SOFTWARE LAB

EEP 702

Assignment 5

Shell Scripting

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Contents

1 Problem Statement

Develop an shell script which can accomplish following tasks:

1. Write a shell script for which the inputs are name of the folder to be opened and the extension type of the files and these are to be passed through commandline. e.g. ./scriptname foldername extensiontype

2. Open the user given folder and search for the subfolders with names having only small letters and without spaces.

3. In these subfolders, write the names of files that have the user given extension into match.txt in the following format. ¡subfolder matching pattern¿ ¡Files in that subfolder matching extension ¿ ¡next sufolder matching pattern¿...and so on.

4. If the given extension is a c or sh, execute the files.

5. Add the functionality to above script to convert all the capital letters to small case and remove blank spaces in the names of all the subfolders of the given folder.

6. Add the functionality to above script to convert gif files into png in the subfolders which match pattern when the extension type is given gif.

2 Abstract

The problem seems to have been designed to provide hand on experience with the concepts of shell scripting. A shell script is a script written for the shell, or command line interpreter, of an operating system. Scripts are collections of commands that are stored in a file. The shell can read this file and act on the commands as if they were typed at the keyboard. In this experiment we will make a shell script to open a folder and find the extension type of the files through commandline. e.g. scriptname foldername extensiontype Write the names of files that have the user given extension into match.txt as per given format. If the given extension is a c or sh, execute the files.

3 Specification And Assumption

3.1 Specification

The specifications of the script are described below:

1. The script is made in bash

2. The complete path of the folder and file extension to be searched to be passed in command line.

3. The script is made for linux sysyem.

4. If the given extension is a c or sh, the files will be executed.

5. If given extension is gif file will be converted into png.

6. Search will be done only for the subfolders with names having only small letters and without spaces.

3.2 Assumptions

1. The C and sh files to be searches and executed are error free.

2. The script will not run recursively.

3. The scripts are written for bash shell.

4. image converion is done using convert command.

4 Flow Chart

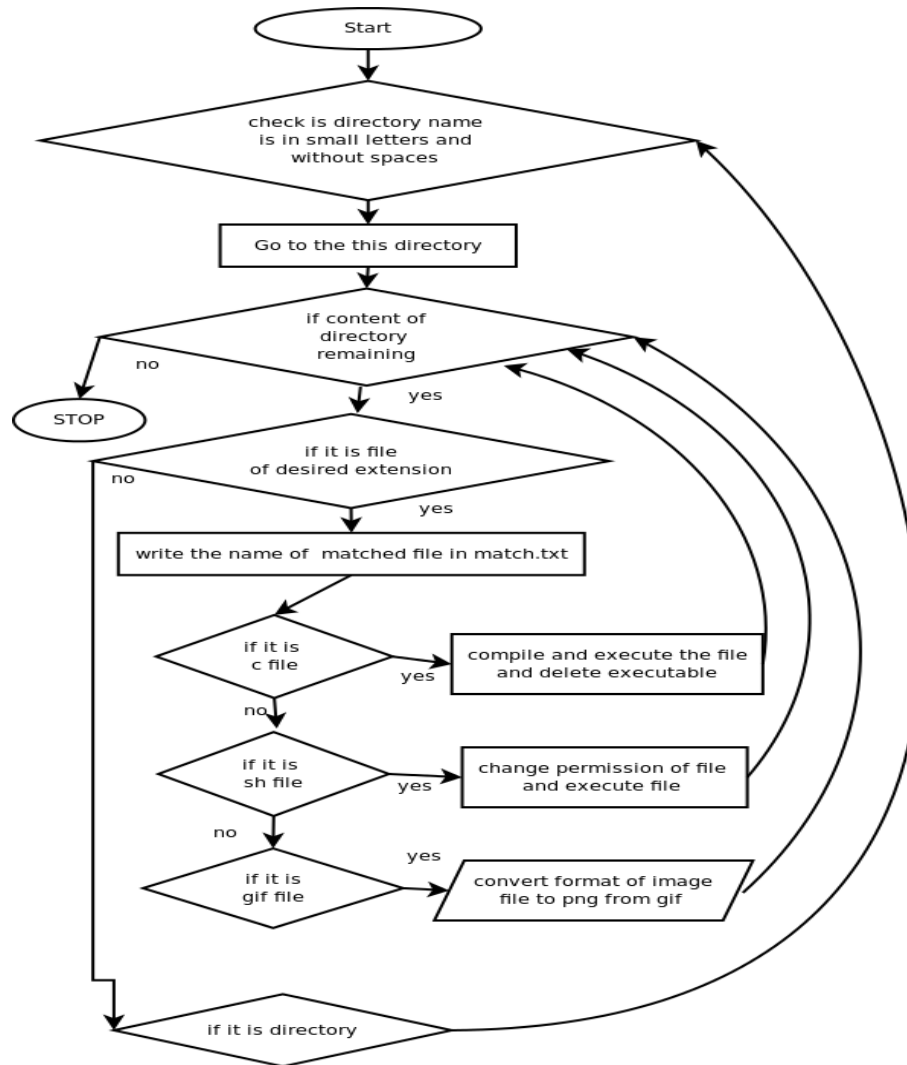The basic algorithm that is implemented is shown through the flow chart given below.

