Name Lakshit Ameta Branch CSE Sem IV

Experiment = 5A Date

Aim: Write a program to find out even and odd using shell script

```
echo "Enter a number"
read a
if [ `expr $a % 2` == 0 ]
then
echo "even"
else
echo "odd"
fi
```

Output

```
Enter a number
2
even
```

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Experiment = 5B Date

Aim :- Write a program to find greatest among 3 number using shell script

```
echo "Enter three value a, b, c"
read a
read b
read c
if [$a -gt $b] && [$b -gt $c]
then
echo "a greatest"
elif [$b -gt $c] && [$c -gt $a]
then
echo "b greatest"
else
echo "C greatest"
fi
```

Output

```
Enter three values
3
4
5
C greatest
```

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Experiment = 5C Date

Aim:- Write a program to find profit or loss using Shell Script

```
echo "Enter Selling Price"
read S
echo "Enter cost price"
read C
if [$S -gt $C]
then
echo "Profit"
else
echo "Loss"
fi
```

Output

```
Enter Selling price
300
Enter cost price
500
Loss.
```

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Name ..... Lakshit Amuta ..... Branch ..... CSE ..... Sem. ..... IV th Sec - B ...

Experiment = 6A Date

Aim:- Write a shell script to print table of a given number.

```
echo "Enter a Number"
read n
i=1
while [$i -le 10]
do
    echo "$n x $i = $((n* i))"
    i=$((i+1))
done
```

Output

Enter a Number

5

5 x 1 = 5

5 x 2 = 10

5 x 3 = 15

5 x 4 = 20

5 x 5 = 25

5 x 6 = 30

5 x 7 = 35

5 x 8 = 40

5 x 9 = 45

5 x 10 = 50

Name ...Lakshit Ameta... Branch ...CSE... Sem ...III th Sec-B...

Experiment = 6B Date

Aim :- Write a shell script to print sum of digit of any number.

```
echo -n "Enter number :"
read n
sd=0
sum=0
while [$n -gt 0]
do
    sd=$(($n % 10))
    n=$(($n / 10))
    sum=$(($sum + $sd))
done
echo "sum of all digit is $sum"
```

Output

```
Enter number : 1234
Sum of all digit is 10
```

Name Lakshit Ameta Branch CSE Sem IV^th Sec-b

Experiment = 6C Date

Aim:- Write a shell script to find factorial of any number.

```
echo "Enter a number"
read n
f = 1
while [$n -gt 1]
do
   f = $((f * n))
   n = $((n-1))
done
echo $f
```

Output

```
Enter a number
5
120
```

Name Lakshit Amita Branch CSE Sem IV th Sec-b

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Experiment - 7A. Date

Aim:- Write a shell script to print days of a week.

```
echo "enter a number"
read n
case $n in
1) echo "Sunday" ;;
2) echo "Monday";;
3) echo "Tuesday";;
4) echo "Wednesday" ;;
5) echo "Thursday";;
6) echo "Friday" ;;
7) echo "Saturday";;
*) echo "enter value between 1 to 7";;
esac
```

Output

```
enter a number
6
Friday.
```

Name Lakshit Ameta Branch CSE Sem IV th Sec b.

Experiment = 7B Date

Aim :- Write a shell script to make a basic calculator which performs addition, subtraction, Multiplication, division.

```
echo "1. Addition"
echo "2. Subtraction"
echo "3. Multiplication"
echo "4. Division"
read c
case $c in
1) echo "Sum $((a+b))" ;;
2) echo "subtraction $((a-b))" ;;
3) echo "multiplication $((a * b))" ;;
4) echo "division $((a/b))" ;;
*) echo "enter valid operation"
esac
```

Output

```
Enter Two numbers:
2
2.
Enter choice:
1. Addition
2. Subtraction
3. Multiplication
4. Division
1
Sum 4.
```

Name Lakshit Ameta Branch CSE Sem IV th Sec-b

Experiment = 8 A Date

Aim: Write a shell script to find a number is Armstrong or not.

```
echo "Enter the number"
read n
function ams
{
t = $n
s = 0
b = 0
c = 10
while [$n -gt $b]
do
n = $((n % c))
i = $ ((n*n*n))
s = $ ((s+i))
n = $((n / c))
done
echo $s
if [$s ==$t]
then
echo "Armstrong Number"
else
echo "Not an Armstrong number"
fi }
result = `ams $n`
echo "$result"
```

(8 A)

Output

Enter the number

153

153

Armstrong Number

Enter the number

124

73

Not an Armstrong Number.

