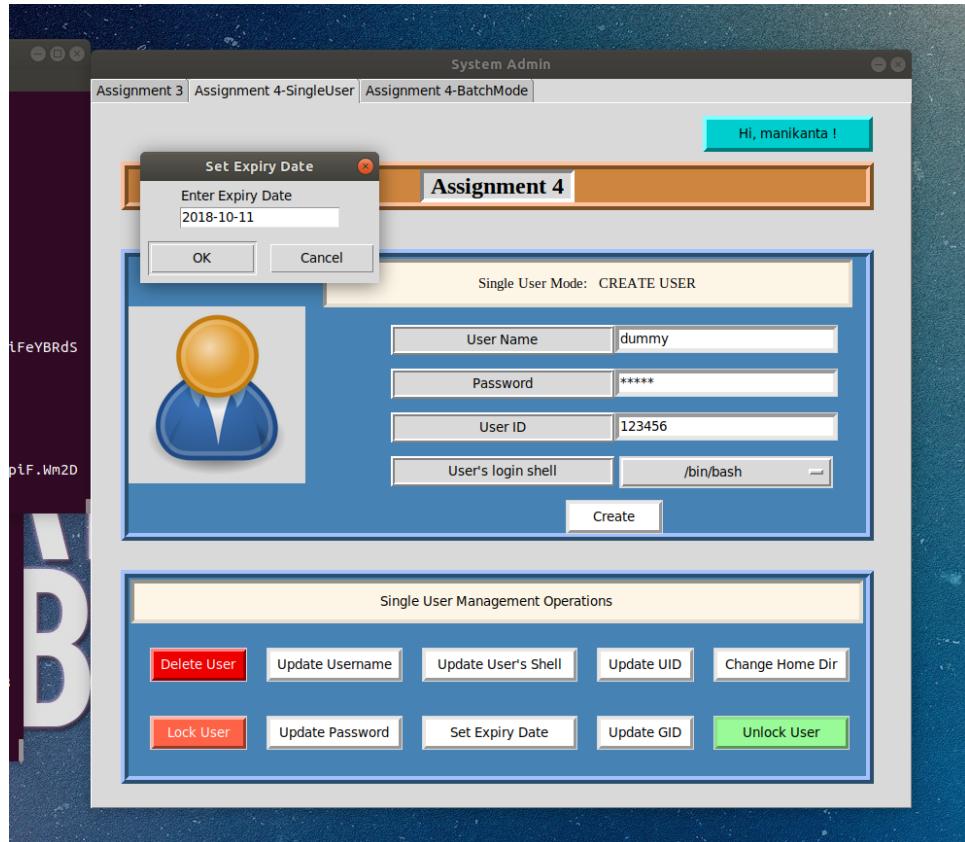


Figure 19: Set Expiry Date

2.2.10 Update GID

Press *Update GID Button* to update the Group ID of an user. Just you need to enter the user name and new GID to update.

