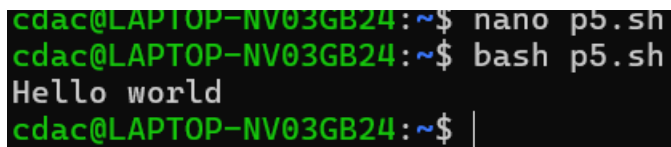


Question 1: Write a shell script that prints "Hello, World!" to the terminal.

```
cdac@LAPTOP-NV03GB24:~$ nano p5.sh
```

```
cdac@LAPTOP-NV03GB24:~$ bash p5.sh
```

Hello world

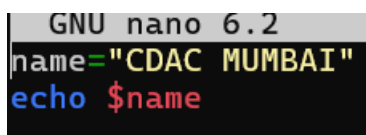
A terminal window with a black background and green text. It shows the user 'cdac' at 'LAPTOP-NV03GB24' in the home directory. The user runs 'nano p5.sh', then 'bash p5.sh', and the output 'Hello world' is displayed. The prompt returns to '~\$' with a cursor.

```
cdac@LAPTOP-NV03GB24:~$ nano p5.sh
cdac@LAPTOP-NV03GB24:~$ bash p5.sh
Hello world
cdac@LAPTOP-NV03GB24:~$ |
```

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

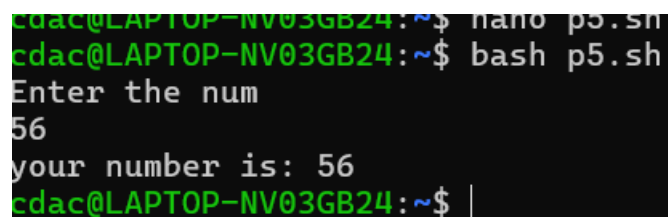
```
name="CDAC MUMBAI"
```

```
echo $name
```

A terminal window showing the GNU nano 6.2 editor. The text 'name="CDAC MUMBAI"' and 'echo \$name' is entered on two lines.

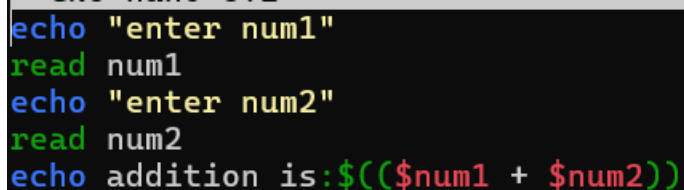
```
GNU nano 6.2
name="CDAC MUMBAI"
echo $name
```

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

A terminal window showing the execution of a shell script. The user runs 'nano p5.sh' and 'bash p5.sh'. The script prompts 'Enter the num', the user enters '56', and the script outputs 'your number is: 56'.

```
cdac@LAPTOP-NV03GB24:~$ nano p5.sh
cdac@LAPTOP-NV03GB24:~$ bash p5.sh
Enter the num
56
your number is: 56
cdac@LAPTOP-NV03GB24:~$ |
```

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

A terminal window showing the code for a shell script. The code uses 'echo' to prompt for two numbers, 'read' to capture them into 'num1' and 'num2', and 'echo' to print the sum using arithmetic expansion.

```
echo "enter num1"
read num1
echo "enter num2"
read num2
echo addition is:$(( $num1 + $num2 ))
```

```
cdac@LAPTOP-NV03GB24:~$ nano p5.sh
cdac@LAPTOP-NV03GB24:~$ bash p5.sh
enter num1
5
enter num2
2
addition is:7
```

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

```
echo "Enter the Number"
```

```
read n
```

```
r=`expr $n % 2`
```

```
if [ $r -eq 0 ]
```

```
then
```

```
echo "$n is Even number"
```

```
else
```

```
echo "$n is Odd number"
```

```
fi
```

```
cdac@LAPTOP-NV03GB24:~$ nano p3.sh
cdac@LAPTOP-NV03GB24:~$ bash p3.sh
Enter the Number
5
5 is Odd number
cdac@LAPTOP-NV03GB24:~$ bash p3.sh
Enter the Number
2
2 is Even number
```

Q6 : Write a shell script that uses a for loop to print numbers from 1 to 5.

```
cdac@LAPTOP-NV03GB24:~$ nano p3.sh
```

```
cdac@LAPTOP-NV03GB24:~$ cat p3.sh
```

```
i=0
```

```
for i in 1 2 3 4 5
```

```
do
```

```
    echo $i
```

```
done
```

```
cdac@LAPTOP-NV03GB24:~$ bash p3.sh
```

```
1
```

```
2
```

```
3
```

```
4
```

```
5
```

```
cdac@LAPTOP-NV03GB24:~$ nano p3.sh
cdac@LAPTOP-NV03GB24:~$ cat p3.sh
i=0
for i in 1 2 3 4 5
do
    echo $i
done
cdac@LAPTOP-NV03GB24:~$ bash p3.sh
1
2
3
4
5
cdac@LAPTOP-NV03GB24:~$ |
```

