**1.**

#!/bin/bash

<<com

1. Write a shell script to print the following pattern for any number of lines:

\*

\* \* \*

\* \* \* \* \*

\* \* \* \* \* \* \*

\* \* \* \* \* \* \* \* \*

com

read -p "Enter the number of lines: " n

for (( i=n; i<2\*n; i++ ))

do

for(( j=1; j<2\*n; j++ ))

do

if [ $j -le $i -a $(expr $i + $j) -ge $(expr 2 \\* $n) ]

then

echo -n "\*"

else

echo -n " "

fi

done

echo

done

<<com

OUTPUT -

Enter the number of lines: 5

\*

\*\*\*

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\*\*\*\*\*\*\*

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com

**2.**

#!/bin/bash

# 2. Write a shell script to test whether a given string is palindrome or not.

read -p "Enter a string: " str

str=`echo $str | tr -d '[:punct:]' | tr '[:upper:]' '[:lower:]'`

reverse=`echo $str | rev`

if [ "$str" == "$reverse" ]; then

echo "$str is a palindrome"

else

echo "$str is not a palindrome"

fi

<<com

OUTPUT -

Enter a string: 123321

123321 is a palindrome

Enter a string: 123132

123132 is not a palindrome

com

**3.**

#!/bin/bash

# 3. Write a shell script which counts the number of consonants and vowels in a given sentence.

count\_vowels() {

echo "$1" | grep -io '[aeiou]' | wc -l

}

count\_consonants() {

echo "$1" | grep -io '[bcdfghjklmnpqrstvwxyz]' | wc -l

}

echo "Enter a sentence: "

read sentence

num\_vowels=$(count\_vowels "$sentence")

num\_consonants=$(count\_consonants "$sentence")

echo "Number of vowels: $num\_vowels"

echo "Number of consonants: $num\_consonants"

<<com

OUTPUT -

Enter a sentence:

The quick brown fox jumps over the lazy dog.

Number of vowels: 11

Number of consonants: 24

com

**4.**

#!/bin/bash

# 4. Write a shell script to display the list of users as well as the number of users connected to the system.

users=$(who | awk '{print $1}')

num\_users=$(echo "$users" | wc -w)

echo "List of currently logged in users: $users"

echo "Total number of users connected: $num\_users"

<<com

OUTPUT -

List of currently logged in users: adhiraj

Total number of users connected: 1

com

**5.**

#!/bin/bash

# 5. Write a shell script to list the name of files under the current directory that starts with a vowel.

files=$(ls -1 | grep -E '^[aeiouAEIOU]' | tr '\n' ' ')

if [[ -z "$files" ]]; then

echo "No files found that start with a vowel."

else

echo "Files that start with a vowel:"

echo "$files"

fi

<<com

OUTPUT -

No files found that start with a vowel.

Files that start with a vowel:

a.c

com

**6.**

#!/bin/bash

<<com

6. Devise a menu-driven shell program that accepts values from 1 to 4 and performs action depending

upon the number keyed in:

1) List of users currently logged in

2) Present date

3) Present working directory

4) Quit

com

while true; do

# Display menu

echo "Enter a number from 1 to 4:"

echo "1. List of users currently logged in"

echo "2. Present date"

echo "3. Present working directory"

echo "4. Quit"

# Read user input

read choice

# Perform action based on user input

case "$choice" in

1) who ;;

2) date ;;

3) pwd ;;

4) break ;;

\*) echo "Invalid input. Please enter a number from 1 to 4." ;;

esac

echo # Print an empty line for readability

done

<<com

OUTPUT -

Enter a number from 1 to 4:

1. List of users currently logged in

2. Present date

3. Present working directory

4. Quit

1

Enter a number from 1 to 4:

1. List of users currently logged in

2. Present date

3. Present working directory

4. Quit

2

Fri May 12 15:41:26 UTC 2023

Enter a number from 1 to 4:

1. List of users currently logged in

2. Present date

3. Present working directory

4. Quit

3

/workspaces/cloud/Assignments/Network\_Assgn/day6

Enter a number from 1 to 4:

1. List of users currently logged in

2. Present date

3. Present working directory

4. Quit

4

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