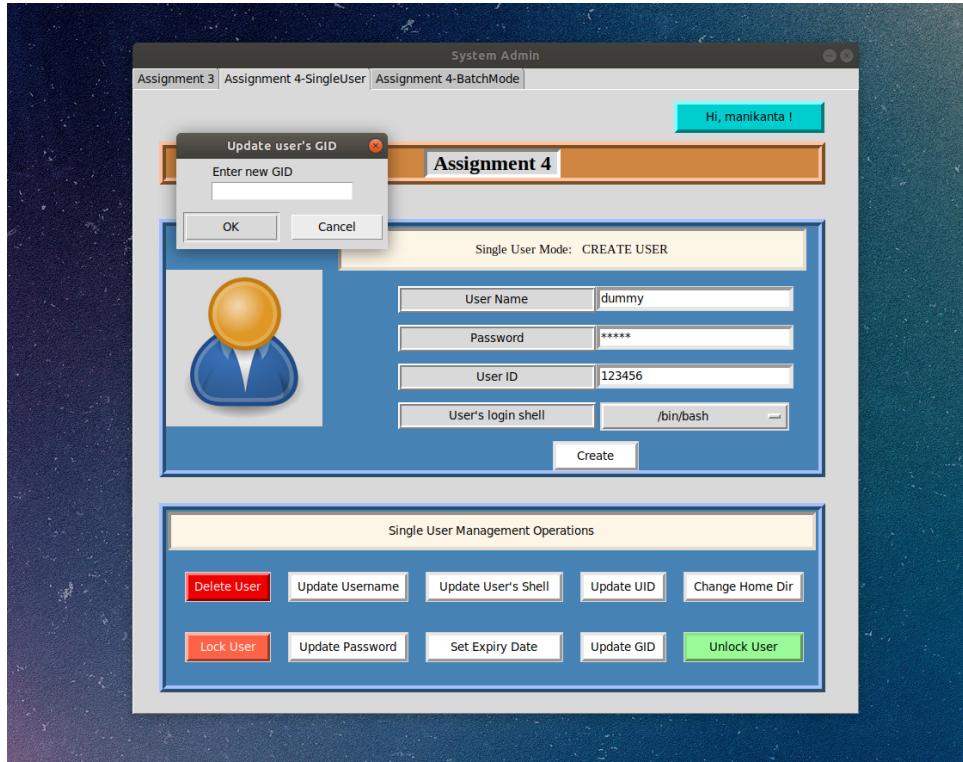


Figure 20: Update user's GID

2.3 Assignment 4: User Management- Batch Mode

This section is about User Management in Batch Mode. You'll find several operations like Create, delete etc., for Batch mode in this section. You need upload required CSV file for all below operations

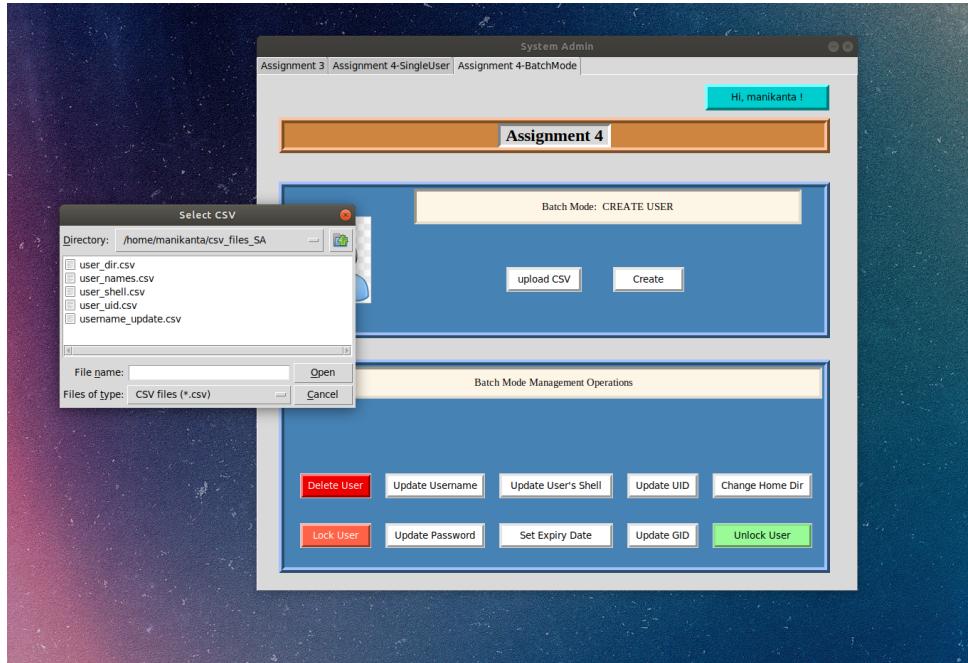


Figure 21: CSV file dialog

A	B	C	D	E	F	G	H	I
1	username	uid	password	login-shell				
2	Gaurav	201552003	Gaurav201552003	/bin/bash				
3	Shrihans	201552012	Shrihans201552012	/bin/bash				
4	Urvashi	201552023	Urvashi201552023	/bin/bash				
5	Riya	201552026	Riya201552026	/bin/bash				
6	Pavankumar	201552028	Pavankumar201552028	/bin/bash				
7	Shweta	201552042	Shweta201552042	/bin/sh				
8	Ayush	201552046	Ayush201552046	/bin/sh				
9	Rajat	201552047	Rajat201552047	/bin/sh				
10	Saurabh	201552051	Saurabh201552051	/bin/sh				
11	Kshitiz	201552052	Kshitiz201552052	/bin/sh				
12								
13								
14								
15								
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24								
25								

Figure 22: CSV file example

2.3.1 CREATE USER

You need to upload the CSV file which contains account details for creating users through *Button Upload CSV* and Press *Create Button* to Create those users.

