

## BASH PROJECTS

### 1. BASH CASE 1:

The screenshot shows a terminal window with the following session:

```
meghana@3148c6658f7456b:~$ touch bash_case.sh
meghana@3148c6658f7456b:~$ chmod 777 bash_case.sh
meghana@3148c6658f7456b:~$ gedit bash_case.sh

(gedit:627): IBUS-WARNING **: 09:49:49.761: Failed to mkdir /home/meghana/snap/gedit/684/.config/ibus/bus: Not a directory
meghana@3148c6658f7456b:~$ ./bash_case.sh
Do you know Java Programming?
Yes/No? :Yes
That's amazing.

meghana@3148c6658f7456b:~$ ./bash_case.sh
Do you know Java Programming?
Yes/No? :No
It's easy. Let's start learning from javatpoint.
meghana@3148c6658f7456b:~$
```

### 2. BASH CASE 2:

The screenshot shows a terminal window with the following session:

```
meghana@3148c6658f7456b:~$ touch bash2.sh
meghana@3148c6658f7456b:~$ chmod 777 bash2.sh
meghana@3148c6658f7456b:~$ gedit bash2.sh

(gedit:627): IBUS-WARNING **: 09:49:49.761: Failed to mkdir /home/meghana/snap/gedit/684/.config/ibus/bus: Not a directory
meghana@3148c6658f7456b:~$ ./bash2.sh
Which Operating System are you using?
Windows, Android, Chrome, Linux, Others?
Type your OS Name:" OS
Windows|windows)
That's common. You should try something new.

Android|android)
This is my favorite. It has lots of applications.

Chrome|chrome)
Cool!!! It's for pro users. Amazing Choice.

Linux|linux)
You might be serious about security!!

*)
Sounds interesting. I will try that.

meghana@3148c6658f7456b:~$
```

```

meghana@3148c6658f7456b:~$ touch bash2.sh
meghana@3148c6658f7456b:~$ chmod 777 bash2.sh
meghana@3148c6658f7456b:~$ gedit bash2.sh

(gedit:772): IBUS-WARNING **: 09:52:46.404: Failed to mkdir /home/meghana/snap/gedit/684/.config/ibus/bus: Not a directory
meghana@3148c6658f7456b:~$ ./bash2.sh
Which Operating System are you using?
Windows, Android, Chrome, Linux, Others?
Type your OS Name:windows
That's common. You should try something new.

meghana@3148c6658f7456b:~$ ./bash2.sh
Which Operating System are you using?
Windows, Android, Chrome, Linux, Others?
Type your OS Name:Android
This is my favorite. It has lots of applications.

meghana@3148c6658f7456b:~$ ./bash2.sh
Which Operating System are you using?
Windows, Android, Chrome, Linux, Others?
Type your OS Name:Linux
You might be serious about security!!

meghana@3148c6658f7456b:~$ ./bash2.sh
Which Operating System are you using?
Windows, Android, Chrome, Linux, Others?
Type your OS Name:Others
Sounds interesting. I will try that.

```

## FOR LOOP:

### 3. BASIC FOR LOOP:

The screenshot shows a terminal window with the following content:

```

Open   ▾   +   for-loop.sh
/home/meghana

1#!/bin/bash
2#This is the basic example of 'for loop'.
3
4learn="Start learning from Javatpoint."
5
6for learn in $learn
7do
8echo $learn
9done
10
11echo "Thank You." |

```

```

meghana@3148c6658f7456b:~$ touch for-loop.sh
meghana@3148c6658f7456b:~$ chmod 777 for-loop.sh
meghana@3148c6658f7456b:~$ gedit for-loop.sh

(gedit:1003): IBUS-WARNING **: 10:03:44.200: Failed to mkdir
meghana@3148c6658f7456b:~$ ./for-loop.sh
Start
learning
from
Javatpoint.
Thank You.
meghana@3148c6658f7456b:~$ 

