

A Linux Based Content Management System

K Ankith Kumar

Computer Science
ESL, Saltlake City, Kolkata
E-mail: ankithkumar165@gmail.com

Abstract- A Content Management System (CMS) is computer program or a system administrator tool that allows publishing, editing and modifying the contents as well as maintenance from a central interface. Such systems of content management provide procedures to manage work flow in a collaborative environment. The core function and use of content management system is to store and organize files, and provide control to access their data.

The content management system (CMS) has two elements:

- Content management application (CMA) is the front-end user interface that allows a user to add, modify and remove the contents from a system.
- Content delivery application (CDA) compiles that information and updates the system.

Unix/Linux is less popular as compare with other OS like windows, Mac or others. It is always difficult to remember all commands for a non-technical user to manage the contents. So, this application enables to access the contents without accepting any commands from user.

Index Terms- Content Management System, File handling in Linux, Linux, and Shell Programming

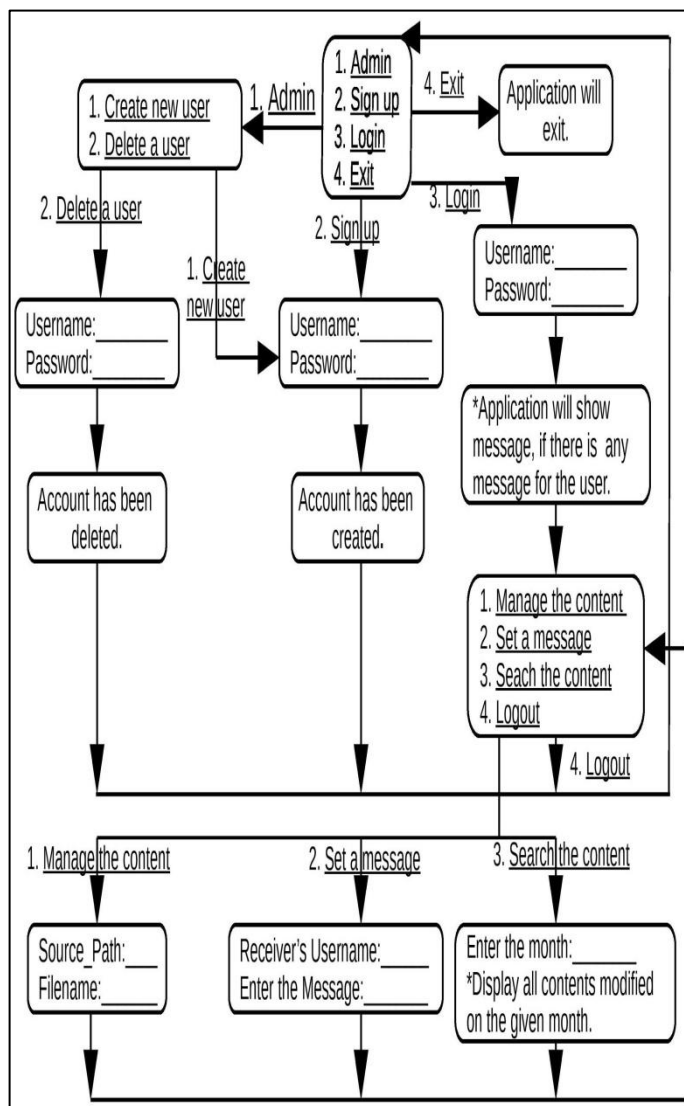
INTRODUCTION

It is always difficult to manage the contents in collaborative environment for individual needs. But this application serves individual details for each user to avoid collision of data. It contains a distinct directory for each user as well as distinct sub-directories for each type of the file in each user's directory. Sometimes there arises a problem, while working with a file and the file gets crashed. To overcome this problem, CMS provides a feature by creating a backup and user can work with the backup file without interrupting the original file. On the other hand, it also enables messaging; one user can send a message to another user as well as user can create a note for him. User can also search his contents by month. The application will search contents, present in current user's directory and shows the possible results which are modified on the given month.

CMS serves as a central interface containing documents, movies, pictures, phone numbers, and scientific data. CMS can be used for storing, controlling, modifying and publishing documents. This content management application is simple to use and easy to understand for your individual needs. No prior knowledge of programming is required to manage and control your content. With the ability to define multiple users and roles, you can control the privileges assigned to your users, allowing complete control to their individual contents. It provides full management for your comprehensive documents,

images and media libraries including messages to organize, store and display all of your contents with ease.

METHODOLOGY



Step Algorithm-

Step 1: Create a "CMS" directory -

- It contains all the information regarding the CMS application.
- It contains all users' data and details.

Step 2: Create a text file with name "login.txt" -

- It contains all users' names and respective user's password.

Step 3: Ask user to choose an option from the following -

- 1. Admin.
- 2. Sign up.
- 3. Login.

Step 4: In Admin mode -

- Admin can delete any existing user.
- Admin can create a new user.

Step 5: In Sign up mode -

- User can create user's account.
- As user will create his/her account, the details regarding the user will be updated in "CMS" directory followed by user name.

