Command Line Assignment

Peer Learning Document

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

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.

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.

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 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.

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).

1. `Rithish Punna`'s Approach:

Question-1:

Command	Function
$(DATE '+%d-%m-%y')	Date
$(date +"%T")	Time
$USER	Current Working User
$HOME	Home Directory
$PWD	Current Working Directory

Question-2:

`Rithish Punna`'s code accepts input from the command line. He used an if statement to print an error message if no output was given.He then used a while loop which runs from 1 to 10, to print the table of the given input.

Question-3:

In this question, `Rithish Punna`'s code takes input from the user after the bash script is run. He used a for loop which iterates from 2 to the square root of the number to check if the number is divisible by the looping numbers. He used a flag variable to keep record of the prime number. If flag = 0, then it's a prime number.

Question-4:

Command	Function
mkdir -p $path/assignment	Creating folder using mkdir
touch $path/assignment/File1.txt	Creating file using touch
cat $path/command_line_assignment/Table.sh > $path/assignment/File1.txt	Copying data in q2 to file1 using cat
echo "Welcome to Sigmoid" >> $path/assignment/File1.txt	Appending given text to file1
ls $path	Printing files and folders in Desktop

Question-5:

In this question, Rithish Punna used two approaches. In the first method he first wrote the code such that we can read the number of elements in the array from the user. For inputting the array elements he used a for loop, which iterates from 1 to n. He then initialized the minimum and maximum variables to be printed. He then iterated through the array to see if there are elements that are smaller or larger than the already initialized min max variables. In the second method, he used pipelining to feed one output of one command line to another command, next he sorted the array and then returned the first element and in case of finding max element he reversed the array.

2. Arin Arora's Approach:

Question-1:

Command	Function
$(DATE '+%d-%m-%y')	Date
$(DATE +"%T")	Time
$USER	Current Working User
$HOME	Home Directory
$pwd	Current Working Directory

Question-2:

Arin Arora used the same approach as asked in the question. His code takes input from the command line and prints an error message if no input was given. He also used a while loop which runs from 1 to 10 and prints the table of the given number.

Question-3:

Arin Arora , in his code used a function named 'prime', in which he used an if statement to print an error if no input is given. Base condition, if the number is less than 2 then it's not a prime number. He used a for loop which iterates from 2 to (i*i). He used a 'cnt' variable which increments, when the loop variable i is divisible by the given number. If cnt = 0, then the number is prime.

Question-4:

Command	Function
mkdir -p Assignment	Creating folder using mkdir
`cd Assignment`	Change into folder
`echo | cat ../table.sh > File1.txt`	Copying data in table.sh to file1 using cat
`echo "Welcome to Sigmoid" >> File1.txt`	Appending given text to file1
`cd` `cd Desktop`	Traversing to desktop directory
ls	Printing files and folders in Desktop

Question-5:

First `Arin Arora`, stored the given array in a variable named 'arr'. He used `${#arr[@]` to find the length of the array. Next he initialized min and max to the first element of the array. He then used a for loop which runs from 0 to len(arr)-1 which finds the min and max of the array using if statements.

3. `Shikhar Agrawal`'s Approach:

Question-1:

Command	Function
$(date "+DATE: %D")	Date
`$(date "+Time: %T")`	Time
$(whoami)	Current Working User
`~$HOME`	Home Directory
$(pwd)	Current Working Directory

As for the question-1, me and my peers have done the similar approach, `Rithish Punna` used $now command for finding the date

Question-2:

By using if statement and $# we can check if input is given or not in the command line to handle errors.

As for Shikhar Agrawal He also did the same method in which his code takes the input from the command line. He used a while loop which iterates from 1 to 10 and prints the table of the given number.

Question-3:

Condition for a number to be prime is that the number should only be divisible by 1 or itself. Function is created to check whether a given number is prime or not.

Shikhar Agrawal defined a function called 'check_prime' in which there is a for loop which iterates from 2 to n. Now if the remainder when we divide the loop variable with the given number then it is not a prime number else it's a prime number.

Question-4:

Command	Function
mkdir Assignment	Creating folder using mkdir
touch Assignment/File1.txt	Creating file using touch
cat Table.sh > Assignment/File1.txt	Copying data in table.sh to file1 using cat
echo "Welcome to Sigmoid" >> Assignment/File1.txt	Appending given text to file1
ls $pathls ~/desktop	Printing files and folders in Desktop

Question-5:

Shikhar Agrawal firstly stored the given array in a variable named 'arr'. He used ${#arr[@] to find the length of the array. Next he initialized min and max to the first element of the array. He then used a for loop which runs from 0 to len(arr)-1 which finds the min and max of the array using if statements.