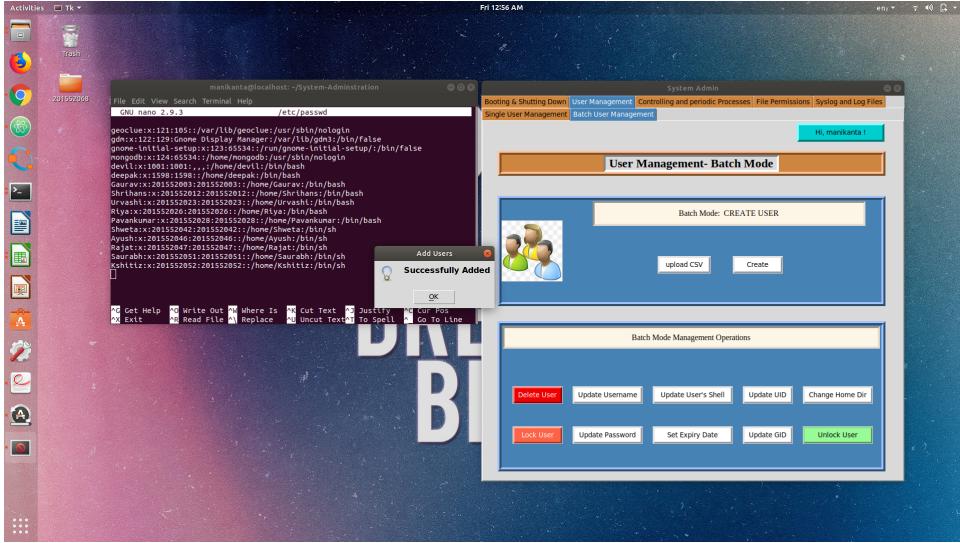


Figure 23: Add Users

2.3.2 Delete User

Press *Delete User Button* to delete a Users. Just you need to upload the CSV file for delete those accounts.

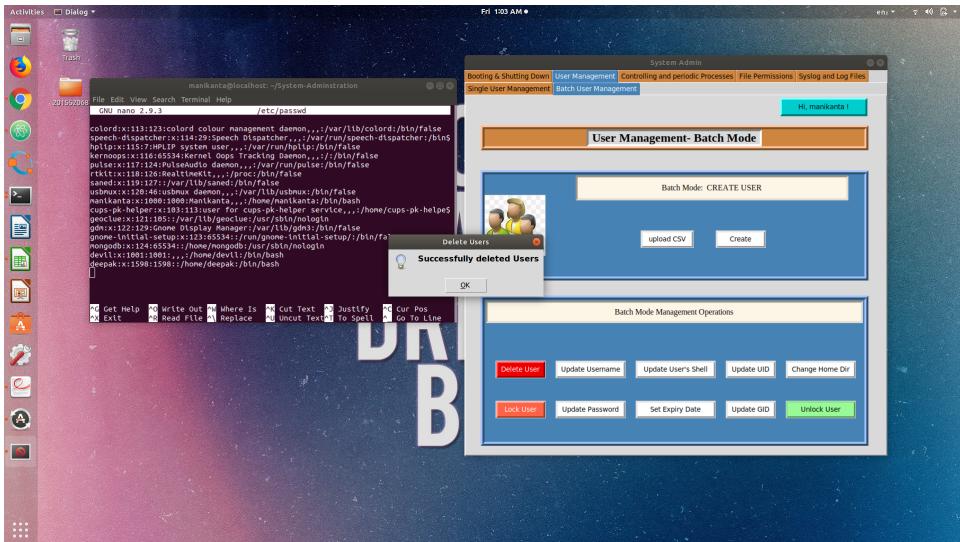


Figure 24: Delete Users

2.3.3 Update Username

Press *Update Username Button* to update Usernames of given users. Just you need to upload the CSV file which contains usernames and their new username to update.