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

```
cdac@LAPTOP-NV03GB24:~$ nano p3.sh
```

```
cdac@LAPTOP-NV03GB24:~$ bash p3.sh
```

```
1
```

```
2
```

```
3
```

```
4
```

```
5
```

```
cdac@LAPTOP-NV03GB24:~$ cat p3.sh
```

```
i=1
```

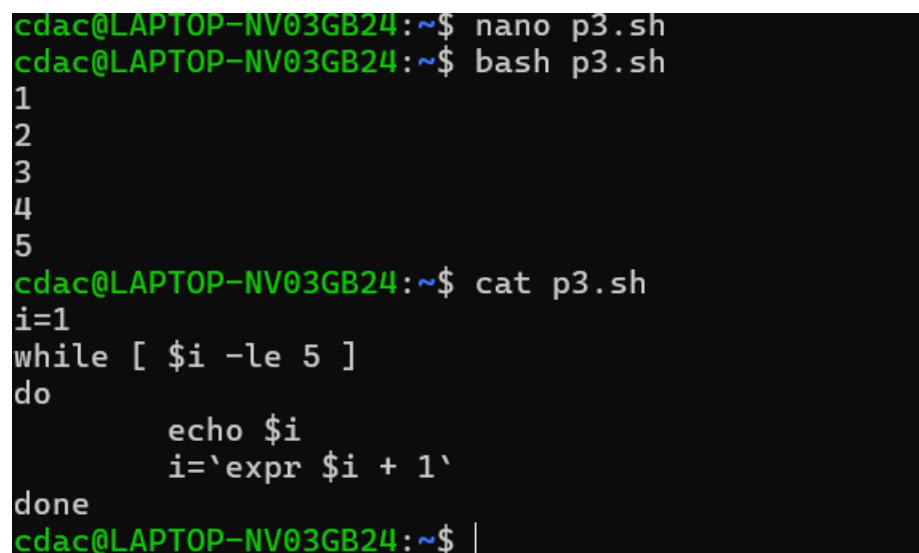
```
while [ $i -le 5 ]
```

```
do
```

```
    echo $i
```

```
    i=`expr $i + 1`
```

```
done
```



```
cdac@LAPTOP-NV03GB24:~$ nano p3.sh
cdac@LAPTOP-NV03GB24:~$ bash p3.sh
1
2
3
4
5
cdac@LAPTOP-NV03GB24:~$ cat p3.sh
i=1
while [ $i -le 5 ]
do
    echo $i
    i=`expr $i + 1`
done
cdac@LAPTOP-NV03GB24:~$ |
```

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".

If [-f "file1.txt"]

Then echo exist

Else echo not exist

```
cdac@LAPTOP-NV03GB24:~$ nano p5.sh
cdac@LAPTOP-NV03GB24:~$ ls
LinuxAssignment docs fruit.txt p1 p5.sh
data.txt file1.txt numbers.txt p2 pre1.text
day1 file1.txt output.txt p3.sh subjects
cdac@LAPTOP-NV03GB24:~$ bash p5.sh
file exist
cdac@LAPTOP-NV03GB24:~$ |
```

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.

echo enter the num

read n

if [\$n -gt 10]

then

echo greater than 10

else

echo less than 10

fi

```
cdac@LAPTOP-NV03GB24:~$ nano p5.sh
cdac@LAPTOP-NV03GB24:~$ cat p5.sh
echo enter the num
read n
if [ $n -gt 10 ]
then
    echo greater than 10
else
    echo less than 10
fi

cdac@LAPTOP-NV03GB24:~$ bash p5.sh
enter the num
5
less than 10
cdac@LAPTOP-NV03GB24:~$ bash p5.sh
enter the num
11
greater than 10
```

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.

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

```
cdac@LAPTOP-NV03GB24:~$ nano p8.sh
cdac@LAPTOP-NV03GB24:~$ bash p8.sh
1 * 1 = 1
1 * 2 = 2
1 * 3 = 3
1 * 4 = 4
1 * 5 = 5
1 * 6 = 6
1 * 7 = 7
1 * 8 = 8
1 * 9 = 9
1 * 10 = 10
-----
2 * 1 = 2
2 * 2 = 4
2 * 3 = 6
2 * 4 = 8
2 * 5 = 10
2 * 6 = 12
2 * 7 = 14
2 * 8 = 16
2 * 9 = 18
2 * 10 = 20
-----
3 * 1 = 3
3 * 2 = 6
3 * 3 = 9
3 * 4 = 12
3 * 5 = 15
3 * 6 = 18
3 * 7 = 21
3 * 8 = 24
3 * 9 = 27
3 * 10 = 30
```

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-NV03GB24:~$ nano p8.sh
cdac@LAPTOP-NV03GB24:~$ bash p8.sh
enter the num
5
25
enter the num
-1
no negative number
cdac@LAPTOP-NV03GB24:~$ cat p8.sh
while true
do
echo "enter the num"
read num
if [ $num -lt 0 ]
then
echo "no negative number"
break
fi

squ=$((num*num))
echo $squ
done
cdac@LAPTOP-NV03GB24:~$ |
```