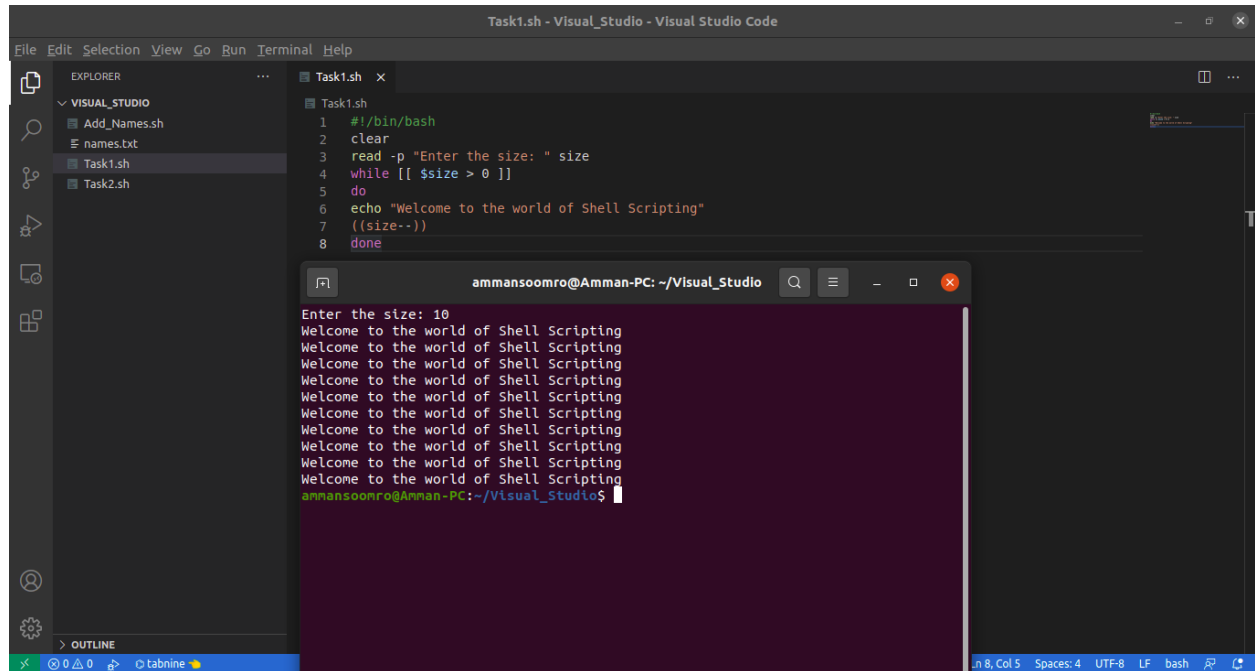


## LAB 03 – 19K 1048

### TASK 1

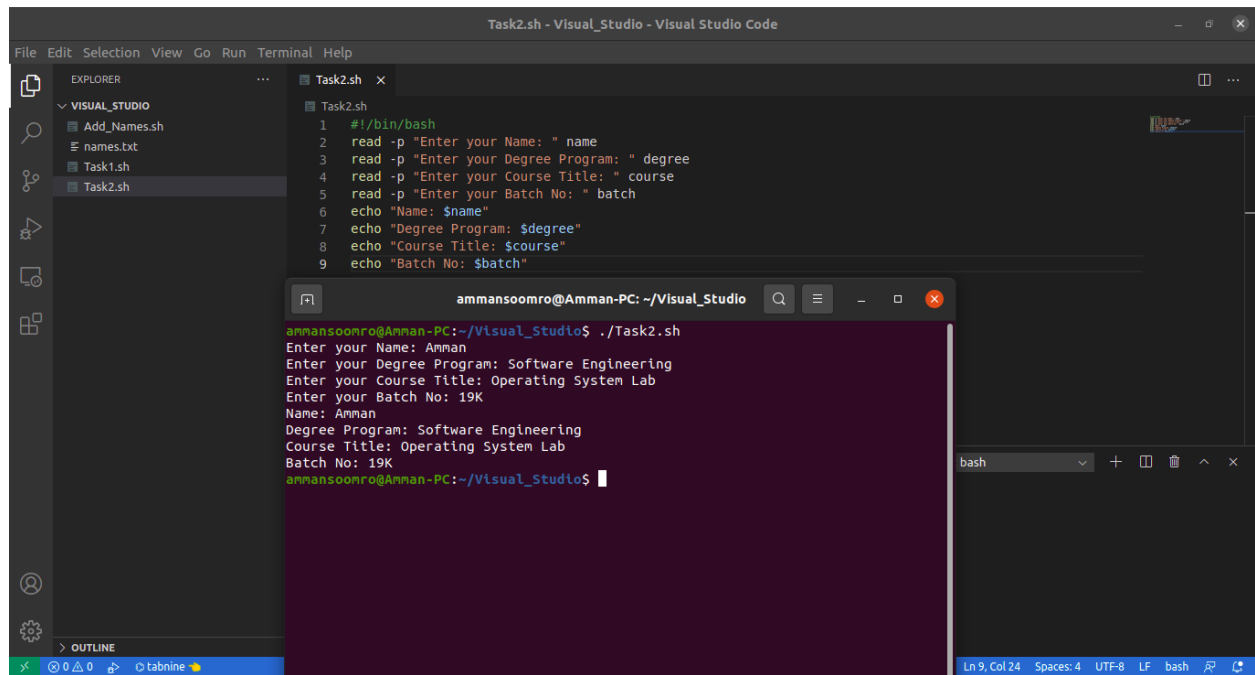


The screenshot shows the Visual Studio Code interface with a file explorer on the left containing 'Add\_Names.sh', 'names.txt', 'Task1.sh', and 'Task2.sh'. The main editor displays 'Task1.sh' with the following script:

```
1 #!/bin/bash
2 clear
3 read -p "Enter the size: " size
4 while [[ $size > 0 ]]
5 do
6 echo "Welcome to the world of Shell Scripting"
7 ((size--))
8 done
```

A terminal window is open, showing the execution of the script. The user entered '10' for the size, and the script printed 'Welcome to the world of Shell Scripting' ten times. The terminal prompt is now 'ammansoomro@Amman-PC: ~/Visual\_Studio\$'.

