**Program No : 18**

AIM **:** Write a script to accept a filename while running the script and check it has the write permission, if yes prompt the user to enter a text and append the text to the given filename.

#!/bin/bash

filename=$1

if [ ! -e “$filename” ]; then

echo “File does not exist”;

exit 1

fi

if [ ! -w “$filename” ]; then

echo “File does not have write permission”;

exit 1

fi

echo “Enter text to append to $filename”;

read text

echo “$text”>>”$filename”;

echo “Text appended to $filename”;

**Output**

user@user:~$ bash perm.sh f1

Enter text to append to f1:

arpitha

Text appended to f1

user@user:~$ cat f1

Anju

Aleena

Manu

Akhil

Joseph

**Program : 19**

Aim **:** Write a shell script which displays a list of all files in the current

directory to which you have read, write &amp; execute permissions.

#!/bin/bash

echo “List of files with read, write, and execute permissions:”;

for file in \*

do

if [ -r “$file” ] && [ -w “$file” ] && [ -x “$file” ]

then

echo “$file”;

fi

done

**Output**

user@user:~$ bash rwe.sh

List of files with read, write, and execute permissions:

------------------------------------------------------

3A

Desktop

dir1

dir2

Documents

Downloads

file6

MBA

Music

NetBeansProjects

Pictures

Public

sif

snap

Templates

Videos

**Program : 20**

Aim **:** Write a shell script which receives two file names as arguments.It should check

whether the two file’s contents are the same or not .If they are the same, delete the

second file.

#!/bin/bash

if [ $# -ne 2 ]; then

echo “Usage: $0 <file1><file2>”

exit 1

fi

file1=”$1”

file2=”$2”;

if cmp –s “$file1” “$file2”;; then

echo “$file1 and $file2 have the same contents”;

rm “$file2”

else

echo “$file1 and $file2 have different contents”;

fi

**Output**

user@user-H510M-S2:~$ ls

20\_linux.sh Downloads ‘lab installation’ Pictures Templates

Desktop file1 Music Public Videos

Documents file2 my\_app snap

user@user-H510M-S2:~$ bash 20\_linux.sh file1 file2

file1 and file2 have the same contents

user@user-H510M-S2:~$ ls

20\_linux.sh Downloads Music Public Videos

Desktop file1 my\_app snap

Documents ‘lab installation’ Pictures Templates

**Program : 21**

Aim **:** Write a shell script, which will receive any number of filenames as arguments.The shell script should check whether such files already exist.

#!/bin/bash

for file in “$@”;; do

if [ -e “$file” ]; then

echo “$file exists”

else

echo “$file does not exist”

fi

done

**Output**

user@user-H510M-S2:~$ bash 20\_linux.sh file1 file

file1 exists

file does not exist

**Program : 22**

Aim **:** Write a shell script to perform operations for student data like view, add and delete records.

#!/bin/bash

DATABASE=”students.txt”;

function view\_records {

if [ ! –f “$DATABASE” ]; then

echo “No records found”;

return 1

fi

echo “ID | NAME | GRADE”;

cat “$DATABASE”;

}

function add\_record {

echo “Enter student ID:”

read id

echo “Enter student name:”;

read name

echo “Enter student grade:”;

read grade

echo “$id | $name | $grade” >> “$DATABASE”;

echo “Record added successfully”;

}

function delete\_record {

if [ ! -f “$DATABASE” ]; then

echo “No records found”

return 1

fi

echo “Enter student ID to delete:”;

read id

if grep -q “^$id” “$DATABASE”;; then sed -i

“/^$id /d” “$DATABASE”

echo “Record deleted successfully”

else

echo “Record not found”

fi

}

while true; do

echo “1. View records”

echo “2. Add record”

echo “3. Delete record”

echo “4. Exit”

read choice

case $choice in

1) view\_records;;

2) add\_record;;

3) delete\_record;;

4) exit;;

\*) echo “Invalid choice”;;

esac

echo

done

**Output**

user@user:~$ bash student.sh 1.

View records

2. Add record

3. Delete record

4. Exit

1

ID | NAME | GRADE

------------------

102 | akash | B

103 | namitha | A

101 | amal | A

1. View records

2. Add record

3. Delete record

4. Exit

2

Enter student ID:

104

Enter student name:

binoy

Enter student grade:

B

Record added successfully 1.

View records

2. Add record

3. Delete record

4. Exit

1

ID | NAME | GRADE ---

---------------

102 | akash | B

103 | namitha | A

101 | amal | A

104 | binoy | B

1. View records

2. Add record

3. Delete record

4. Exit

3

Enter student ID to delete:

104

Record deleted successfully 1.

View records

2. Add record

3. Delete record

4. Exit

1

ID | NAME | GRADE ---

---------------

102 | akash | B

103 | namitha | A

101 | amal | A

1. View records

2. Add record 3.

Delete record 4.

Exit

4

**Program : 23**

Aim **:** Write a shell script to sort the given numbers in descending order using Bubble

sort .

#!/bin/bash

echo “Enter the numbers to sort (space-separated):”

read -a numbers

length=${#numbers[@]}

for (( i=0; i<length-1; i++ ))

do

for (( j=0; j<$length-i-1; j++ ))

do

if (( ${numbers[j]}< ${numbers[j+1]} ))

then

temp=${numbers[j]}

numbers[j]=${numbers[j+1]}

numbers[j+1]=$temp

fi

done

done

echo “Sorted Array (Descending Order):”

echo “${numbers[@]}”

**Output**

user@user:~$ bash sort.sh

Enter the numbers to sort (space-separated):

10 20 15 30 50 40

Sorted Array (Descending Order):

50 40 30 20 15 10

**Program : 24**

Aim **:** Write a shell program to find the factorial of a number using function.

