Command Line Assignment

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Question 1. Write a bash script to get the current date, time, username, home directory and current working directory.

```
echo "Current Date : `Date`"
echo "Time : `Date +"%T"`"
echo "User: `whoami`"
echo "Home Directory : $HOME"
echo "Current Directory : `pwd`"
```

Output:

```
amitshukla@Amits-MacBook-Air cliCodes % bash Question1.sh
Current Date : Thu Feb  2 16:44:11 IST 2023
Time : 16:44:11
User: amitshukla
Home Directory : /Users/amitshukla
Current Directory : /Users/amitshukla/Desktop/cliCodes
amitshukla@Amits-MacBook-Air cliCodes %
```

Question 2. Write a bash script (name Table.sh) to print the Table of a number by using a while loop. It should support the following requirements.

- The script should accept the input from the command line.
- If you don't input any data, then display an error message to execute the script correctly.

```
#!/bin/bash

# Input from user
echo "Enter the number -"
read n
if [ -z $n ]
 then
   echo "error- please enter a valid number"
else
```

```
   i=1
   while [ $i -le 10 ]
       do
           res=`expr $i \* $n`
           echo "$n * $i = $res"
           ((++i))
       done
fi
```

Output:

```
[amitshukla@Amits-MacBook-Air cliCodes % bash Table.sh
Enter the number -

error- please enter a valid number
[amitshukla@Amits-MacBook-Air cliCodes % bash Table.sh
Enter the number -
8
8 * 1 = 8
8 * 2 = 16
8 * 3 = 24
8 * 4 = 32
8 * 5 = 40
8 * 6 = 48
8 * 7 = 56
8 * 8 = 64
8 * 9 = 72
8 * 10 = 80
[amitshukla@Amits-MacBook-Air cliCodes % bash Table.sh
Enter the number -
10
10 * 1 = 10
10 * 2 = 20
10 * 3 = 30
10 * 4 = 40
10 * 5 = 50
10 * 6 = 60
10 * 7 = 70
10 * 8 = 80
10 * 9 = 90
10 * 10 = 100
amitshukla@Amits-MacBook-Air cliCodes %
```

Question 3. Write a Function in bash script to check if the number is prime or not? It should support the following requirement.

● The script should accept the input from the User

```
echo "Enter the n "
read n
i=2

f=0
while test $i -le `expr $n / 2`
   do

       if test `expr $n % $i` -eq 0
       then
       f=1
       fi
       i=`expr $i + 1`
   done
if test $f -eq 1
then
echo "$n is not a prime number"
else
echo "$n is a prime number"
fi
```

Output:

```
[amitshukla@Amits-MacBook-Air cliCodes % bash Prime.sh
Enter the n
79
79 is a prime number
[amitshukla@Amits-MacBook-Air cliCodes % bash Prime.sh
Enter the n
88
88 is not a prime number
[amitshukla@Amits-MacBook-Air cliCodes % bash Prime.sh
Enter the n
89
89 is a prime number
amitshukla@Amits-MacBook-Air cliCodes %
```

Question 4. Create a bash script that supports the following requirement.

- Create a folder ‘Assignment’.
- Create a file ‘File1.txt’ inside ‘Assignment’ Folder.
- Copy all the content of Table.sh(2nd script) in ‘File1.txt’ without using ‘cp’ and ‘mv’ command.
- Append the text Welcome to Sigmoid’ to the ‘File1.txt’ file.
- List all the directories and files present inside Desktop Folder.

```
echo "Creating Assignment Folder `mkdir Assignment`"
echo "Creating File1.txt `touch ./Assignment/File1.txt`"

echo "Copying Table.sh File into File1.txt  `cat Table.sh >> ./Assignment/File1.txt `"
echo "Appending Text into File1.txt  `echo Welcome to Sigmoid\' >>
./Assignment/File1.txt`"



echo "***** All the directories and files in Desktop Folder are  *****"
echo `cd ~/Desktop && ls`
```

Output:

```
amitshukla@Amits-MacBook-Air cliCodes % bash Question4.sh
Creating Assignment Folder
Creating File1.txt
Copying Table.sh File into File1.txt
Appending Text into File1.txt
***** All the directories and files in Desktop Folder are  *****
Screenshot 2023-01-26 at 5.48.37 PM.png Screenshot 2023-01-27 at 5.22.05 PM.png Screenshot 2023-01-30 at 6.22.28 PM.png Screenshot 2023-02-02 at 12.52.25 PM.p
ng cliCodes gitAssgn python codes pythonAssignment touch
amitshukla@Amits-MacBook-Air cliCodes %
```

Question 5. You have given an array. Using Bash script, print its length, maximum element and minimum element. arr=(2 3 4 1 6 7).

```
#!/bin/bash
arr=( 2 3 4 1 6 7)

echo "Array length is : ${#arr[@]}"



max=${arr[0]}
min=${arr[0]}

for i in ${arr[@]}
```

```
do
    if [[ $i -gt $max ]]
    then
       max="$i"
    fi

    if [[ $i -lt $min ]]
    then
       min="$i"
    fi
done

echo "The Maximum element is : $max"
echo "The Minimum element is : $min"
```

Output:

```
amitshukla@Amits-MacBook-Air cliCodes % bash Arrays.sh
Array length is : 6
The Maximum element is : 7
The Minimum element is : 1
amitshukla@Amits-MacBook-Air cliCodes %
```