

SHELL PROGRAMMING

Problem 1: Shell program to find sum of two numbers.

PROGRAM:

```
echo "Enter the First number"
read a
echo " Enter the Second number"
read b
echo "Sum $((a+b))"
```

OUTPUT:

```
Kenaz@KenazMathukutty:~$ gedit sum.h
Kenaz@KenazMathukutty:~$ bash sum.h
Enter the first number
2
Enter the second number
2
sum 4
```

Problem 2: Program to find largest of three numbers

PROGRAM:

```
echo "Enter the number"
read a
echo "Enter the number"
read b
if(($a > $b))
then
echo "num1 is greater"
else
echo "num2 is greater"
fi
```

OUTPUT:

```
Kenaz@KenazMathukutty:~$ gedit largest.h
Kenaz@KenazMathukutty:~$ bash largest.h
Enter the number
3
Enter the number
7
num2 is greater
```

Problem 3: Shell program to find first n natural numbers.

PROGRAM:

```
echo "Enter the number"
read a
echo "Natural numbers upto $a are:"
for (( i=1;i<=$a;i++))
do
echo "$i"
done
```

OUTPUT:

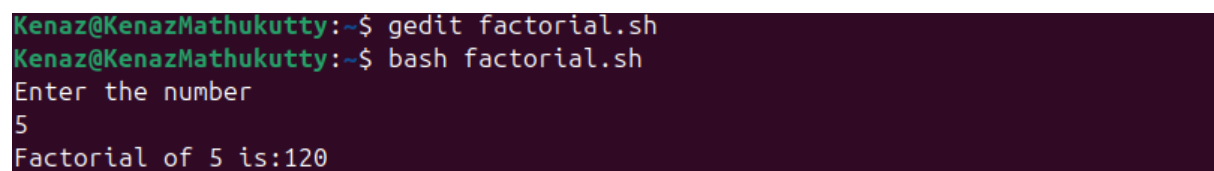
```
Kenaz@KenazMathukutty:~$ gedit naturalnum.sh
Kenaz@KenazMathukutty:~$ bash naturalnum.sh
Enter the number
5
Natural number upto 5 are:
1
2
3
4
5
```

Problem 4: Shell program to find factorial of input number

PROGRAM:

```
echo "Enter the number"
read a
f=1
for (( i=1;i<=$a;i++))
do
f=$((f*i))
done
echo "Factorial of $a is:$f"
```

OUTPUT:

A terminal window with a dark purple background. The prompt is 'Kenaz@KenazMathukutty:~\$'. The user enters 'gedit factorial.sh'. The prompt changes to 'Kenaz@KenazMathukutty:~\$' and the user enters 'bash factorial.sh'. The program outputs 'Enter the number'. The user enters '5'. The program outputs 'Factorial of 5 is:120'.

```
Kenaz@KenazMathukutty:~$ gedit factorial.sh
Kenaz@KenazMathukutty:~$ bash factorial.sh
Enter the number
5
Factorial of 5 is:120
```

Problem 5: Shell program to print first n Fibonacci series

PROGRAM:

```
echo "Enter the number"
read a
num1=0
num2=1
echo "Fibanocci series are:"
echo $num1 $num2
for (( i=1;i<=$a-2;i++))
do
num3=$(( $num1+$num2))
num1=$num2
num2=$num3
echo-n " $num3"
done
```

OUTPUT:

```
Kenaz@KenazMathukutty:~$ gedit fibanocci.sh
Kenaz@KenazMathukutty:~$ bash fibanocci.sh
Enter the number
6
Fibanocci series are:
0 1
1
2
3
5
```

Problem 6: Program to perform simple calculator

PROGRAM:

```
echo "Enter First number"
read a
echo "Enter second number"
read b
echo "Operations are:"
echo "1.Addition 2.Subtraction 3.Multiplication 4.Division"
echo "Enter the operation"
read op
case $op in
1)rs=$(( $a + $b ))
echo "Sum is:"$rs ;;
2)rs=$(( $a - $b ))
echo "Difference is:"$rs ;;
3)rs=$(( $a * $b ))
echo "Product is:"$rs ;;
4)rs=$(( $a / $b ))
echo "Quotient is:"$rs ;;
*)echo "wrong choice" ;;
esac
```

OUTPUT:

```
Kenaz@KenazMathukutty:~$ gedit calculator.sh
Kenaz@KenazMathukutty:~$ bash calculator.sh
Enter the first number
1
Enter the second number
2
Operations are:
1. Addition 2. Subtraction 3. Multiplication 4. Division
Enter the operation
1
Sum is: 3
Kenaz@KenazMathukutty:~$ bash calculator.sh
Enter the first number
2
Enter the second number
2
Operations are:
1. Addition 2. Subtraction 3. Multiplication 4. Division
Enter the operation
3
Product is: 4
Kenaz@KenazMathukutty:~$
```

Problem 7: Program to print the input number is odd or even

PROGRAM:

```
echo "Enter number"
read a
if (($a % 2 == 0))
then
echo "Even number"
else
echo "Odd number"
fi
```

OUTPUT:

```
Kenaz@KenazMathukutty:~$ gedit oddeven.sh
Kenaz@KenazMathukutty:~$ bash oddeven.sh
Enter the number
5
Odd number
Kenaz@KenazMathukutty:~$ bash oddeven.sh
Enter the number
6
Even number
```