2.3.4 Update User's shell

Press *Update User's shell Button* to update the shell of given Users. Just you need to upload the CSV file which contains usernames and their new shell name to update.

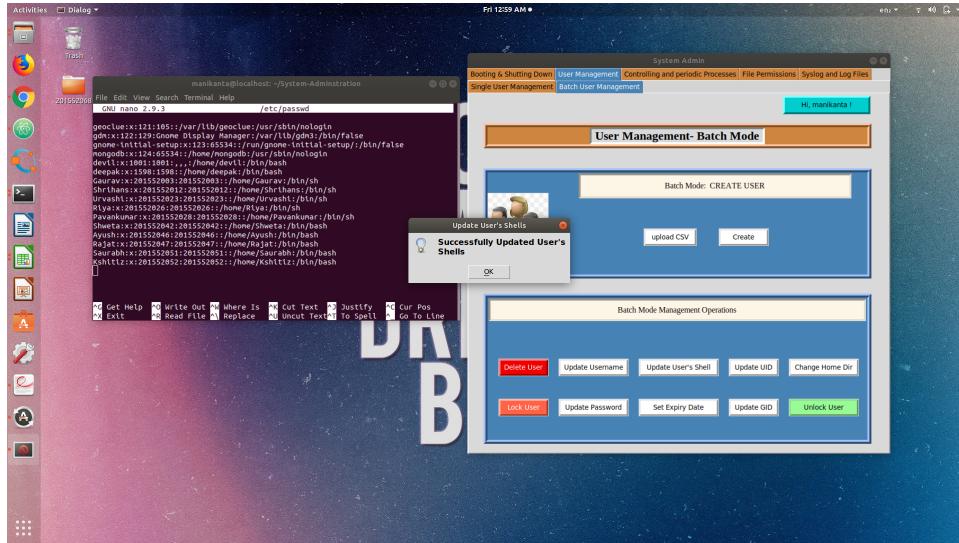


Figure 25: Update users shell

2.3.5 Update UID

Press *Update UID Button* to update the User IDs of given Users. Just you need to to upload the CSV file which contains usernames and their new UIDs to update.

2.3.6 Change Home Dir

Press *Change Home Dir Button* to update the Home Directory of given Users. Just you need to to upload the CSV file which contains usernames and their new Home Dir to update.

2.3.7 Lock User

Press *Lock User Button* to Lock given users. Just you need to upload the CSV file which contains usernames to lock their accounts.

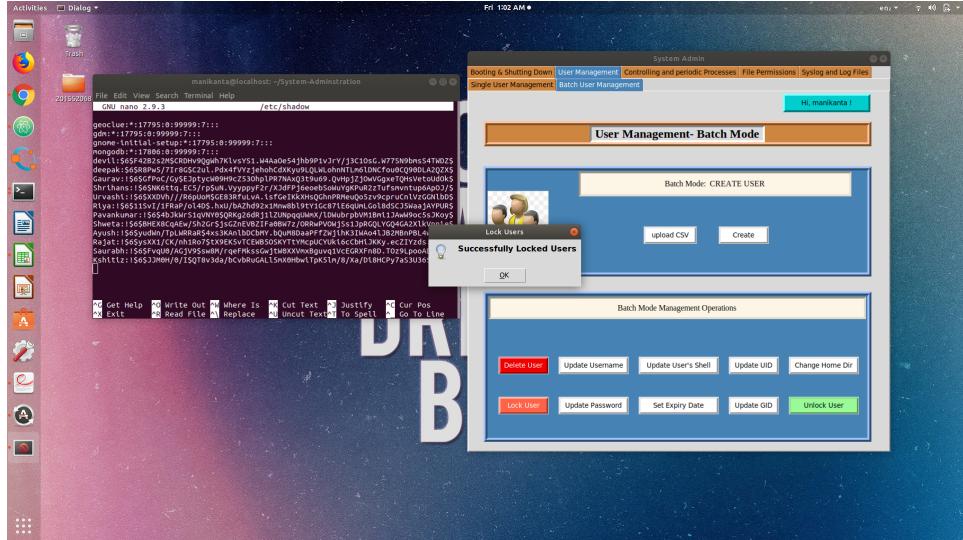


Figure 26: Lock Users

2.3.8 Unlock User

Press *Unlock User Button* to unlock given users. Just you need to upload the CSV file which contains usernames to unlock their accounts.