```

#### 4. FOR LOOP TO READ RANGE:

The screenshot shows a terminal window with the title bar 'read-range.sh /home/meghana'. The file contains the following script:

```
1#!/bin/bash
2#This is the basic example to print a series of numbers from 1 to 10.
3
4for num in {1..10}
5do
6echo $num
7done
8
9echo "Series of numbers from 1 to 10."
```

The screenshot shows a terminal window with the title bar 'read-range.sh /home/meghana'. The command './read-range.sh' is run, and the output is:

```
meghana@3148c6658f7456b:~$ ./read-range.sh
1
2
3
4
5
6
7
8
9
10
Series of numbers from 1 to 10.
meghana@3148c6658f7456b:~$
```

#### FOR LOOP TO READ RANGE WITH INCREMENT OR DECREMENT:

##### 5. For increment:

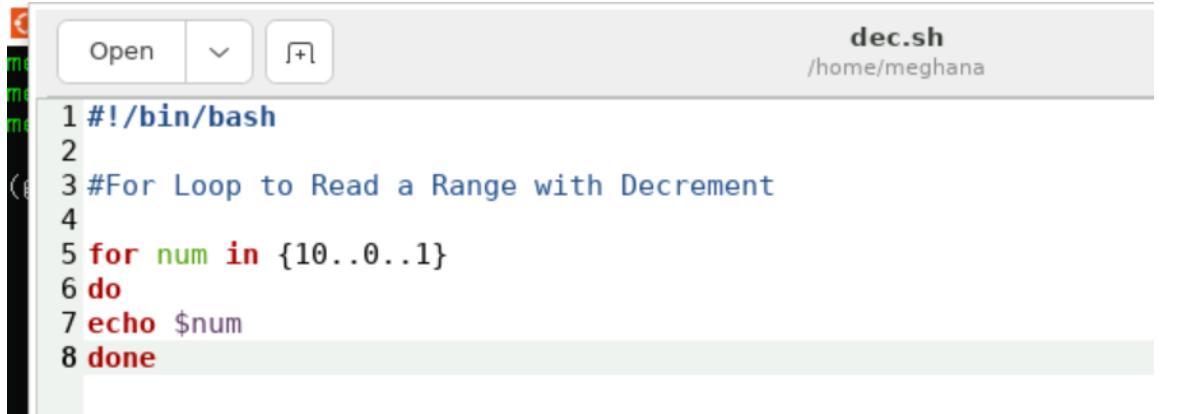
The screenshot shows a terminal window with the title bar 'inc-dec.sh /home/meghana'. The file contains the following script:

```
1#!/bin/bash
2
3#For Loop to Read a Range with Increment
4
5for num in {1..10..1}
6do
7echo $num
8done
```

The screenshot shows a terminal window with the title bar 'inc-dec.sh /home/meghana'. The command './inc-dec.sh' is run, and the output is:

```
meghana@3148c6658f7456b:~$ touch inc-dec.sh
meghana@3148c6658f7456b:~$ chmod 777 inc-dec.sh
meghana@3148c6658f7456b:~$ gedit inc-dec.sh
(gedit:1383): IBUS-WARNING **: 18:19:49.044: Failed to mkdir /home/meghana/snap/gedit/684/.config/ibus/bus: Not a directory
meghana@3148c6658f7456b:~$ ./inc-dec.sh
1
2
3
4
5
6
7
8
9
10
meghana@3148c6658f7456b:~$
```

## 6. For decrement:



```
dec.sh
/home/meghana

1#!/bin/bash
2
3 #For Loop to Read a Range with Decrement
4
5 for num in {10..0..1}
6 do
7 echo $num
8 done
```


```
meghana@3148c6658f7456b:~$ touch dec.sh
meghana@3148c6658f7456b:~$ chmod 777 dec.sh
meghana@3148c6658f7456b:~$ gedit dec.sh

(gedit:1609): IBUS-WARNING **: 10:25:15.534: Failed to mkdir /home/meghana/snap/gedit/684/.config/ibus/bus: Not a directory
meghana@3148c6658f7456b:~$ ./dec.sh
10
9
8
7
6
5
4
3
2
1
0
meghana@3148c6658f7456b:~$
```

