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CS THIRD YEAR
SECTION : "I"
ROLL NO.: 01
ENROLLMENT NO.: 12019009001127

OPERATING SYSTEMS LABORATORY

ASSIGNMENT 8

DATE : 13.09.2021

UNIVERSITY OF ENGINEERING & MANAGEMENT, KOLKATA
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

► Lab Assignments

Q1. Write a shell script that displays a list of all the files in the current directory to which you have read write and execute permissions.

```
# shell script to display the list of files
# which have the read, write and execute permissions
# in the current directory
# Abhishek Sharma, 2021, @abhisheks008

echo "The name of all the files in the current directory :"
for file in *
do
        if [ -f $file ]
        then
                if [ -r $file -a -w $file -a -x $file ]
                then
                        ls -l $file
                fi
        fi
done
```

Output :

```
abhisheks008@LAPTOP-9RGGUF05:~$ vim a8l1.sh
abhisheks008@LAPTOP-9RGGUF05:~$ chmod +x a8l1.sh
abhisheks008@LAPTOP-9RGGUF05:~$ ./a8l1.sh
The name of all the files in the current directory :
-rwxr-xr-x 1 abhisheks008 abhisheks008 358 Sep 10 13:20 a8l1.sh
```

Q2. Write a shell script to displays the files created or updated within fourteen days from the current date.

```
# script for finding the files created
# or updated within 14 days from the current date.
# Abhishek Sharma, 2021 @abhisheks008

echo "List of files created or updated within 14 days!"
find /home/abhisheks008 -iname "*.sh" -mtime -2 -print
```

Output :

```
abhisheks008@LAPTOP-9RGGUF05:~$ ./a8l2.sh
List of files created or updated within 14 days!
/home/abhisheks008/a8l1.sh
/home/abhisheks008/a8l2.sh
/home/abhisheks008/a8l3.sh
```

Q3. Develop a shell script which displays all files with the attributes those have been created or modified in the month of August.

```
# Shell script to find out the files created
# or modified in the month of september
# Abhishek Sharma, 2021

echo "Printing the file names created or modified in September '21"
ls -lia | grep Sep
```

Output :

```
abhisheks008@LAPTOP-9RGGUF05:~$ ./a8l3.sh
Printing the file names created or modified in September '21
 1407374883890809 drwxr-xr-x 1 abhisheks008 abhisheks008  4096 Sep 10 13:56 .
 1125899907222999 -rw-r--r-- 1 abhisheks008 abhisheks008     0 Sep 10 13:16 .motd_shown
 5066549581122150 -rw------- 1 abhisheks008 abhisheks008  8946 Sep 10 13:56 .viminfo
29554872554757036 -rwxr-xr-x 1 abhisheks008 abhisheks008   358 Sep 10 13:20 a8l1.sh
19140298416412681 -rwxr-xr-x 1 abhisheks008 abhisheks008   289 Sep 10 13:48 a8l2.sh
 2533274790776131 -rwxr-xr-x 1 abhisheks008 abhisheks008   204 Sep 10 13:56 a8l3.sh
```

Q4. Write a shell script to print last twenty commands issued by the user. The user name is supplied as a command line argument to the script (use bash history file).

```
# Shell script for printing last 25 commands
# by the user.
# Abhishek Sharma 2021 @abhisheks008

echo "Printing the last 25 commands : "
history 25
```

Output :

```
abhisheks008@LAPTOP-9RGGUF05:~$ vim a8l4.sh
abhisheks008@LAPTOP-9RGGUF05:~$ chmod +x a8l4.sh
abhisheks008@LAPTOP-9RGGUF05:~$ ./a8l4.sh
Printing the last 25 commands :
  892  ls -ltr* | grep Sep
  893  ls -l | grep Sep
  894  vim a8l3.sh
  895  ./a8l3.sh
  896  vim a8l3.sh
  897  find -iname -mtime -2 -print
  898  find -iname "*.sh" -mtime -2 print
  899  find /home/abhisheks008 -iname "*.sh" -mtime -2 -print
  900  find /home/abhisheks008 -iname "*.sh" -mtime -14 -print
  901  vim a8l2.sh
  902  ./a8l2.sh
  903  vim a8l2.sh
  904  history
  905  history 5
  906  sudo vim /home/abhisheks008/.bash_history
  907  sudo vim /home/abhisheks008/.bash_history 5
  908  ls -lia
  909  sudo vim /home/abhisheks008/.bash_history | tail 5
  910  sudo vim /home/abhisheks008/.bash_history | tail
  911  ls -lia
  912  history 5
  913  last username
  914  vim a8l4.sh
  915  chmod +x a8l4.sh
  916  ./a8l4.sh
```