### TASK 2

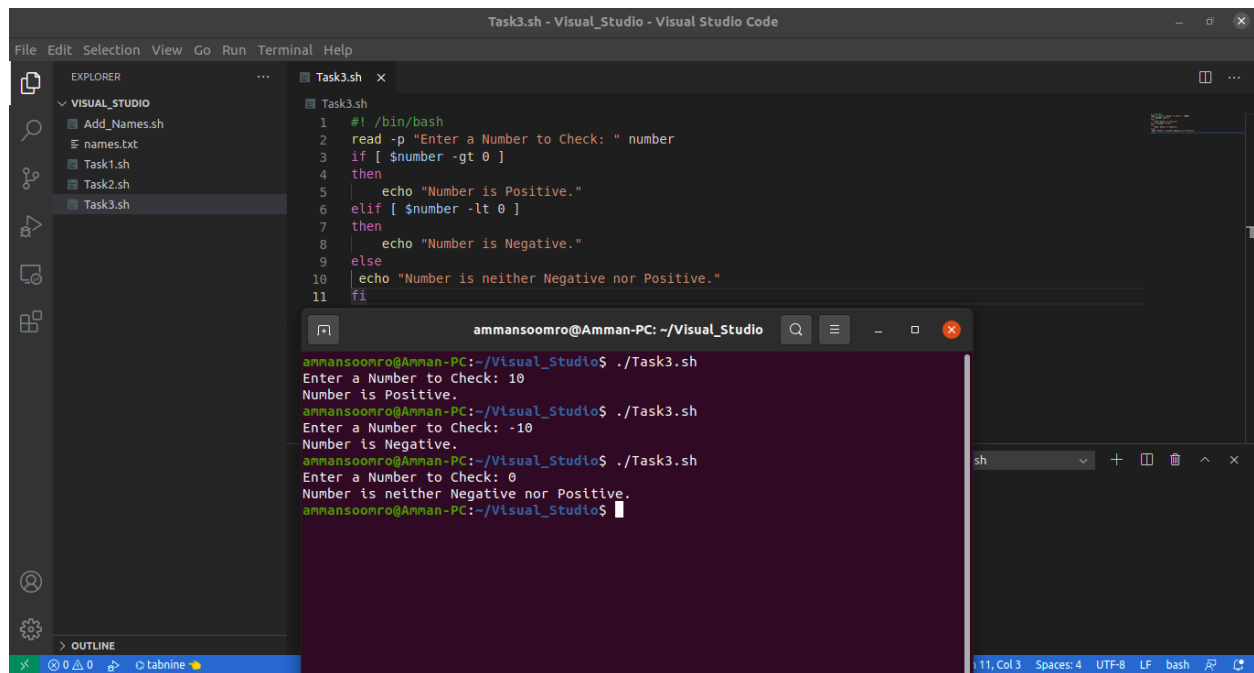


The screenshot shows the Visual Studio Code interface with a file explorer on the left containing 'Add\_Names.sh', 'names.txt', 'Task1.sh', and 'Task2.sh'. The main editor displays 'Task2.sh' with the following script:

```
1 #!/bin/bash
2 read -p "Enter your Name: " name
3 read -p "Enter your Degree Program: " degree
4 read -p "Enter your Course Title: " course
5 read -p "Enter your Batch No: " batch
6 echo "Name: $name"
7 echo "Degree Program: $degree"
8 echo "Course Title: $course"
9 echo "Batch No: $batch"
```

A terminal window is open, showing the execution of the script. The user entered 'Amman' for Name, 'Software Engineering' for Degree Program, 'Operating System