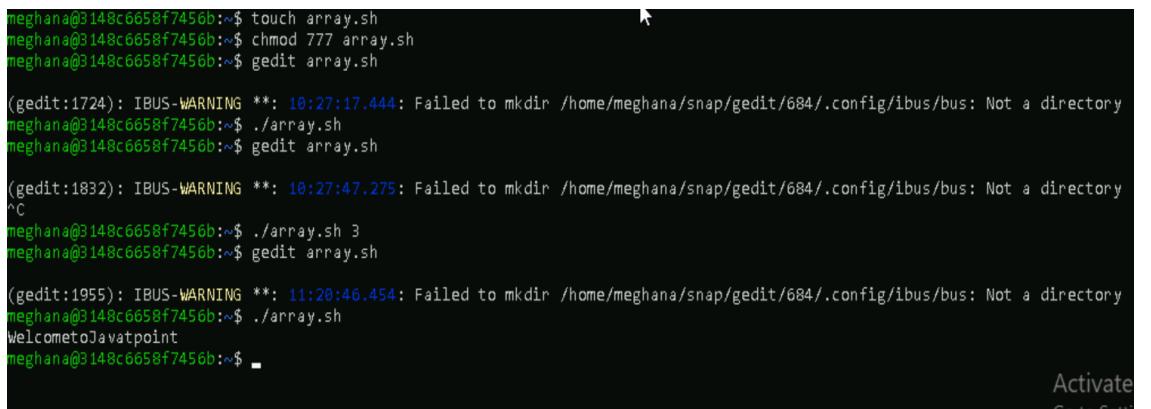
Activate W  
Go to Settings

## 7. FOR LOOP TO READ ARRAY ELEMENTS:



```
array.sh
/home/meghana

1#!/bin/bash
2
3 #Array Declaration
4 arr=( "Welcome""to""Javatpoint" )
5
6 for i in "${arr[@]}"
7 do
8 echo $i
9 done
```

```
meghana@3148c6658f7456b:~$ touch array.sh
meghana@3148c6658f7456b:~$ chmod 777 array.sh
meghana@3148c6658f7456b:~$ gedit array.sh

(gedit:1724): IBUS-WARNING **: 10:27:17.444: Failed to mkdir /home/meghana/snap/gedit/684/.config/ibus/bus: Not a directory
meghana@3148c6658f7456b:~$ ./array.sh
meghana@3148c6658f7456b:~$ gedit array.sh

(gedit:1832): IBUS-WARNING **: 10:27:47.275: Failed to mkdir /home/meghana/snap/gedit/684/.config/ibus/bus: Not a directory
^C
meghana@3148c6658f7456b:~$ ./array.sh 3
meghana@3148c6658f7456b:~$ gedit array.sh

(gedit:1955): IBUS-WARNING **: 11:20:46.454: Failed to mkdir /home/meghana/snap/gedit/684/.config/ibus/bus: Not a directory
meghana@3148c6658f7456b:~$ ./array.sh
WelcometoJavatpoint
meghana@3148c6658f7456b:~$
```

Activate W  
Go to Settings

## 8. FOR LOOP TO READ WHITE SPACES IN STRING AS WORD SEPERATORS:

The screenshot shows a terminal window with the file `spaces.sh` open in Gedit. The script reads a string and prints each word on a new line. When run, it outputs the words "Let's", "start", "learning", "from", and "Javatpoint".

```
1#!/bin/bash
2#For Loop to Read white spaces in String as word separators
3
4str="Let's start
5 learning from Javatpoint."
6
7for i in $str;
8do
9echo "$i"
10done
```

```
meghana@3148c6658f7456b:~$ touch spaces.sh
meghana@3148c6658f7456b:~$ chmod 777 spaces.sh
meghana@3148c6658f7456b:~$ gedit spaces.sh

(gedit:2068): IBUS-WARNING **: 11:26:48.113: Failed to mkdir /home/meghana/snap/gedit/684/.config/ibus/bus: Not a directory
meghana@3148c6658f7456b:~$ ./spaces.sh
Let's
start
learning
from
Javatpoint.
meghana@3148c6658f7456b:~$
```

