CSE 310
Operating System Lab

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Knowledge is Power
DIU
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Department of CSE

Shell Script

- A shell is a program that provides an interface between a user and an operating system (OS) kernel.
- An OS starts a shell for each user when the user logs in or opens a terminal or console window.
- A shell script is a program composed of a series of operating system commands that are executed by the command-line interpreter or the shell in sequence.

Shell Script

- It is called a shell script because the individual commands are combined to form a "script" that the shell follows and executes, very much like how an actor/actress follows the script written for him/her.
- The shell script is usually contained in a simple text file.
- Shell is a UNIX term for the interactive user interface with an operating system.
- In some systems, the shell is called a command interpreter.

Shell Script

- A shell script is useful for repetitive tasks that would become time consuming if manually typed in then executed one at a time.
- For example, programmers and developers use shell scripts to automate their code compile process so that instead of typing in a series of long commands, they just execute the shell script.
- This is especially helpful for them because they often compile and test code, sometimes multiple times, in one single minute.

Shell Script

- Open Terminal
- Write **gedit** (for running a text editor) and give name followed by .sh extension i.e. **gedit filename.sh (sh for shell script)**
- Save the file in a directory / Desktop
- Go to this directory by **cd** command
- Write **chmod +x *.sh** (* means your script name)
- Finally write **./*.sh** on terminal

Shell Script

1. Write a shell script to print the multiplication table for the given number.

Algorithm:

1.Start.
2.Read n.
3.i=1.
4.f = n * i.
5.i = i + 1.
6.Display f.
7.Repeat 4,5,6 steps until i = 10.
8.End.

Shell Script

Source Code:

```
#! /bin/sh
# This is a comment
echo “enter the number”
read n
for i in 1 2 3 4 5 6 7 8 9 10
do
echo $n "*" $i "=" `expr $n \* $i`    # grave accent ( ` ) or backquote

done
```

Shell Script

Input:

enter the number

6

Output:

6 * 1 = 6
6 * 2 = 12
6 * 3 = 18
6 * 4 = 24
6 * 5 = 30
6 * 6 = 36
6 * 7 = 42
6 * 8 = 48
6 * 9 = 54
6 * 10 = 60

Shell Script

2. Write a shell script that copies multiple files into a directory.

Algorithm:

1.Start.
2.Read *.c files into i.
3.Copy $i to the root directory.
4.Repeat 2,3 steps until all values of $i..
5.End.

Shell Script

Source Code:

```
#! /bin/sh
for i in `ls *.c`
do
cp $i /root
done
echo “file are copied into root”
```

Shell Script

Output:

file are copied into root

Question?

Thanks