2.3.9 Update Password

Press *Update Password Button* to update the Password of given users. Just you need to upload the CSV file which contains usernames and their new Password to update.

2.3.10 Set Expiry Date

Press *Set Expiry Date Button* to set Expiry date for given users. Just you need to upload the CSV file which contains usernames and their Expiry dates to set.

2.3.11 Update GID

Press *Update GID Button* to update the Group IDs of given users. Just you need to upload the CSV file which contains usernames and their new GIDs to update.

2.4 Assignment 5: Controlling and periodic Processes

This section is about Controlling and periodic Processes. You'll find two tabs

1. Users Memory and CPU usage
2. Nice Values

2.4.1 Users Memory and CPU usage

you'll find piecharts of Memory usage and CPU usage here. If press *update button*, piechart will update from real-time data from your system.

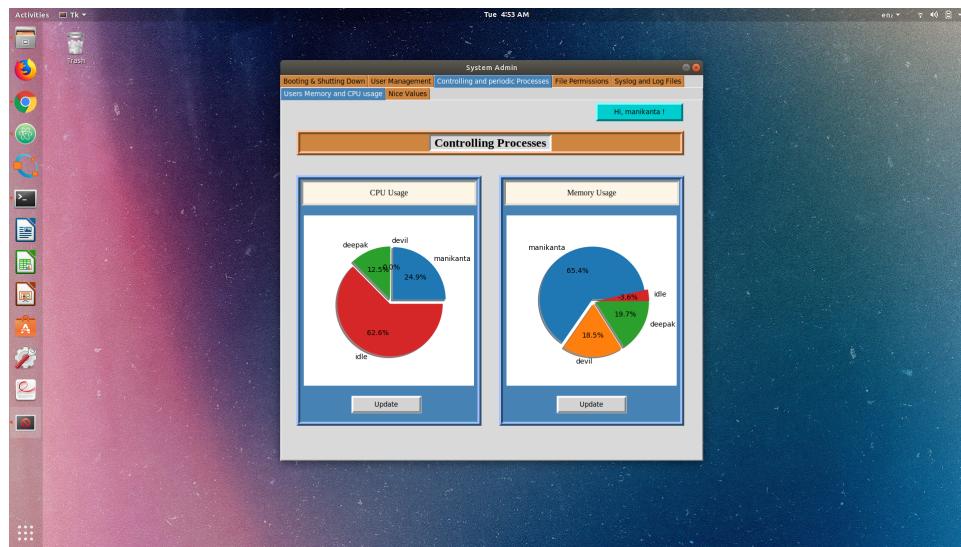


Figure 27: pie charts

2.4.2 Nice Values

you will be shown top five process ids and their scheduling priorities , niceness values sorted accordingly their memory usage

You can update each process nice value if you enter a value in *update nice ness textbox* of that process id. And reset button to check updated nice ness values