► Home Assignments

Q1. Write a shell program, which displays the message "welcome" and prints the date when you login to your system.

```
# Shell script for printing a message for the user
# and welcome the user through a 'welcome' greeting
# Abhishek Sharma 2021 @abhisheks008

echo "Welcome ${USER}"
var=`date`
echo "$var"
```

Output :

```
abhisheks008@LAPTOP-9RGGUF05:~$ vim a8h1.sh
abhisheks008@LAPTOP-9RGGUF05:~$ chmod +x a8h1.sh
abhisheks008@LAPTOP-9RGGUF05:~$ ./a8h1.sh
Welcome abhisheks008
Fri Sep 10 19:12:15 IST 2021
```

Q2. Accept a string from the terminal and echo a suitable message if it doesn't have at least ten characters.

```
# Shell script to check whether a string has 10
# characters or not
# Abhishek Sharma 2021 abhisheks008

echo "Enter a string : "
read str
len=`expr length "$str"`
echo "The length of the string is $len"
if [ $len -lt 10 ]
then
        echo "You have entered less than 10 characters!"
else
        echo "You have entered 10 and more than 10 characters."
fi
```

Output :

```
abhisheks008@LAPTOP-9RGGUF05:~$ vim a8h2.sh
abhisheks008@LAPTOP-9RGGUF05:~$ chmod +x a8h2.sh
abhisheks008@LAPTOP-9RGGUF05:~$ ./a8h2.sh
Enter a string :
Abhishek
The length of the string is 8
You have entered less than 10 characters!
abhisheks008@LAPTOP-9RGGUF05:~$ ./a8h2.sh
Enter a string :
Abhishek Sharma
The length of the string is 15
You have entered 10 and more than 10 characters.
```

Q3. Write a shell script which receives either the LOGNAME or the UID supplied at the command prompt and finds out at how many terminals this user has logged in.

```
# Shell script to find how many terminals have
# been logged in by the input user
# Abhishek Sharma 2021 @abhisheks008

uid=$1
if [ $# -eq 0 ]
then
        echo "Enter the logname or UID : "
        read uid
fi
ch=`who | grep $uid -c`
if [ $ch -eq 1 ]
then
        echo "Logname user logged in!"
else
        echo "Currently the user is not logged in"
fi
echo "Total number of users is : `who | wc -l`"
```

Output :

```
abhisheks008@LAPTOP-9RGGUF05:~$ ./a8h3.sh
Enter the logname or UID :
Abhishek
Currently the user is not logged in
Total number of users is : 0
```

Q4. Write a shell script, which gets executed the moment a user logs in. It should display the message "GOOD MORNING" or "GOOD AFTERNOON" or "GOOD EVENING" depending upon the time at which the user logs in.

```
# Shell script to display different greetings
# based on the time the user logged in
# Abhishek Sharma 2021 @abhisheks008

check=`date +%H`
echo "Now it's around $check hours."
if [ $check -ge 06 -a $check -le 12 ]
then
        echo "Good Morning Sir!"
elif [ $check -ge 12 -a $check -le 17 ]
then
        echo "Good Afternoon Sir!"
else
        echo "Good Evening Sir!!"
fi
```

Output :

```
abhisheks008@LAPTOP-9RGGUF05:~$ vim a8h4.sh
abhisheks008@LAPTOP-9RGGUF05:~$ ./a8h4.sh
Now it's around 19 hours.
Good Evening Sir!!
```

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