OS LAB 3

22k-4647

QUESTION1: Write a shell script that takes two numbers as command-line arguments, adds them, and prints the result.

```
  GNU nano 4.8
var1=$1
var2=$2
echo $var1 " + " $var2 " = " $(($var1+$var2))
```

```
hamza@DESKTOP-UQ15IT8:~/lab3$ nano script.sh
hamza@DESKTOP-UQ15IT8:~/lab3$ ./script.sh 12 19
12  +  19  =  31
hamza@DESKTOP-UQ15IT8:~/lab3$
```

QUESTION2: Write a script that accepts a sentence and counts the number of words in it.

```
  GNU nano 4.8
#!/bin/bash
read -p "Enter String :" var1
len=$(expr length "$var1")
echo "Total words : " $len
```

```
hamza@DESKTOP-UQ15IT8: ~/lab3
hamza@DESKTOP-UQ15IT8:~/lab3$ nano script.sh
hamza@DESKTOP-UQ15IT8:~/lab3$ ./script.sh
Enter String :Hamza A.K
Total words :  9
hamza@DESKTOP-UQ15IT8:~/lab3$
```

QUESTION3: Write a shell script that takes a filename as input, checks if it exists, and appends the current date and time to it.

```
#!/bin/bash
Base_path=${PWD}
File_name=$1
found=0
path=""
for i in `find $Base_path -type f -name $File_name`
do
found=1
path=$i
done
if [ $found == 1 ];
then
        echo $File_name " Exist at " $path $(date +"%Y-%m-%d")
else
        echo "File Does't Exists"
fi
```

```
hamza@DESKTOP-UQ15IT8:~/lab3$ nano script.sh
hamza@DESKTOP-UQ15IT8:~/lab3$ ls
my.txt  my1.txt  script.sh
hamza@DESKTOP-UQ15IT8:~/lab3$ ./script.sh my.txt
my.txt  Exist at  /home/hamza/lab3/my.txt 2024-02-10
hamza@DESKTOP-UQ15IT8:~/lab3$ ./script.sh m1.txt
File Does't Exists
hamza@DESKTOP-UQ15IT8:~/lab3$ ./script.sh my1.txt
my1.txt  Exist at  /home/hamza/lab3/my1.txt 2024-02-10
hamza@DESKTOP-UQ15IT8:~/lab3$
```

QUESTION4: Write a Shell Bash Script for evaluate the status of a file/directory.

```
  GNU nano 4.8
#!/bin/bash
#getFile status
Base_file=$1
echo "FILE STATUS "
stat -f $Base_file
```

```
hamza@DESKTOP-UQ15IT8:~/lab3$ ./script.sh my1.txt
FILE STATUS
  File: "my1.txt"
    ID: 100000000 Namelen: 255     Type: wslfs
Block size: 4096       Fundamental block size: 4096
Blocks: Total: 31109299   Free: 2030803    Available: 2030803
Inodes: Total: 999        Free: 1000000
hamza@DESKTOP-UQ15IT8:~/lab3$
```

QUESTION5: Directory Cleanup Script Develop a bash script to automate directory cleanup tasks by removing old files and directories. The script should:

a. Accept a directory path as an argument.

b. Identify and delete files older than a specified number of days.

c. Recursively remove empty directories within the specified directory.

d. Provide feedback to the user about the cleanup process, including the number of files and directories removed

```bash
#!/bin/bash
#getting file as argument:
Base_directory=$1
del_files=0
del_folders=0


#Check if the Directory is Present Or Not
if [ ! -d $Base_directory ]
then
        echo "Directory does't exist"
        exit 1

fi

#Removing Empty directories:
for i in `find $Base_directory -maxdepth 1 -type d -empty`
do
        rmdir $i
        echo "Empth Folder " $i "has been deleted at " $(date +"%Y-%m-%d %H-%M-%S")
        ((del_folders++))
done

#removing files older than 10 days
for i in `find $Base_directory -type f -mtime +10`
do
        rm $i
        echo $i "File has been deleted Because it was older then 1min " $(date +"%Y-%m-%d %H-%M-%S")
        ((del_files++))
done

echo "Files Deleted "$del_files
echo "Folder Deleted "$del_folders
```

```
hamza@DESKTOP-UQ15IT8:~/lab3$ nano script.sh
hamza@DESKTOP-UQ15IT8:~/lab3$ ls
1.txt  2.txt  3.txt  folder1  folder2  folder3  my.txt  my1.txt  script.sh
hamza@DESKTOP-UQ15IT8:~/lab3$ echo "there are 3 empty folders and 0 files older than 10 days"
there are 3 empty folders and 0 files older than 10 days
hamza@DESKTOP-UQ15IT8:~/lab3$ ./script.sh /home/hamza/lab3
Empth Folder  /home/hamza/lab3/folder1 has been deleted at  2024-02-10 17-46-43
Empth Folder  /home/hamza/lab3/folder2 has been deleted at  2024-02-10 17-46-43
Empth Folder  /home/hamza/lab3/folder3 has been deleted at  2024-02-10 17-46-43
Files Deleted 0
Folder Deleted 3
hamza@DESKTOP-UQ15IT8:~/lab3$
```