Step 6: In Login mode -

- User can login into the user's own account
- User can perform the following operations -
 - 1. Content Management.
 - 2. Messaging.
 - 3. Search for the Content.
 - 4. Logout.

Step 7: As the user logs into the system, an application will open automatically and a message will be shown to the user if any other user has sent message to the current user.

Step 8: In Content Management mode, user can edit any file.

- A duplicate copy of original file will be created in user's directory.
- User can edit and save the duplicate file.
- After editing the file, user can replace the original file with the duplicate file if necessary.

Step 9: In Messaging mode -

- User can send a message to any existing user followed by receiver's username and message.

Step 10: In Searching mode -

- User can search the contents by month.
- All the contents modified on the given month will be show to the user.

Step 11: Finally, if user wants, user can logout from the application.

Messaging-

The messaging feature of this application enables the user to send a message to any existing user in the application. It can also be used as notes by any user for him/her. Consider there are two users- user1 and user2. If user1 wants to send a message to user2 after getting logged into the application, user1 should mention receiver's user name say "user2". The application will check for the existence of user2. If user2 exists then the application will allow user1 to send message to user2 otherwise application will show a warning message. When user2 logs into the application, the message will automatically popup only once.

Content Management-

The content management feature of this application enables the user to store and organize files, and provide the control to access their data. User can access any file from the system and can modify it without updating the original file. When the user chooses to manage the content, the application will ask the user to give a source path of the file and also checks for the existence of the path. If the path exists, the application will ask for filename and again checks for the existence of the file. If the file exists in the given source path then the application will make a duplicate file of the original file and the duplicate file will open in edit mode. Now, the user can modify the file. As user will save the file, application will save the duplicate file without modifying the original file. Application will ask if the user wants to replace the original file with the duplicate file. If the user wants, he/she can replace the original file.

Search for the Content-

The Content search feature of this application enables the user to find the content for the given parameter. User can search his/her contents on the basis of month. Application will ask the user to enter the month, search all the contents present in user's directory and shows all the contents modified for the given month.

