Week 4: Shell Script Programs.

1. Write a Shell sirift to find the factorial of a number.

→ nano fact.sh.

```
#!/bin/bash
echo "FACTORIAL"
read -p: "Enter a number: " num
fact=1
while [ $num -gt 1 ]
do
    fact=$((($fact * $num))
num=$((1$num-1))
done
echo $fact.
```

OUTPUT:

FACTORIAL

Enter a number: 5

120.

2. Write a shell sirift to perform arithmetic operations on two numbers.

→ nano arithmetic.sh

```
#!/bin/bash

echo " Enter 2 Numbers:"
read a
read b

Echo "Enter operation: /+"
echo "1) Addition "
echo " 2) Substration"
```

```
echo "3) Multiplication"
echo "4) Division (Quotient)"
echo "5) Modulus (Remainder)\n"
read op

case $op in

1) echo "scale=3; $a + $b" | bc -l ;;
2) echo "scale=3; $a - $b" | bc -l ;;
3) echo "scale=3; $a \* $b" | bc -l
4) echo "scale=3; $a / $b" | bc -l ;;
5) echo "scale=3; $a % $b" | bc -l ;;
*) echo "Choose a valid option"
esac.
```

OUTPUT:

```
Enter 2 Numbers:
10
20
Enter operation:
2)
-10.
```

3. Write a shell script to find the sum of even numbers upto n.

→ nano sum_of_n.sh

```
#!/bin/bash
read -p "Enter number:" n
i=2
sum=0
echo "Digits:"
while [ $i -le $n ]
do
    echo "$i"
```

```
sum=$ ((($sum + $i))
      i= $ (($i+2))
    done
echo "$sum = $sum".
```

OUTPUT:

Enter number: 6

Digits:

2

4

6

Sum = 12 .

4. Write a shell script to find the power of a number.

→ nano power.sh.

```
#!/bin/bash
echo "Enter the number"
read n
echo "Enter Exponent:"
read x
pow=1
while [$ n -gt 0]
do
pow=$ (($pow*n))
n= $ ((n-1))
done
echo $pow
```

OUTPUT:

Enter the number

2

Enter Exponent:

2

4

5. Write a shell scripts to do the following

Read the user input from the user (yes or no) option.
Assume the possible way in which user may enter the input
If they give any cases of yes print "Agreed".
If they give any cases of no then exit with 1.

→ nano ques1.sh

```
#!/bin/bash
echo "Enter the charaiter [y/n]"
read n
case "$n" in
y|Y) echo "Agreed";;
n|N) exit;;
esac
```

OUTPUT:

Enter the charaiter [y/n]
y
Agreed.