Part C

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

```
cdac@MSI: ~/ShellProgramm
 GNU nano 6.2                                    helloFile.sh
#!/bin/bash
echo "Hello Word"
```

```
cdac@MSI:~/ShellProgramming/PartC$ nano helloFile.sh
cdac@MSI:~/ShellProgramming/PartC$ bash helloFile.sh
Hello Word
cdac@MSI:~/ShellProgramming/PartC$
```

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

```
cdac@MSI: ~/ShellProgramm
 GNU nano 6.2                                    varName.sh
#!/bin/bash
name="CDAC Mumbai"
echo $name
```

```
cdac@MSI: ~/ShellProgramm
cdac@MSI:~/ShellProgramming/PartC$ bash varName.sh
CDAC Mumbai
cdac@MSI:~/ShellProgramming/PartC$
```

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

```
cdac@MSI: ~/ShellProgramm
 GNU nano 6.2                                    takeInp.sh
#!/bin/bast

echo "Enter a Number"
read num1

echo "You entered $num1."
```

```
cdac@MSI: ~/ShellProgramm
cdac@MSI:~/ShellProgramming/PartC$ nano takeInp.sh
cdac@MSI:~/ShellProgramming/PartC$ bash takeInp.sh
Enter a Number
5
You entered 5.
cdac@MSI:~/ShellProgramming/PartC$
```

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

```
cdac@MSI: ~/ShellProgramm
 GNU nano 6.2                                    add.sh *
#!/bin/bash
n1=5
n2=3
res=`expr $n1 + $n2`
echo $res
```

```
cdac@MSI: ~/ShellProgramm
cdac@MSI:~/ShellProgramming/PartC$ nano add.sh
cdac@MSI:~/ShellProgramming/PartC$ bash add.sh
8
cdac@MSI:~/ShellProgramming/PartC$
```

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

```
cdac@MSI: ~/ShellProgramm
 GNU nano 6.2                                                    evenOdd.sh
#!/bin/bash

echo Enter a Number
read n

if(( n%2==0 ))
then
        echo Number is even.
else
        echo Number is odd.
fi
```

```
cdac@MSI: ~/ShellProgramm
cdac@MSI:~/ShellProgramming/PartC$ nano evenOdd.sh
cdac@MSI:~/ShellProgramming/PartC$ bash evenOdd.sh
Enter a Number
5
Number is odd.
cdac@MSI:~/ShellProgramming/PartC$ bash evenOdd.sh
Enter a Number
8
Number is even.
cdac@MSI:~/ShellProgramming/PartC$
```

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

```
cdac@MSI: ~/ShellProgramm
 GNU nano 6.2                                                      1to5.sh
#!/bin/bash
for i in {1..5}
do
        echo $i
done
```

```
cdac@MSI: ~/ShellProgramm
cdac@MSI:~/ShellProgramming/PartC$ nano 1to5.sh
cdac@MSI:~/ShellProgramming/PartC$ bash 1to5.sh
1
2
3
4
5
cdac@MSI:~/ShellProgramming/PartC$
```

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

```
cdac@MSI: ~/ShellProgramm
 GNU nano 6.2                                                  1to5While.sh
#!/bin/bash
i=1
while [ $i -lt 6 ]
do
        echo $i
i=`expr $i + 1`
done
```

```
cdac@MSI: ~/ShellProgramm
cdac@MSI:~/ShellProgramming/PartC$ nano 1to5While.sh
cdac@MSI:~/ShellProgramming/PartC$ bash 1to5While.sh
1
2
3
4
5
cdac@MSI:~/ShellProgramming/PartC$
```

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".

```
cdac@MSI: ~/ShellProgramm
 GNU nano 6.2                                                    fileCheck.sh
#!/bin/bash

if [ -f "input.txt" ]
then
        echo File present
else
        echo File not present
fi
```

```
cdac@MSI:~/ShellProgramming/PartC$ nano fileCheck.sh
cdac@MSI:~/ShellProgramming/PartC$ bash fileCheck.sh
File not present
cdac@MSI:~/ShellProgramming/PartC$
```

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.

```
 GNU nano 6.2                                                grtThan10.bs
#!/bin/bash

n=10
if [ $n -gt 10 ]
then
        echo Number is greater that 10
else
        echo Number is lest that or equl to 10
fi
```

```
cdac@MSI:~/ShellProgramming/PartC$ nano grtThan10.bs
cdac@MSI:~/ShellProgramming/PartC$ nano grtThan10.bs
cdac@MSI:~/ShellProgramming/PartC$ bash grtThan10.bs
Number is lest that or equl to 10
cdac@MSI:~/ShellProgramming/PartC$
```

```
 GNU nano 6.2                                              grtThan10.bs *
#!/bin/bash

n=12
if [ $n -gt 10 ]
then
        echo Number is greater that 10
else
        echo Number is lest that or equl to 10
fi
```

```
cdac@MSI:~/ShellProgramming/PartC$ nano grtThan10.bs
cdac@MSI:~/ShellProgramming/PartC$ nano grtThan10.bs
cdac@MSI:~/ShellProgramming/PartC$ bash grtThan10.bs
Number is lest that or equl to 10
cdac@MSI:~/ShellProgramming/PartC$ nano grtThan10.bs
cdac@MSI:~/ShellProgramming/PartC$ bash grtThan10.bs
Number is greater that 10
cdac@MSI:~/ShellProgramming/PartC$
```

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.

```
 GNU nano 6.2                                              tables1to5.sh
#!/bin/bash

for  i in {1..5}
do
        for j in {1..10}
        do
        echo -ne "$(expr $i \* $j) "
        done
echo
done
```

```
cdac@MSI:~/ShellProgramming/PartC$ nano tables1to5.sh
cdac@MSI:~/ShellProgramming/PartC$ bash tables1to5.sh
1 2 3 4 5 6 7 8 9 10
2 4 6 8 10 12 14 16 18 20
3 6 9 12 15 18 21 24 27 30
4 8 12 16 20 24 28 32 36 40
5 10 15 20 25 30 35 40 45 50
cdac@MSI:~/ShellProgramming/PartC$
```

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.

cdac@MSI: ~/ShellProgramm

```
 GNU nano 6.2                                  untilNegativeNo.sh
#!/bin/bash

for  i in true
do
        echo Enter a Number
        read n
        if [ $n -lt 0 ]
        then
        break
        else
        echo $n square is `expr $n \* $n`
        fi
done
```

cdac@MSI: ~/ShellProgramm

```
cdac@MSI:~/ShellProgramming/PartC$ bash untilNegativeNo.sh
Enter a Number
-5
cdac@MSI:~/ShellProgramming/PartC$ bash untilNegativeNo.sh
Enter a Number
5
5 square is 25
```