

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

```
cdac@LAPTOP-39EV3JI7:~$ mkdir ShellProgramming
cdac@LAPTOP-39EV3JI7:~$ cd ShellProgramming
cdac@LAPTOP-39EV3JI7:~/ShellProgramming$ nano file1.sh
cdac@LAPTOP-39EV3JI7:~/ShellProgramming$ bash file1.sh
Hello, World!
```

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

```
cdac@LAPTOP-39EV3JI7:~/ShellProgramming$ nano file2.sh
cdac@LAPTOP-39EV3JI7:~/ShellProgramming$ bash file2.sh
CDAC Mumbai
```

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

```
cdac@LAPTOP-39EV3JI7:~/shellPrograms$ nano file1.sh
cdac@LAPTOP-39EV3JI7:~/shellPrograms$ bash file1.sh
Enter the number:
12
Entered number by user is: 12
```

Prg:

```
echo "Enter the number:"
```

```
read number
```

```
echo "Entered number by user is: $number"
```

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

```
cdac@LAPTOP-39EV3JI7:~/shellPrograms$ nano file2.sh
cdac@LAPTOP-39EV3JI7:~/shellPrograms$ bash file2.sh
Enter number 1
5
Enter number 2
3
Addition is:
8
```

Program:

```
echo "Enter num1"
```

```
read num1
```

```
echo "Enter num2"
```

```
read num2
```

```
sum=$((num1+num2))
```

echo "Addition is: \$sum"

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

```
cdac@LAPTOP-39EV3JI7:~$ nano file4.sh
cdac@LAPTOP-39EV3JI7:~$ bash file4.sh
Enter a number
4
4 is even
```

Program:

```
echo "Enter a number"
read number
if [ $((number % 2)) -eq 0 ]
then
echo "$number is even"
else
echo "$number is odd"
fi
```

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

```
cdac@LAPTOP-39EV3JI7:~$ nano file5.sh
cdac@LAPTOP-39EV3JI7:~$ bash file5.sh
Printed numbers are:1,2,3,4,5
```

Program:

```
for i in 1,2,3,4,5
do
echo "Printed numbers are:$i"
done
```

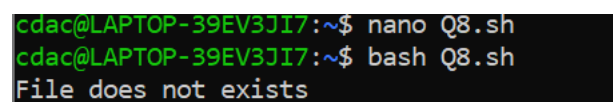
Question 7: Write a shell script that uses a while loop to print numbers from 1 to 5.

```
cdac@LAPTOP-39EV3JI7:~$ nano file6.sh
cdac@LAPTOP-39EV3JI7:~$ bash file6.sh
Printed numbers are: 1
Printed numbers are: 2
Printed numbers are: 3
Printed numbers are: 4
Printed numbers are: 5
```

Program:

```
count=1
while [ $count -le 5 ]
do
echo "Printed numbers are: $count"
count=$((count+1))
done
```

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".

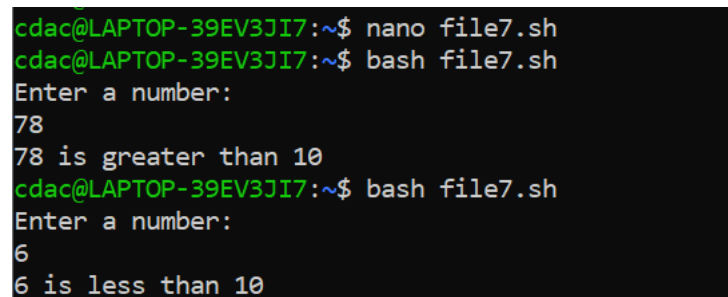


```
cdac@LAPTOP-39EV3JI7:~$ nano Q8.sh
cdac@LAPTOP-39EV3JI7:~$ bash Q8.sh
File does not exists
```

Program:

```
if [ -f "file.txt" ]
then
echo "File exists"
else
echo "File does not exists"
fi
```

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.



```
cdac@LAPTOP-39EV3JI7:~$ nano file7.sh
cdac@LAPTOP-39EV3JI7:~$ bash file7.sh
Enter a number:
78
78 is greater than 10
cdac@LAPTOP-39EV3JI7:~$ bash file7.sh
Enter a number:
6
6 is less than 10
```

Program:

```
echo "Enter a number:"
read number
if [ $((number)) -gt "10" ]
```

```

then

echo "$number is greater than 10"

else

echo "$number is less than 10"

fi

```

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.

```

cdac@LAPTOP-39EV3JI7:~$ nano table.sh
cdac@LAPTOP-39EV3JI7:~$ bash table.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 50cdac@LAPTOP-39EV3JI7:~$

```

Program:

```

for i in {1..5}
do
for j in {1..10}
do
result=$((i * j))
printf "%4d" "$result"

done

done

```

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@LAPTOP-39EV3JI7:~$ nano negative.sh
cdac@LAPTOP-39EV3JI7:~$ bash negative.sh
Enter a number:3
Square of 3 is 9

```

Program:

```

while true
do

    echo -n "Enter a number:"

```

```
read number
if [ $number -lt 0 ]
then
break
fi
square=$((number * number))
echo "Square of $number is $square"
done
echo "You entered number "
```