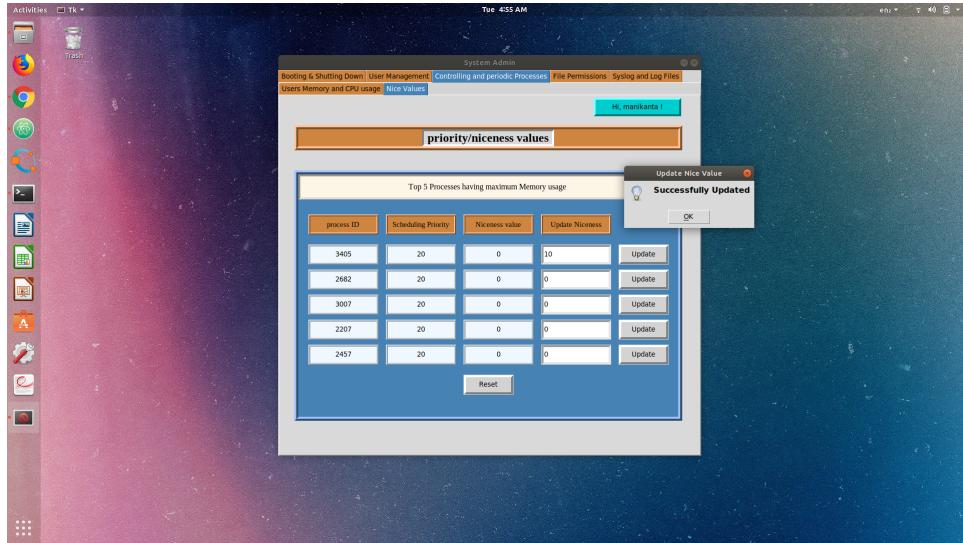


Figure 28: changing nicevalues

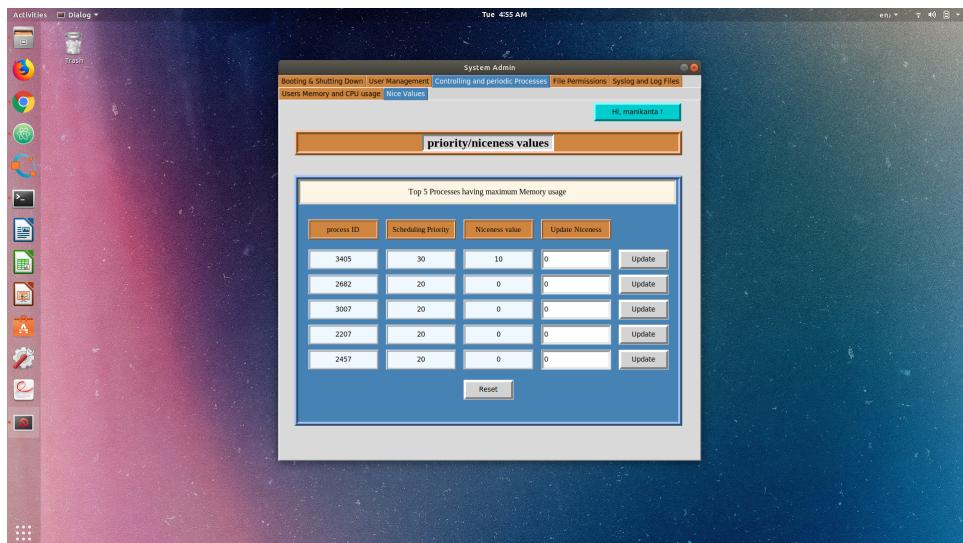


Figure 29: After changing nicevalue

2.5 Assignment 6: File Permissions

This section is about File Permissions. You'll find three tabs

1. Umask calculator

2. Access Control List
 3. Default Permissions

2.5.1 Umask calculator

This is Umask Calculator. If you enter Umask value. You'll get default permissions of file or directory

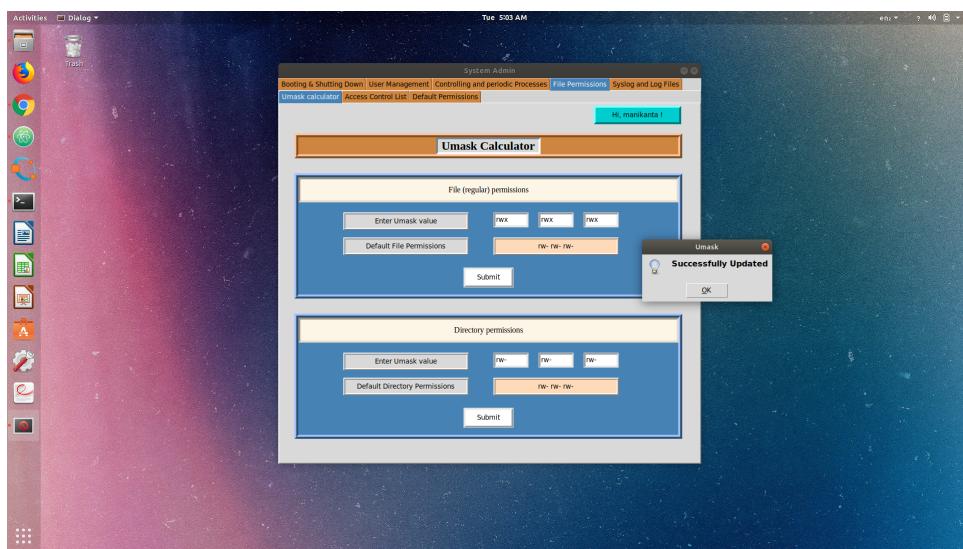


Figure 30: umask calculator

2.5.2 Access Control List

You can set or delete permissions for user or group over file or directory using this ACL.

