Assignment 2

Part C

Question 1: Write a shell script that prints "Hello, World!" to the terminal.

Prg::

```
cdac@DESKTOP-7AO8I9B: ~/ShellProgramming
  GNU nano 6.2                        p2
echo Hello,World!
```

Output::

```
-rw-r--r-- 1 cdac cdac 21 Aug 30 15.14 p1
cdac@DESKTOP-7AO8I9B:~/ShellProgramming$ nano p2
cdac@DESKTOP-7AO8I9B:~/ShellProgramming$ ^C
cdac@DESKTOP-7AO8I9B:~/ShellProgramming$ bash p2
Hello,World!
cdac@DESKTOP-7AO8I9B:~/ShellProgramming$
```

Question 2: Declare a variable named "name" and assign the value "CDAC Mumbai" to it. Print the value of the variable.

Prg::

```
cdac@DESKTOP-7AO8I9B: ~/ShellProgramming
  GNU nano 6.2                        p3
echo  "name=CDAC Mumbai"
echo $name
```

Output::

```
cdac@DESKTOP-7AO8I9B:~/ShellProgramming$ nano p3
cdac@DESKTOP-7AO8I9B:~/ShellProgramming$ bash p3
name=CDAC Mumbai
```

Question 3: Write a shell script that takes a number as input from the user and prints it.

Prg::

```
cdac@DESKTOP-7AO8I9B: ~/ShellProgramming          —
  GNU nano 6.2                        p4
echo "Enter Num1"
read num1
echo Printed Number is,$num1
```

Output::

```
cdac@DESKTOP-7AO8I9B:~/ShellProgramming$ nano p4
cdac@DESKTOP-7AO8I9B:~/ShellProgramming$ bash p4
Enter Num1
100
Printed Number is,100
cdac@DESKTOP-7AO8I9B:~/ShellProgramming$
```

Question 4: Write a shell script that performs addition of two numbers (e.g., 5 and 3) and prints the result.

Prg::

```
cdac@DESKTOP-7AO8I9B: ~/ShellProgramming          —    □    >
  GNU nano 6.2                        p5
echo "Enter Number 1"
read N1
echo "Enter Number 2"
read N2
add=`expr $N1 + $N2`
echo $add
```

Output::

```
cdac@DESKTOP-7AO8I9B:~/ShellProgramming$ nano p5
cdac@DESKTOP-7AO8I9B:~/ShellProgramming$ bash p5
Enter Number 1
100
Enter Number 2
200
300
cdac@DESKTOP-7AO8I9B:~/ShellProgramming$
```

Question 5: Write a shell script that takes a number as input and prints "Even" if it is even, otherwise prints "Odd".

Prg::

```
GNU nano 6.2                          p6
echo "Enter a Number"
read num
if [ $(($num%2)) -eq 0 ]
then
echo Number is Even
else
echo Number is Odd
fi
```

Output::

```
cdac@DESKTOP-7AO8I9B:~/ShellProgramming$ nano p6
cdac@DESKTOP-7AO8I9B:~/ShellProgramming$ bash p6
Enter a Number
12
Number is Even
cdac@DESKTOP-7AO8I9B:~/ShellProgramming$ bash p6
Enter a Number
19
Number is Odd
cdac@DESKTOP-7AO8I9B:~/ShellProgramming$
```

Question 6: Write a shell script that uses a for loop to print numbers from 1 to 5.

Prg::

```
GNU nano 6.2                          p7
a=0
sum=0
for a in 1 2 3 4 5
do
echo $a
done
```

```
cdac@DESKTOP-7AO8I9B:~/ShellProgramming$ nano p7
cdac@DESKTOP-7AO8I9B:~/ShellProgramming$ bash p7
1
2
3
4
5
cdac@DESKTOP-7AO8I9B:~/ShellProgramming$
```

Output::

Question 7: Write a shell script that uses a while loop to print numbers from 1 to 5.

```
cdac@DESKTOP-7AO8I9B: ~/ShellProgramming              —     □

  GNU nano 6.2                      p8
#!/bin/bash
a=0
while [ $a -lt 5 ]
do
echo $a
a=$(expr $a + 1)
done
```

Prg::

```
cdac@DESKTOP-7AO8I9B:~/ShellProgramming$ nano p8
cdac@DESKTOP-7AO8I9B:~/ShellProgramming$ bash p8
0
1
2
3
4
cdac@DESKTOP-7AO8I9B:~/ShellProgramming$
```

Output::

Question 8: Write a shell script that checks if a file named "file.txt" exists in the current directory. If it does, print "File exists", otherwise, print "File does not exist".

Prg::

Output::

Question 9: Write a shell script that uses the if statement to check if a number is greater than 10 and prints a message accordingly.

Prg::

Output::

Question 10: Write a shell script that uses nested for loops to print a multiplication table for numbers from 1 to 5. The output should be formatted nicely, with each row representing a number and each column representing the multiplication result for that number.

```
#!/bin/bash
echo "Enter the number "
read n
i=1
while [ $i -le 10 ]
do
res=`expr $i \* $n`
echo "$n * $i = $res"
((++i))
done
```

Prg::

Output::

```
cdac@DESKTOP-7AO8I9B:~/ShellProgramming$ nano p11
cdac@DESKTOP-7AO8I9B:~/ShellProgramming$ bash p11
Enter the number
5
5 * 1 = 5
5 * 2 = 10
5 * 3 = 15
5 * 4 = 20
5 * 5 = 25
5 * 6 = 30
5 * 7 = 35
5 * 8 = 40
5 * 9 = 45
5 * 10 = 50
cdac@DESKTOP-7AO8I9B:~/ShellProgramming$
```

Question 11: Write a shell script that uses a while loop to read numbers from the user until the user enters a negative number. For each positive number entered, print its square. Use the break statement to exit the loop when a negative number is entered.

Prg::

```
cdac@DESKTOP-7AO8I9B: ~/ShellProgramming                     —

  GNU nano 6.2                        p12
echo "Enter positive numbers"
while true ;
do
read -p "Enter a number:" num
if ((num < 0));
then
echo "Existing the loop."
break
fi
done
```

Output::

```
cdac@DESKTOP-7AO8I9B:~/ShellProgramming$ nano p12
cdac@DESKTOP-7AO8I9B:~/ShellProgramming$ bash p12
Enter positive numbers
Enter a number:5
Enter a number:6
Enter a number:2
Enter a number:4
Enter a number:1
Enter a number:3
Enter a number:-5
Existing the loop.
cdac@DESKTOP-7AO8I9B:~/ShellProgramming$
```