**1. List only the directories in your current directory:**

ls -d \*/

**2. Display the name and count of the directories in the current directory:**

find . -type d -maxdepth 1 -exec echo {} \; | wc -l

**3. Menu-based shell script for arithmetic operations:**

#!/bin/bash

while true; do

echo "Menu"

echo "--------------"

echo "1: Addition"

echo "2: Subtraction"

echo "3: Multiplication"

echo "4: Division"

echo "5: Exit"

read -p "Enter your choice (1/2/3/4/5): " choice

case $choice in

1)

read -p "Enter first number: " num1

read -p "Enter second number: " num2

result=$((num1 + num2))

echo "Result: $result"

;;

2)

read -p "Enter first number: " num1

read -p "Enter second number: " num2

result=$((num1 - num2))

echo "Result: $result"

;;

3)

read -p "Enter first number: " num1

read -p "Enter second number: " num2

result=$((num1 \* num2))

echo "Result: $result"

;;

4)

read -p "Enter first number: " num1

read -p "Enter second number: " num2

if [ $num2 -eq 0 ]; then

echo "Error: Division by zero"

else

result=$(awk "BEGIN {printf \"%.2f\", $num1 / $num2}")

echo "Result: $result"

fi

;;

5)

echo "Exiting..."

exit 0

;;

\*)

echo "Invalid choice. Please enter a valid option."

;;

esac

done

**4. Shell script to copy file contents without a specific string and display character, line, and word counts:**

#!/bin/bash

read -p "Enter the input file name: " input\_file

read -p "Enter the output file name: " output\_file

read -p "Enter the string to exclude: " exclude\_string

# Copy file contents without the specified string

grep -Ev "$exclude\_string" "$input\_file" > "$output\_file"

# Calculate character, line, and word counts

char\_count=$(wc -m < "$output\_file")

line\_count=$(wc -l < "$output\_file")

word\_count=$(wc -w < "$output\_file")

echo "Character count: $char\_count"

echo "Line count: $line\_count"

echo "Word count: $word\_count"

5. Shell script to generate the specified pattern:

#!/bin/bash

for i in {1..3}; do

echo " \*"

done

for i in {1..5}; do

echo "\* \* \*"

done

for i in {1..3}; do

echo " \*"

done

**6. Shell script to find the largest of three numbers:**

#!/bin/bash

read -p "Enter the first number: " num1

read -p "Enter the second number: " num2

read -p "Enter the third number: " num3

if [ "$num1" -ge "$num2" ] && [ "$num1" -ge "$num3" ]; then

largest="$num1"

elif [ "$num2" -ge "$num1" ] && [ "$num2" -ge "$num3" ]; then

largest="$num2"

else

largest="$num3"

fi

echo "The largest number is: $largest"