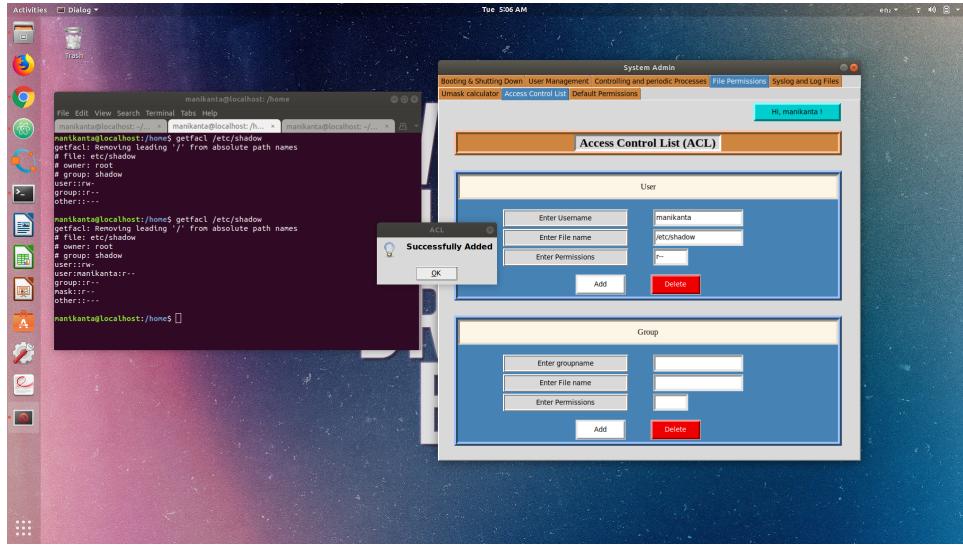


Figure 31: ACL

2.5.3 Default Permissions

Here, you can set permissions for file or directory.

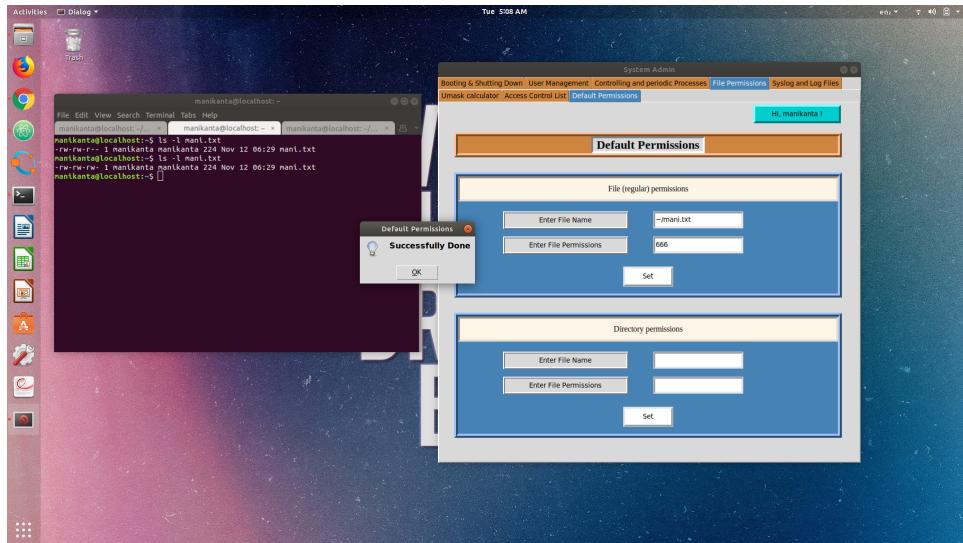


Figure 32: changing permissions of a file

2.6 Assignment 7: Syslog and Log Files

This section is about File Permissions. You'll find two tabs

1. Managing Log Files
2. Log Rotation

2.6.1 Managing Log Files

In this section, You can manage your log file. You are given with three fields *facility*, *level*, *logfile to manage*. fill up those and press *submit* to manage your log file.