Lab' for Course Title, and '19K' for Batch No. The script printed the entered values. The terminal prompt is now 'ammansoomro@Amman-PC: ~/Visual\_Studio\$'.

### TASK 3



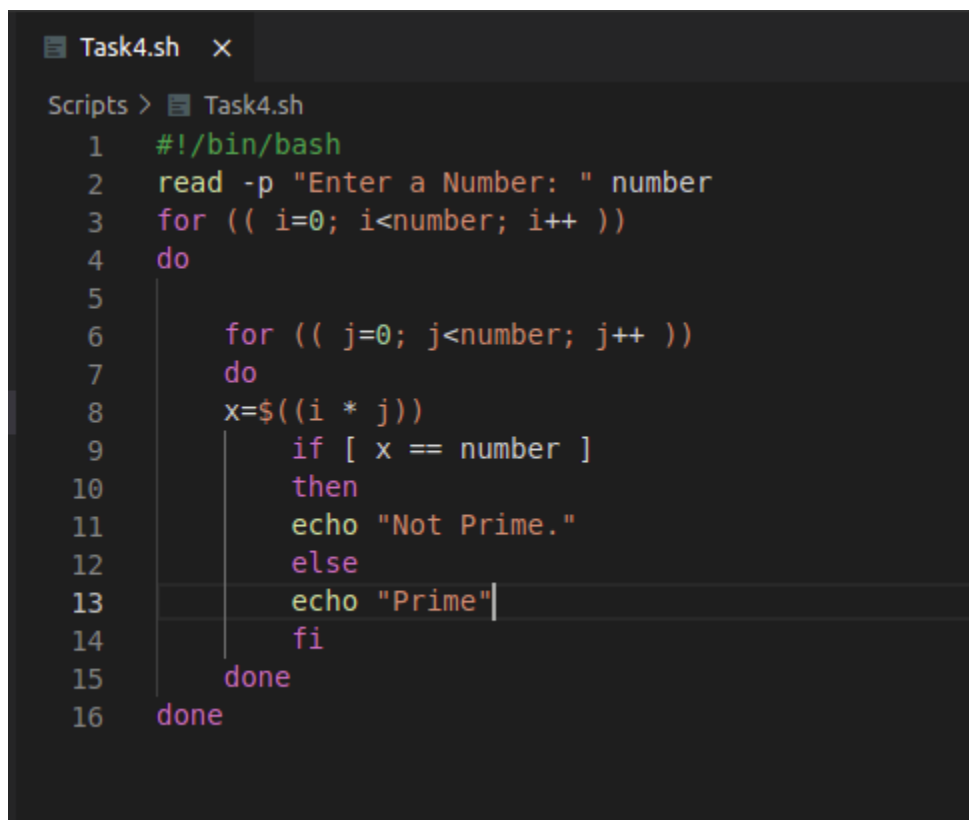
The screenshot shows the Visual Studio Code interface. The Explorer panel on the left shows a project named 'VISUAL\_STUDIO' with files 'Add\_Names.sh', 'names.txt', 'Task1.sh', 'Task2.sh', and 'Task3.sh'. The main editor displays the content of 'Task3.sh'.

```
1  #!/bin/bash
2  read -p "Enter a Number to Check: " number
3  if [ $number -gt 0 ]
4  then
5      echo "Number is Positive."
6  elif [ $number -lt 0 ]
7  then
8      echo "Number is Negative."
9  else
10     echo "Number is neither Negative nor Positive."
11 fi
```