#!/bin/bash

function fact

{

f=1

echo “enter the number”

read a

for((i=1;i<=$a;i++))

{

f=$((f\*i))

}

echo “factorial is: $f”

}

Fact

**Output**

user@user:~$ bash facto.sh

enter the number:

5

factorial is:120

**Program : 25**

Aim **:** Write a shell program to determine whether the given string is palindrome or not using function.

#!/bin/bash

function is\_palindrome

{

reverse=$(echo $1 | rev)

if [[ $1 == $reverse ]]

then

echo “Palindrome”

else

echo “Not Palindrome”

fi

}

echo “Enter a string to check if it is a palindrome:”

read str

result=$(is\_palindrome “$str”)

echo “The given string is $result”

**Output**

user@user:~$ bash pal1.sh

Enter a string to check if it is a palindrome:

malayalam

The given string is Palindrome

**Program : 26**

Aim **:** Write a script to rename all c files to cpp files.

#!/bin/bash

ls \*.c>new.temp

while read line

do

echo $line

new=${line}pp

echo $new

mv $line $new>/dev/null

echo “All .c files have been renamed to .cpp files”

done

<new.temp

**Output**

user@user:~$ ls -a | grep \*.c

new.c

user@user:~$ bash ctocpp.sh

new.c

new.cpp

All .c files have been renamed to .cpp files

**PROGRAM : 27**

Aim : The word “mca” is present in some of the files supplied as arguments. Write a script to search each of these files, and to stop at the first file containing the word “mca” and report it.

#!/bin/bash

while [ $# -ne 0 ]

do

grep -l “mca” $1

shift

done

**OUTPUT :**

user@user:~$ bash mca.sh file1 file2 file3

file2

**PROGRAM : 28**

Aim **:** Write a script to receive any number of filenames as arguments and to check whether the arguments supplied is a file or directory. If it is directory, it should be appropriately reported. if it is a filename then name of the file as well as the number of lines present in it should be reported.

#!/bin/bash

for arg in “$@”

do

if [ -d “$arg” ]; then

echo “$arg is a directory”

elif [ -f “$arg” ]; then

num\_lines=$(wc -l <”$arg&”)

echo “$arg has $num\_lines line(s)”

else

echo “$arg is neither a file nor a directory”

fi

done

**Output**

user@user:~$ ls

3c cost.sh dir2 even.sh file2 file.txt.save mark.sh

new\_directory perm.sh reverse.sh snap sumdig.sh text

argu.sh cp direc.sh excp.py file3 first MBA

new\_folder1 Pictures rev.sh sort.sh sum.sh textfile

char.sh ctocpp.sh dir.sh f1 file4 fruit.py mca.sh

new.temp pow.sh rwe.sh student.sh temp this

combin.sh data.db Documents f2 file5 fruit.txt mul.sh

odd.sh prgm1.sh second students.txt Templates touch

command.sh data.py Downloads facto.sh file6 hello.cpp Music pal1.sh

prgm2.sh series.sh stud.py term.sh Videos Copied Desktop echo file

file.py is NetBeansProjects pali.sh prime.sh sif stud.sh test1.py year.sh

‘Copied successfully’ dir1 edited file1 file.sh jannah new.cpp pal.sh

Public sif.txt successfully test.py

user@user:~$ bash argu.sh MBA

MBA is a directory

**Program : 29**

Aim **:** Write a script to read from a file which is supplied as a command line argument and count the number of lines and words. If there is no filename supplied, the script should accept text from the keyboard.

#!/bin/bash

if [ $# -eq 1 ]; then

filename=$1

if [ -f “$filename” ]; then

num\_lines=$(wc -l < “$filename”)

num\_words=$(wc -w < “$filename”)

echo “File ‘$filename’ has $num\_lines line(s) and $num\_words word(s).” else

echo “Error: ‘$filename’ is not a valid file.”

exit 1

fi

else

echo “Enter some text (EOF to end):”

text=$(cat)

num\_lines=$(echo “$text” | wc -l)

num\_words=$(echo “$text” | wc -w)

echo “Input has $num\_lines line(s) and $num\_words word(s).”

fi

**Output**

user@user:~$ bash arg.sh file2

File ‘file2’ has 2 line(s) and 3 word(s).

**Program : 30**

Aim **:** Write a shell script which receives an even number of file names. Suppose four file names are supplied then the first file should get copied into the second file, the third file should get copied into the fourth file, and so on. If odd numbers of file names are supplied then no copying should take place and an error message should be displayed.

#!/bin/bash

if [ $# -eq 0 ] || [ $(($# % 2)) -ne 0 ]; then

echo “Error: an even number of file names is required.”

exit 1

fi

for (( i=1; i<=$#; i+=2 ))

do

cp “${i}” “${i+1}”

echo “Copied ‘${i}’ to ‘{i+1}’”

done

**Output**

user@user:~$ bash evn.sh file1 file2 file3

Error: an even number of file names is required.

user@user:~$ bash evn.sh file1 file2 file3 file4

Copied ‘file1’ to ‘1’

Copied ‘file3’ to ‘1’

**Program : 31**

Aim **:** Write a script to wish the user “Good Morning, Good Afternoon and Good Evening” when he logs in to the system based on the time.

#!/bin/bash

hour=$(date + “%H”)

if [ $hour -ge 5 ] && [ $hour -lt 12 ]; then

echo “Good morning!”

elif [ $hour -ge 12 ] && [ $hour -lt 18 ]; then

echo “Good afternoon!”

else

echo “Good evening!”

fi

**Output**

user@user:~$ bash time.sh

Good evening!