FIGURE 1: Flow Chart

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5   Logic Implementation

The logic for Shell script is discussed below:

1. Initially the user has to pass folder path and extension type of the file to be searched.

2. Open the user given folder and search for the subfolders with names having only small letters and without spaces. cd and grep commands has been used for this.

3. In these subfolders, the names of files that have the user given extension are written into match.txt .

4. If the given extension is a c or sh, execute the files using gcc.

5. Convert all the capital letters to small case and remove blank spaces in the names of all the subfolders of the given folder.

6. convert gif files into png in the subfolders which match pattern when the extension type is given gif.
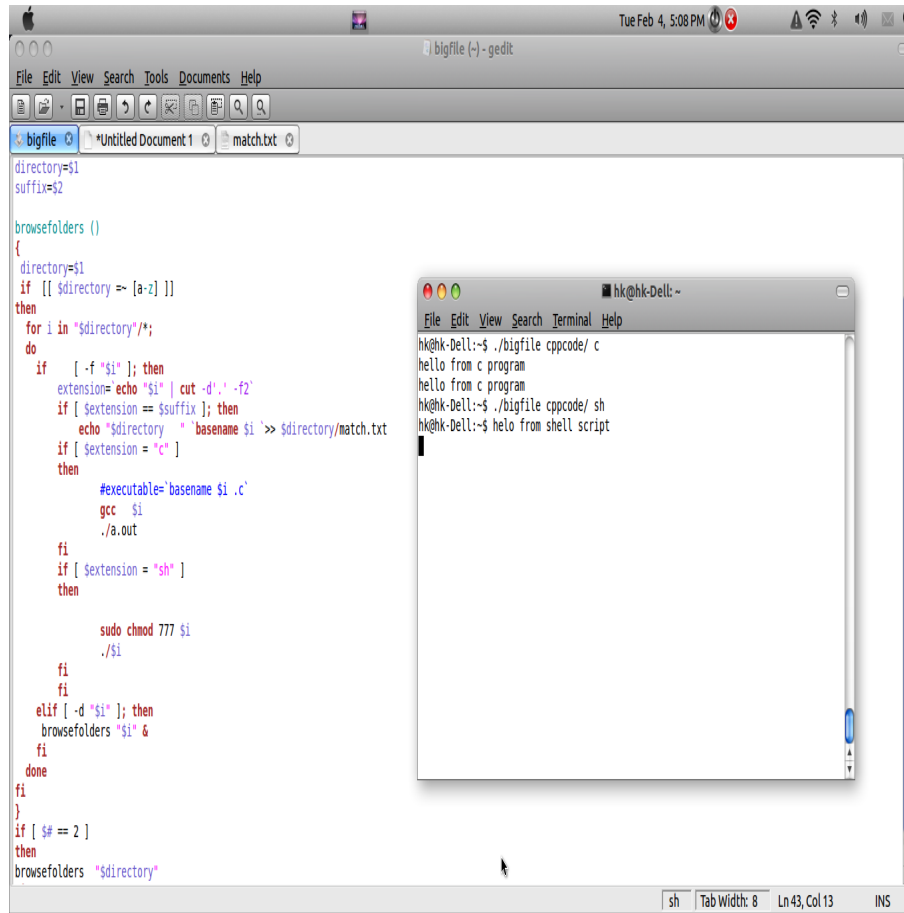
6 Execution Directives

The execution directives for executing the the scripts is given below:

1. cd path of the script

2. script name foldername extensiontype

3. output will be saved in matter.txt in every subfolder.

7 Output

The snapshot of the output window after scriptname foldernamem extension type

FIGURE 1: RESULT

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8 Result And Conclusion

The conclusions drawn from the above programs are given below:

1. The problem seems to have been designed to provide hand on experience with the concepts of shell scripting. A shell script is a script written for the shell, or command line interpreter, of an operating system. Scripts are collections of commands that are stored in a file. The shell can read this file and act on the commands as if they were typed at the keyboard.

2. converted images into png are of good quality as they are converted using convert command .

3. if directory name has sapce it will be removed or capital letters will be converted into small letters in second case.