Below the editor, a terminal window is open, showing the execution of the script. The prompt is 'ammansoonro@Amman-PC: ~/Visual\_Studio'.

```
ammansoonro@Amman-PC:~/Visual_Studio$ ./Task3.sh
Enter a Number to Check: 10
Number is Positive.
ammansoonro@Amman-PC:~/Visual_Studio$ ./Task3.sh
Enter a Number to Check: -10
Number is Negative.
ammansoonro@Amman-PC:~/Visual_Studio$ ./Task3.sh
Enter a Number to Check: 0
Number is neither Negative nor Positive.
ammansoonro@Amman-PC:~/Visual_Studio$
```

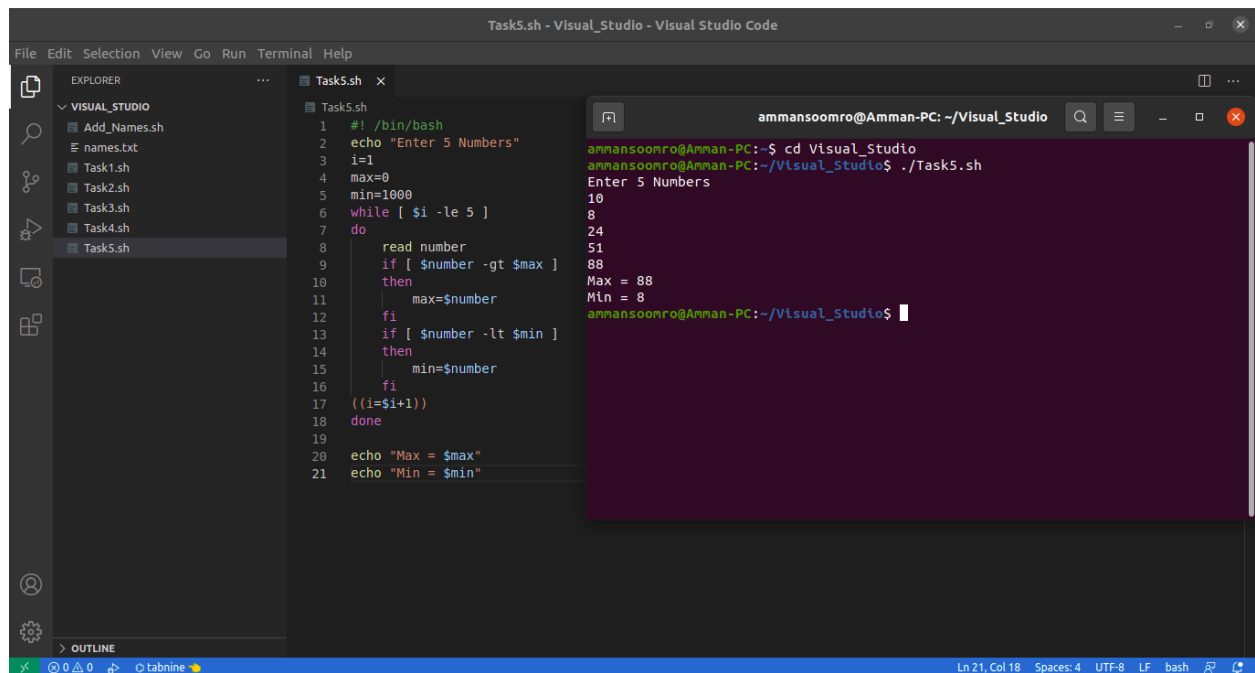
### TASK 4



The screenshot shows the Visual Studio Code interface with the 'Scripts' view selected. The file 'Task4.sh' is open in the editor.

```
1  #!/bin/bash
2  read -p "Enter a Number: " number
3  for (( i=0; i<number; i++ ))
4  do
5
6      for (( j=0; j<number; j++ ))
7      do
8          x=$((i * j))
9          if [ x == number ]
10         then
11             echo "Not Prime."
12         else
13             echo "Prime"
14         fi
15     done
16 done
```

## TASK 5



The screenshot shows the Visual Studio Code interface with a file explorer on the left, a code editor in the center, and a terminal window on the right. The file explorer shows a project named 'VISUAL\_STUDIO' with files 'Add\_Names.sh', 'names.txt', 'Task1.sh', 'Task2.sh', 'Task3.sh', 'Task4.sh', and 'Task5.sh'. The code editor displays the content of 'Task5.sh', which is a bash script that reads 5 numbers and finds the maximum and minimum values. The terminal window shows the execution of the script, with the user entering 10, 8, 24, 51, and 88, resulting in 'Max = 88' and 'Min = 8'.

```
Task5.sh - Visual_Studio - Visual Studio Code
```

```
File Edit Selection View Go Run Terminal Help
```

```
EXPLORER
```

- VISUAL\_STUDIO
  - Add\_Names.sh
  - names.txt
  - Task1.sh
  - Task2.sh
  - Task3.sh
  - Task4.sh
  - Task5.sh

```
Task5.sh
```