## 9. FOR LOOP TO READ EACH LINE IN STRING AS A WORD

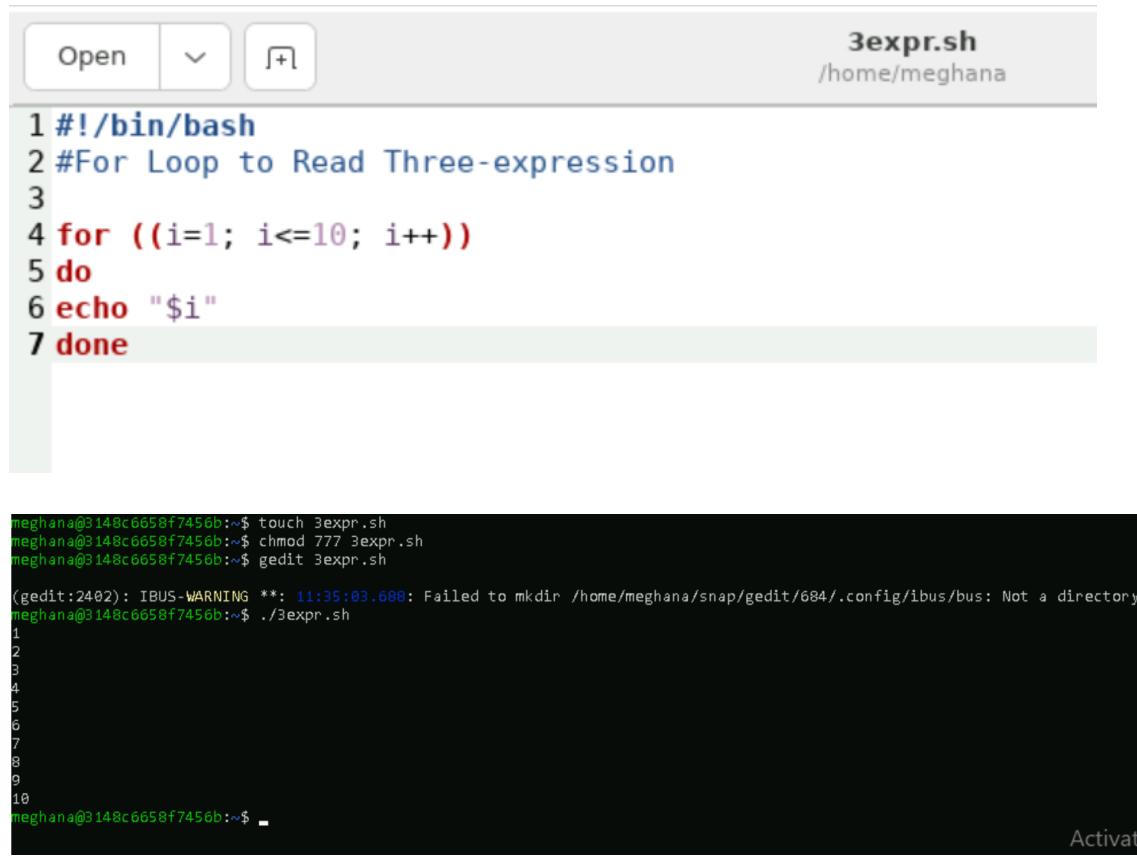
The screenshot shows a terminal window with the file `each_line.sh` open in Gedit. The script reads a string and prints each word on a new line. When run, it outputs the words "Let's", "start", "learning", "from", and "Javatpoint".

```
1#!/bin/bash
2#For Loop to Read each line in String as a word
3
4str="Let's start
5 learning from
6 Javatpoint."
7
8for i in "$str";
9do
10echo "$i"
11done
```

```
meghana@3148c6658f7456b:~$ touch each_line.sh
meghana@3148c6658f7456b:~$ chmod 777 each_line.sh
meghana@3148c6658f7456b:~$ gedit each_line.sh

(gedit:2181): IBUS-WARNING **: 11:30:42.071: Failed to mkdir /home/meghana/snap/gedit/684/.config/ibus/bus: Not a directory
meghana@3148c6658f7456b:~$ ./each_line.sh
Let's
start
learning
from
Javatpoint.
meghana@3148c6658f7456b:~$
```