RESULT

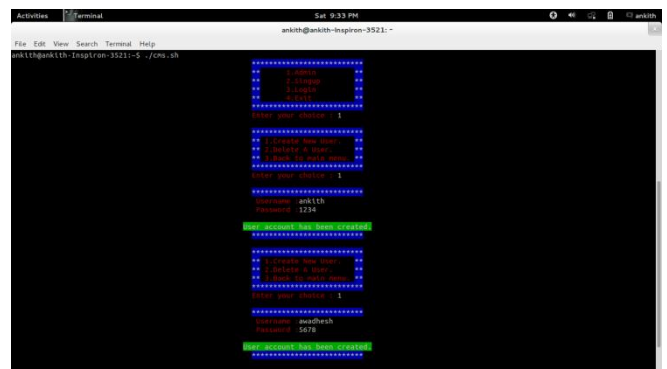


Figure-1

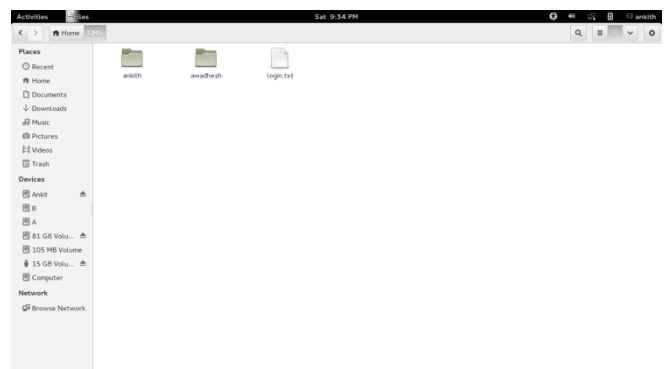


Figure-2

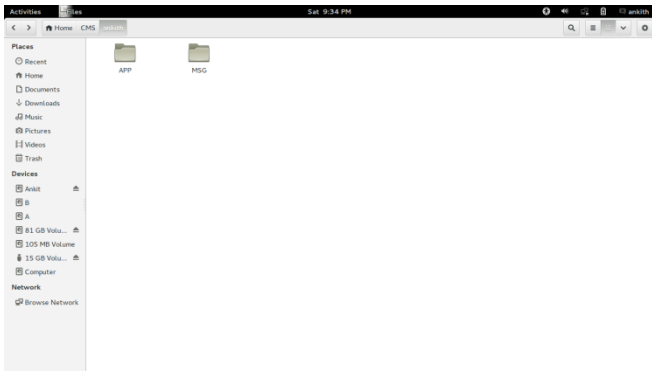


Figure-3

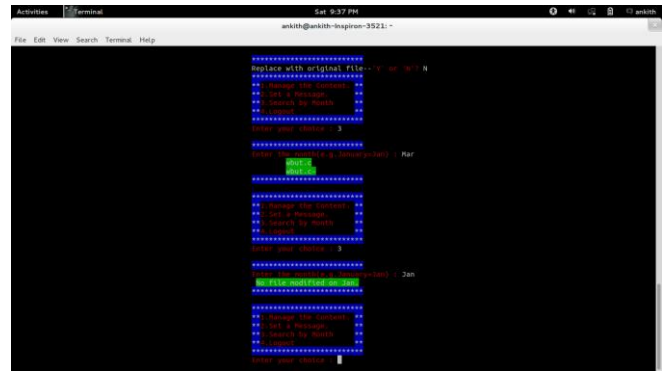


Figure-7



Figure-4



Figure-8

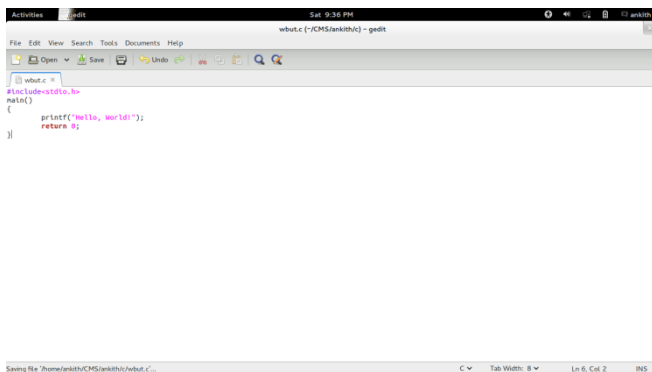


Figure-5

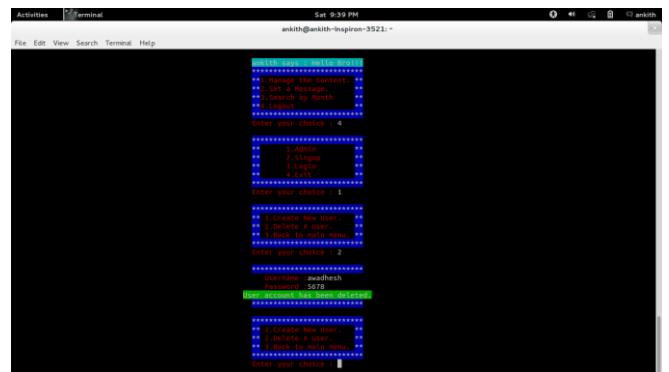


Figure-9

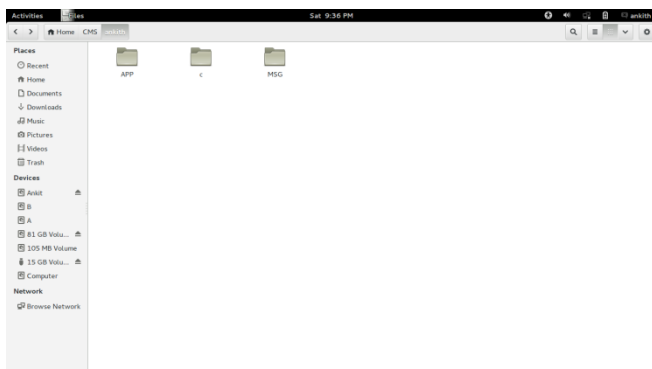


Figure-6

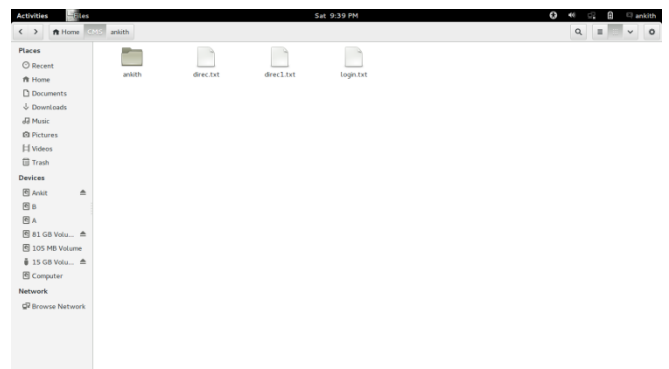


Figure-10

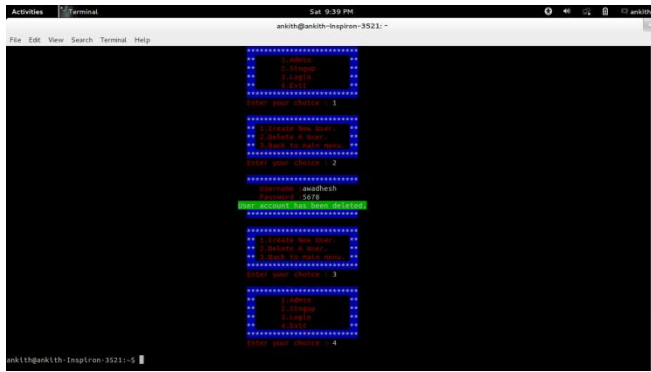


Figure-11

FUTURE WORK & CONCLUSION

The security features need to be imported in this system in order to prevent outside attacks. Encryption and decryption techniques can be used to store the file secretly and securely.

The Methodology section of this report describes the implementation concept in detail and the result section shows that the system works as per our expectation. We hope that the concept described in this report will aid the developers' community in near future.