Name Lakshit Ameta Branch C.S.E Sem IV th Sec-b

Experiment - 8.B. Date

Aim - Write a shell script to find a number is palindrome or not.

```
echo "Enter the number"
read n
function pal
{
number=$n
reverse=0
while [$n -gt 0]
do
a=expr $n % 10
n=expr $n / 10
reverse=`expr $reverse \* 10 + $a`
done
if [$number -eq $reverse]
then
    echo "Number is palindrome"
else
    echo "Number is not palindrome"
fi
}
u=`pal $n`
echo "$r"
```

(8B)

Output

Enter the number

123

321

Number is not palindrome

Enter the number

121

121

Number is palindrome

Name Lakshit Ameta Branch C.S.E Sem IV th Sec. b

Experiment = 8c Date

Aim:- Write a shell script to print Fibonacci series

```
echo "How many number of terms to be generated ?"
read n
function fib
{
  x=0
  y=1
  i=2
echo "Fibonacci Series upto $n terms :"
echo "$x"
echo "$y"
while [$i -lt $n]
do
    i=`expr $i+1`
    z=`expr $x+$y`
echo "$z"
  x=$y
  y=$z
done
}
r=`fib $n`
echo "$r"
```

(8C)

Output

How many number of terms to be generated ?
15

Fibonacci Series up to 15 terms :
0
1
1
2
3
5
8
13
21
34
55
89
144
233
377

(8C)

Output

How many number of terms to be generated ?
15

Fibonacci Series up to 15 terms :
0
1
1
2
3
5
8
13
21
34
55
89
144
233
377

Name Dakshit Ameta Branch CSE Sem IV th Sec-b

Experiment = 8D Date

Aim :- Write a shell script to find prime number.

```
echo "enter number"
read num
function prime
{
for ((i=2; i<=num/2; i++))
do
  if [$((num % i)) -eq 0]
then
   echo "Sum is not a prime number."
   exit
  fi
done
echo "$num is a prime number."
}
n=`prime $number`
echo "$n"
```

output

```
enter number
4
4 is not a prime number.
enter number
7
7 is a prime number.
```

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Name Lakshit Ameta Branch CSE Sem III th Sec - b

Experiment - 9A Date

Aim:- Write a C program to read and print elements of array.

```
#include <stdio.h>
int main()
{
 int a[1000], i, n;
 printf("Enter size of array : ");
 scanf("%d", &n);
 printf("Enter %d elements in the array :", n);
 for(i=0; i<n; i++)
  {
   scanf("%d", &a[i]);
  }
 printf("\n Elements in array are :");
 for(i=0; i<n; i++)
  {
    printf("%d", a[i]);
  }
  return 0;
 }
```

output

Enter size of array : 4

Enter 4 elements in the array : 1

2

3

4.

Elements in array are : 1 2 3 4.

Name Lakshit Ameta Branch C.S.E Sem IV

Experiment = 9B Date

Aim:- Write a C program to find sum of all array elements.

```
#include <stdio.h>
int main()
{
int arr[100], size, i, sum = 0;
printf("Enter array size\n");
scanf("%d", &size);
printf("Enter array elements\n");
for(i=0; i<size; i++)
  scanf("%d", &arr[i]);

for(i=0; i<size; i++)
   sum = sum + arr[i];
printf("Sum of the array = %d\n", sum);
return 0;
}
```

Output

Enter array size
5
Enter array elements
1 2 3 5 6
Sum of the array = 17

Name Lakshit Ameta Branch C.S.E Sem IV th

Experiment - 9c Date

Aim:- Write a C program to find reverse of an array.

```
#include <stdio.h>
#include <stdlib.h>
# define n 6
int main() {
    int arr[n] = {9, 8, 7, 2, 4, 3};
    int temp;
    for (int i = 0; i < n/2; i++) {
        temp = arr[i];
        arr[i] = arr[n-i-1];
        arr[n-i-1] = temp;
    }
    for (int i = 0; i < n; i++) {
        printf("%d", arr[i]);
    }
}
```

Input :- 6, 9, 8, 7, 2, 4, 3

Output :- 3, 4, 2, 7, 8, 9

Name Lakshit Ameta Branch CSE Sem IV

Date

Experiment - 9D

Aim :- Write a C program to search an element in an array.

```
#include <stdio.h>
#include <conio.h>
int main()
{
int a[10000], i, n, Key;
printf("Enter size of the array:");
scanf("%d", &n);
printf("Enter elements in array:");
for(i=0; i<n; i++){
  scanf("%d", &a[i]);
}
printf("Enter the key:");
scanf("%d", &Key);
for(i=0; i<n; i++)
{
  if(a[i]==Key)
  {
    printf("element found");
    return 0;
  }
}
printf("element not found");
}
```

Output

```
Enter size of the array: 3
Enter elements in array: 4
6
2
Enter the Key: 2
element found
```