OS-Project Report

R.Amshu Naik (B20CS046)
Mamidipalli Divya Meghana (B20CS032)

Objective:

Ubuntu is known for a user friendly operating system, but then also a lot of users face difficulties in using it than in other operating systems. That's why we thought of adding a bit more features to boost productivity and to make the environment a bit interactive to make it more user friendly and easier to use. In this project we made use of a few GUI applications using python language.
.

Features Added:

As mentioned above the features we added , made with help of GUI and setting a interactive environment for making ubuntu user friendly are:

- Weather Forecast
- Memory Info- CPU and Memory
- Mail notifier

The details of the feature and methodology used are mentioned below:

Weather Forecast

This feature provides weather information for any location. It provides current Weather status, temperature status as well as wind velocity status too of a certain location of which you want. We created a code for 2 types of information we want about weather. First case is If the user wants weather info for today, and another button is for getting weather information about the next 5 days

To get the output we need 2 Identity keys "API_kEY" and "LOCATION_KEY" of the location of whose weather info we want.This feature is present in some OS . So we built this for Ubuntu so the user can use it.

We made use of following libraries:

- Tkinter: to create GUI . The new window was created using this.
- Tinydb: used to store data. Used to store the key_Id and Api_Id of different locations in a json file.
- Json, daytime and other few libraries

Methodology to implement the code:

- We implemented it using Python code.
- In the window we created, if want today's weather info -> press button "Current Info"
- If we want next 5 days Info -> press button "Next 5 days report"
- After getting info press the "Exit" button , to close the window.

Memory Info- Cpu and Memory

This feature provides us with the Statistics of Memory and CPU usage. Using this application, users need not even know the commands to see the system stats. This is a very simple user-friendly window using tkinter.
We made use of following libraries:

- Tkinter: to create GUI . The new window was created using this.

Methodology

- Implemented in Python along with shell code.
- Created a tkinter window and made Buttons which are directly connected to the shell codes which when pressed give us the required output.
- If we want Memory Stats, then press the Mem button to get its relevant information.

Mail Info

This feature provides Mail information which the user receive in his/her mail at any particular point of time.Due this user not need to continuously open and check mail in browser.It saves a lot of time and increase productivity and let him do his/her job at ease without any need to check mail at regular interval. In It we provide 2 info , one is the user's "Email-ID" and another is "PASSWORD" of the mail-Id.
The library and modules used are:

- Imaplib: Used to access email over IMAP protocols which is very needful for this feature.
- Webbrowser: Allow displaying web-based documents to users

Methodology

- Implemented with the help of Cronjob.
- Cron is a tool used to run software automatically on a specified schedule.
- Code for implementation of Cron and to be able to sync 2 scripts to get desired output is: */10 * * * * /scripts/weat.sh >> /home/ubu/Desktop/test/out.txt 2>&1

-

Contribution:

R.Amshu Naik: Contributed to the code part of Weather part, Mail Notifier.Report writing

Mamidipalli Divya Meghana : Contributed to the code part of System Stats, Mail Notifier. Report Writing.