**1.**

#!/bin/bash

# 1. Write a shell program that takes a number from user and prints the reverse of the number.

echo "Enter a number: "

read num

reverse=0

while [ $num -ne 0 ]

do

remainder=$(( num%10 ))

reverse=$(( reverse\*10+remainder ))

num=$(( num/10 ))

done

echo "Reverse of the num is: $reverse"

<<com

OUTPUT -

$ sh q1.sh

Enter a number:

123456789

Reverse of the num is: 987654321

com

**2.**

#!/bin/bash

# 2. Write a shell script to determine whether two numbers input through keyboard are prime to each other.

echo "Enter the 1st number: "

read num1

echo "Enter the 2nd number: "

read num2

gcd () {

a=$1

b=$2

while [ $b -ne 0 ]

do

remainder=$(( a%b ))

a=$b

b=$remainder

done

echo $and

}

result=$(gcd $num1 $num2)

if [ $((result)) -eq 1 ]

then

echo "$num1 and $num2 are prime to each other."

else

echo "$num1 and $num2 are prime to each other."

fi

<<com

OUTPUT -

$ sh q2.sh

Enter the 1st number:

7

Enter the 2nd number:

12

7 and 12 are prime to each other.

com

**3.**

#!/bin/bash

# 3. Write a shell script to find whether a number is divisible by 11.

echo "Enter a number to check if it is divisible by 11: "

read num

sum\_alt=0

sum\_other=0

remainder=0

while [ $num -gt 0 ]

do

remainder=$(( num % 10 ))

if [ $(( ${#num} % 2 )) -eq $(( ${#remainder} % 2 )) ]

then

sum\_alt=$(( sum\_alt + remainder ))

else

sum\_other=$(( sum\_other + remainder ))

fi

num=$(( num / 10 ))

done

diff=$(( sum\_other - sum\_alt ))

if [ $(( diff % 11 )) -eq 0 ]

then

echo "The number is divisible by 11"

else

echo "The number is not divisible by 11"

fi

<<com

OUTPUT -

$ bash q3.sh

Enter a number to check if it is divisible by 11:

891

The number is divisible by 11

$ bash q3.sh

Enter a number to check if it is divisible by 11:

235

The number is not divisible by 11

com

**4.**

#!/bin/bash

<<com1

4. Write a shell script that produces a shell calculator to perform the following operations:

1. Addition

2. Subtraction

3. Multiplication

4. Division

com1

while true

do

echo "1. Addition"

echo "2. Subtraction"

echo "3. Multiplication"

echo "4. Division"

echo "5. Exit"

echo "Enter your choice: "

read choice

case $choice in

1)

read -p "Enter first number: " num1

read -p "Enter second number: " num2

sum=$((num1 + num2))

echo "Sum is: $sum"

;;

2)

read -p "Enter first number: " num1

read -p "Enter second number: " num2

diff=$((num1 - num2))

echo "Difference is: $diff"

;;

3)

read -p "Enter first number: " num1

read -p "Enter second number: " num2

prod=$((num1 \* num2))

echo "Product is: $prod"

;;

4)

read -p "Enter dividend: " num1

read -p "Enter divisor: " num2

if [ $num2 -eq 0 ]

then

echo "Cannot divide by zero"

else

quotient=$((num1 / num2))

remainder=$((num1 % num2))

echo "Quotient is: $quotient"

echo "Remainder is: $remainder"

fi

;;

5)

exit 0

;;

\*)

echo "Invalid choice"

;;

esac

done

<<com2

OUTPUT -

$ sh q4.sh

1. Addition

2. Subtraction

3. Multiplication

4. Division

5. Exit

Enter your choice:

1

Enter first number: 4

Enter second number: 2

Sum is: 6

1. Addition

2. Subtraction

3. Multiplication

4. Division

5. Exit

Enter your choice:

2

Enter first number: 5

Enter second number: 7

Difference is: -2

1. Addition

2. Subtraction

3. Multiplication

4. Division

5. Exit

Enter your choice:

3

Enter first number: 3

Enter second number: 3

Product is: 9

1. Addition

2. Subtraction

3. Multiplication

4. Division

5. Exit

Enter your choice:

4

Enter dividend: 6

Enter divisor: 2

Quotient is: 3

Remainder is: 0

1. Addition

2. Subtraction

3. Multiplication

4. Division

5. Exit

Enter your choice:

5

com2

**5.**

#!/bin/bash

# 5. Write a shell script that shows the names of all the non-directory files in the current directory and calculates the sum of the size of them.

total\_size=0

for file in \*

do

if [ -f "$file" ] && [ ! -d "$file" ]

then

echo "File: $file, Size: $(du -h "$file" | cut -f 1)"

size=$(stat -c %s "$file")

total\_size=$((total\_size + size))

fi

done

echo "Total size of non-directory files: $(numfmt --to=iec-i --suffix=B $total\_size)"

<<com

OUTPUT -

$ sh q5.sh

File: q1.sh, Size: 4.0K

File: q2.sh, Size: 4.0K

File: q3.sh, Size: 4.0K

File: q4.sh, Size: 4.0K

File: q5.sh, Size: 4.0K

Total size of non-directory files: 4.1KiB

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