LAB - 5 6/12/22

1) Shell script to print the combinations of numbers 123:

```
#!/bin/sh
for i in 1 2 3
do
for j in 1 2 3
do
for k in 1 2 3
do
echo $i $j $k
done
done
done
```

Output:

```
1 1 1
1 1 2
1 1 3
1 2 1
1 2 2
1 2 3
1 3 1
1 3 2
1 3 3
2 1 1
2 1 2
2 1 3
2 2 1
2 2 2
2 2 3
2 3 1
2 3 2
2 3 3
3 1 1
3 1 2
3 1 3
3 2 1
3 2 2
3 2 3
3 3 1
3 3 2
3 3 3
```

2) Shell script to display the pass class of a student

```
#!/bin/sh
echo "Enter your marks"
read marks
if [$marks -le 40]
then
echo "fail"
elif [$marks -ge 40]
then
 echo "pass"
elif [$marks -ge 40 ] && [$marks -le 59]
 then
 echo "result : second class"
elif [$marks -ge 60] && [$marks -le 85]
then
 echo "result : First class"
elif [$marks -gt 85]
then
 echo "result : Distinction"
 fi
```

Output:

```
Enter your marks
45
Pass
```

3) Shell script to find the Fibonacci series up to n:

nano fib.sh

```
#!/bin/bash
echo "Enter the end limit"
read n
n1=0
n2=1
echo "$n1 $n2 \c"
while [ $n -gt 2]
do
num=$(($n2+$n1))
echo "$num \c"
n1=$n2
n2=$num
n=$(($n-1))
done
```

Output:

```
Enter the end limit
10
0 1 1 2 3 5 8 13 21 34
```

4) Shell script to find GCD and LCM: nano gcd.sh

```
#!/bin/bash
echo "Enter two numbers"
 read m
 read n
temp=$((m*n))
 while [ $m -ne $n ]
 do
 if [ $m -gt $n ]
 then
 m=$(( $m-$n))
  else
 n=$(($n-$m))
  fi
 done
 echo "GCD=$n"
  LCM=$(($temp/$n))
  echo "LCM:$LCM"
```

Output:

```
Enter two numbers
10
20
GCD=10
LCM=20
```

5) Take filenames as arguments and searches for a specific word on these files one by one and stops the search as soon as the word is found

```
#!/bin/bash
for i in $2 $3 $4
do
grep -l "$1" $i
done
```

sh grep.sh "bin" gcd.sh fib.sh a.txt

Output:

```
gcd.sh
fib.sh
```

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