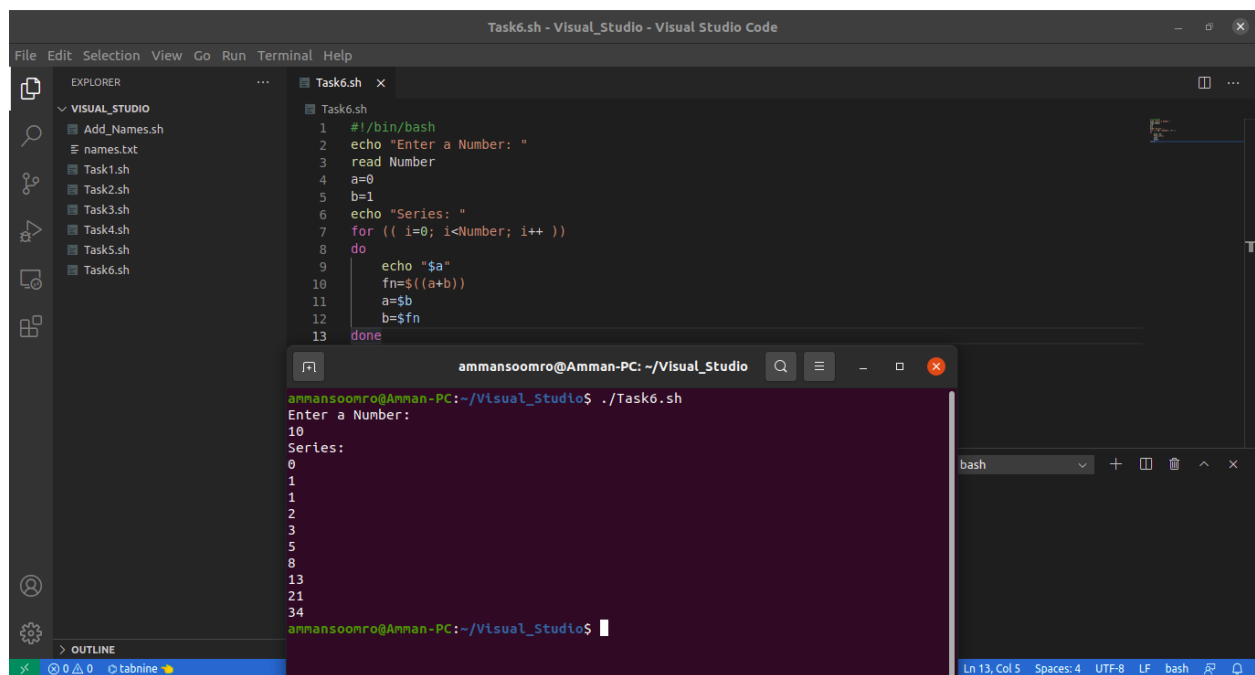
```
1 #!/bin/bash
2 echo "Enter 5 Numbers"
3 i=1
4 max=0
5 min=1000
6 while [ $i -le 5 ]
7 do
8     read number
9     if [ $number -gt $max ]
10    then
11        max=$number
12    fi
13    if [ $number -lt $min ]
14    then
15        min=$number
16    fi
17    ((i=i+1))
18 done
19
20 echo "Max = $max"
21 echo "Min = $min"
```

```
ammansoomro@Amman-PC: ~/Visual_Studio
```

```
ammansoomro@Amman-PC:~$ cd Visual_Studio
ammansoomro@Amman-PC:~/Visual_Studio$ ./Task5.sh
Enter 5 Numbers
10
8
24
51
88
Max = 88
Min = 8
ammansoomro@Amman-PC:~/Visual_Studio$
```

Ln 21, Col 18 Spaces: 4 UTF-8 LF bash

## TASK 6



The screenshot shows the Visual Studio Code interface with a file explorer on the left, a code editor in the center, and a terminal window on the right. The file explorer shows a project named 'VISUAL\_STUDIO' with files 'Add\_Names.sh', 'names.txt', 'Task1.sh', 'Task2.sh', 'Task3.sh', 'Task4.sh', 'Task5.sh', and 'Task6.sh'. The code editor displays the content of 'Task6.sh', which is a bash script that reads a number and prints a series of numbers from 0 to that number. The terminal window shows the execution of the script, with the user entering 10, resulting in a series of numbers from 0 to 10.

```
Task6.sh - Visual_Studio - Visual Studio Code
```

```
File Edit Selection View Go Run Terminal Help
```

```
EXPLORER
```

- VISUAL\_STUDIO
  - Add\_Names.sh
  - names.txt
  - Task1.sh
  - Task2.sh
  - Task3.sh
  - Task4.sh
  - Task5.sh
  - Task6.sh

```
Task6.sh
```