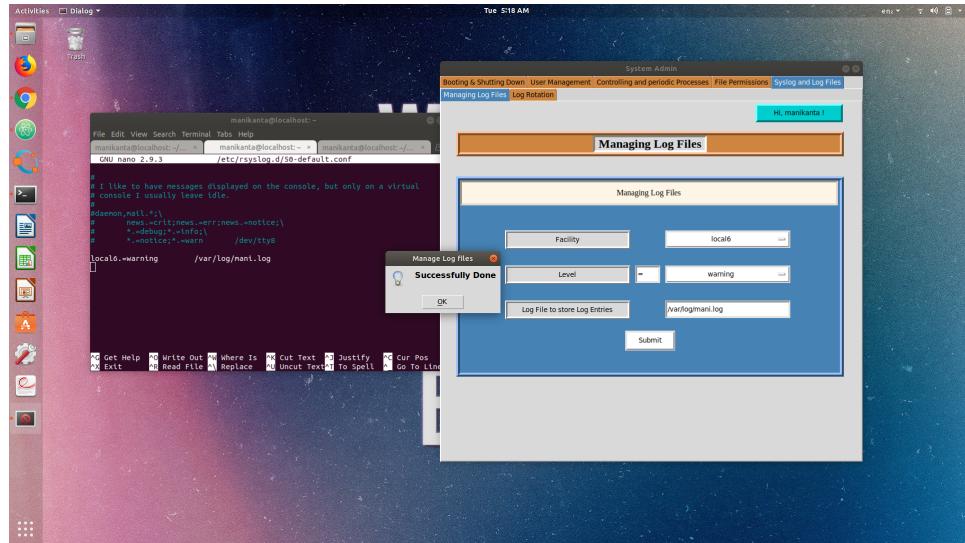


Figure 33: managing log file

2.6.2 Log Rotation

In this section, You can manage rotation of your log file. You are given with 6 fields as shown in GUI. fill up those and press *submit* to manage your log file.

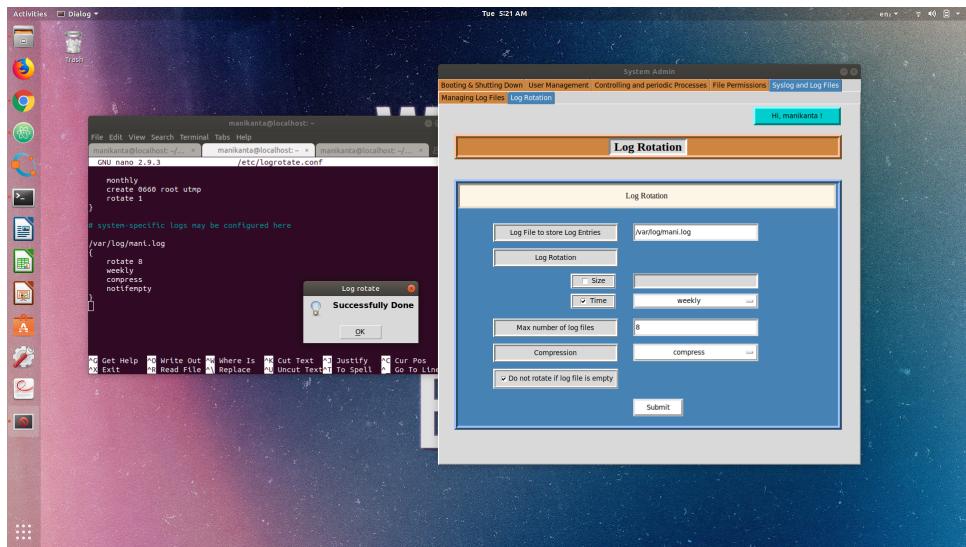


Figure 34: managing log rotation file