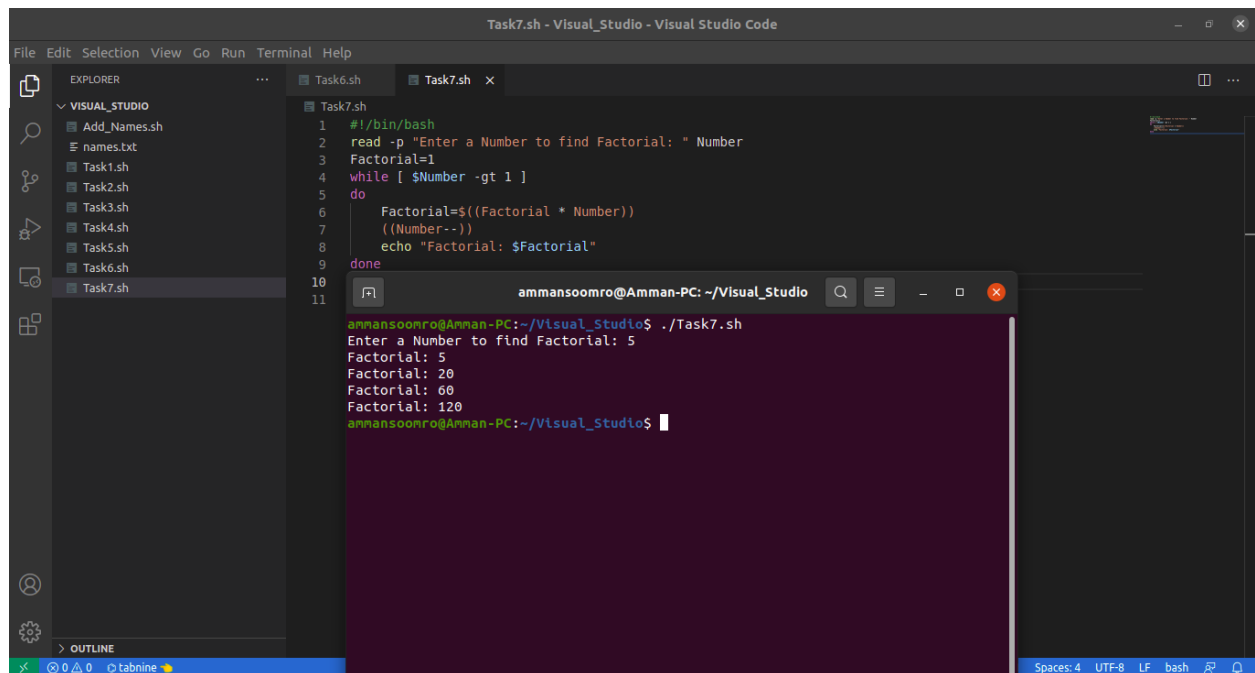
```
1 #!/bin/bash
2 echo "Enter a Number: "
3 read Number
4 a=0
5 b=1
6 echo "Series: "
7 for (( i=0; i<Number; i++ ))
8 do
9     echo "$a"
10    fn=$((a+b))
11    a=$b
12    b=$fn
13 done
```

```
ammansoomro@Amman-PC: ~/Visual_Studio
```

```
ammansoomro@Amman-PC:~/Visual_Studio$ ./Task6.sh
Enter a Number:
10
Series:
0
1
1
2
3
5
8
13
21
34
ammansoomro@Amman-PC:~/Visual_Studio$
```

Ln 13, Col 5 Spaces: 4 UTF-8 LF bash

## TASK 7



The screenshot shows the Visual Studio Code interface with a file explorer on the left containing a directory named 'VISUAL\_STUDIO' with files 'Add\_Names.sh', 'names.txt', and 'Task1.sh' through 'Task7.sh'. The main editor displays 'Task7.sh' with the following script:

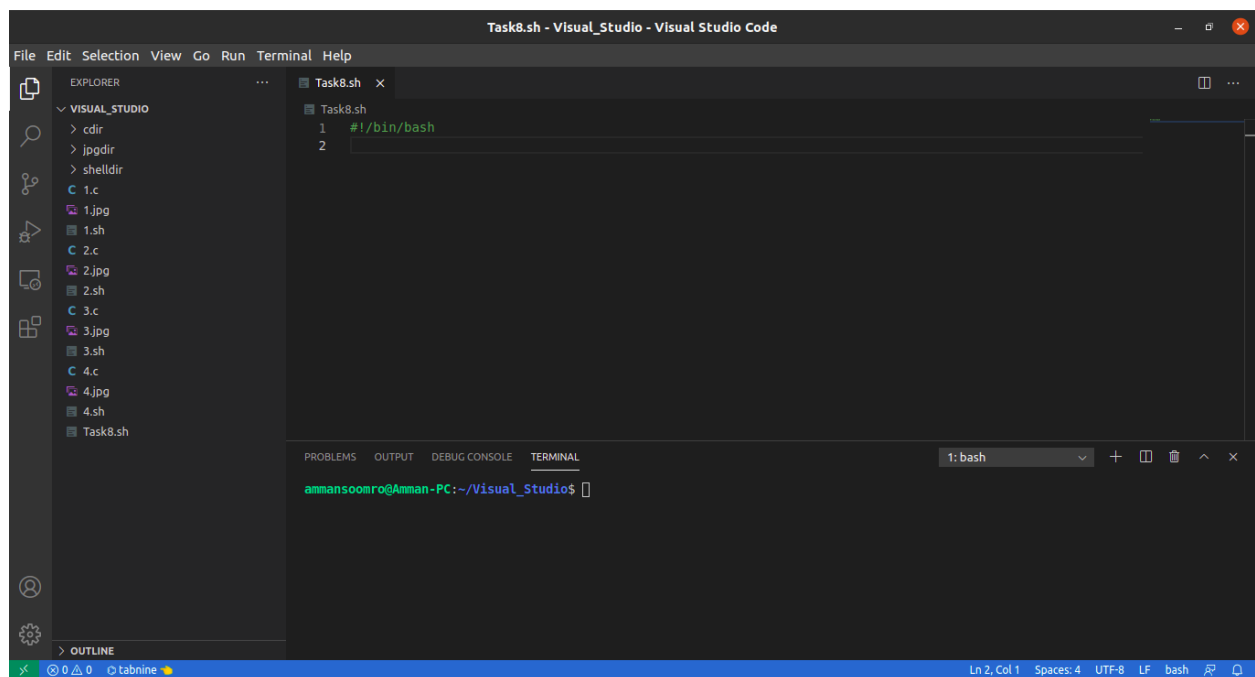
```
1 #!/bin/bash
2 read -p "Enter a Number to find Factorial: " Number
3 Factorial=1
4 while [ $Number -gt 1 ]
5 do
6     Factorial=$((Factorial * Number))
7     ((Number--))
8     echo "Factorial: $Factorial"
9 done
10
11
```

Below the editor, a terminal window titled 'ammansoomro@Amman-PC: ~/Visual\_Studio' shows the execution of the script:

```
ammansoomro@Amman-PC:~/Visual_Studio$ ./Task7.sh
Enter a Number to find Factorial: 5
Factorial: 5
Factorial: 20
Factorial: 60
Factorial: 120
ammansoomro@Amman-PC:~/Visual_Studio$
```

The status bar at the bottom indicates 'Spaces: 4', 'UTF-8', 'LF', 'bash', and a search icon.

## TASK 8



The screenshot shows the Visual Studio Code interface with a file explorer on the left containing a directory named 'VISUAL\_STUDIO' with files '1.c', '1.jpg', '1.sh', '2.c', '2.jpg', '2.sh', '3.c', '3.jpg', '3.sh', '4.c', '4.jpg', '4.sh', and 'Task8.sh'. The main editor displays 'Task8.sh' with the following script:

```
1 #!/bin/bash
2
```

Below the editor, a terminal window titled '1: bash' shows the execution of the script:

```
ammansoomro@Amman-PC:~/Visual_Studio$
```

The status bar at the bottom indicates 'Ln 2, Col 1', 'Spaces: 4', 'UTF-8', 'LF', 'bash', and a search icon.