## 10. FOR LOOP TO READ THREE EXPRESSIONS:

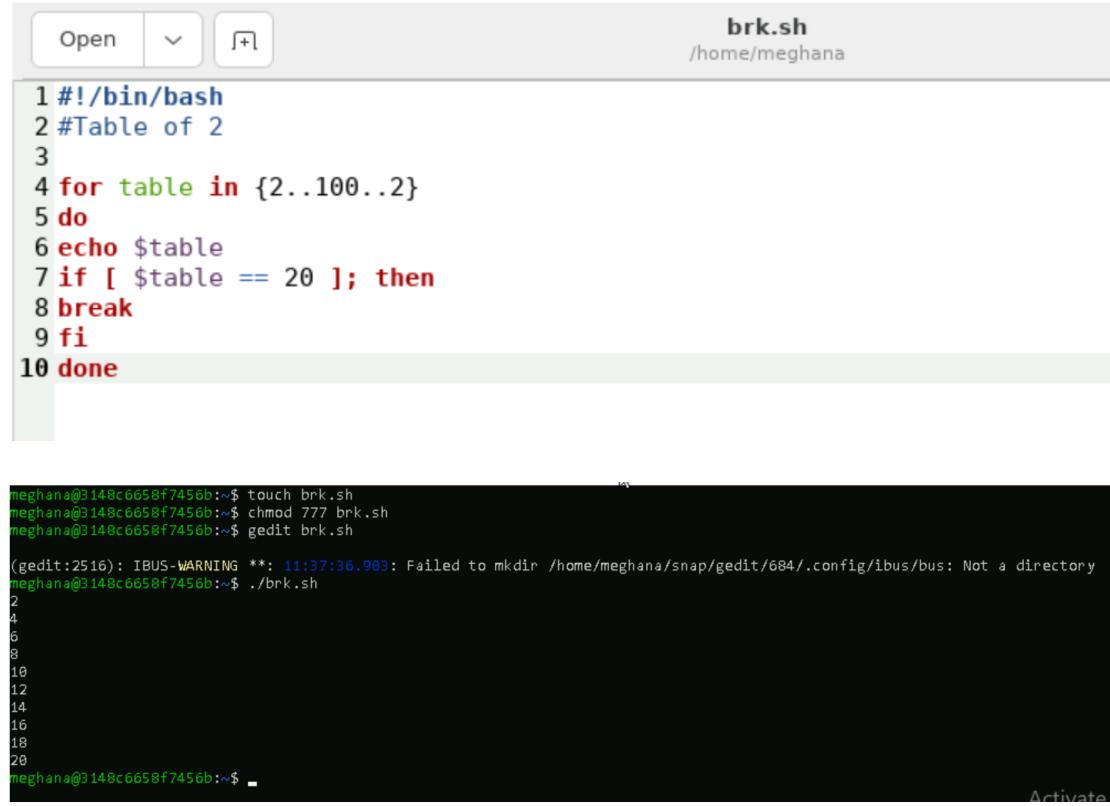


```
1#!/bin/bash
2 #For Loop to Read Three-expression
3
4 for ((i=1; i<=10; i++))
5 do
6 echo "$i"
7 done
```

```
meghana@3148c6658f7456b:~$ touch 3expr.sh
meghana@3148c6658f7456b:~$ chmod 777 3expr.sh
meghana@3148c6658f7456b:~$ gedit 3expr.sh
(gedit:2402): IBUS-WARNING **: 11:35:03.688: Failed to mkdir /home/meghana/snap/gedit/684/.config/ibus/bus: Not a directory
meghana@3148c6658f7456b:~$ ./3expr.sh
1
2
3
4
5
6
7
8
9
10
meghana@3148c6658f7456b:~$
```

Activate

## 11. BREAK STATEMENT:



```
1#!/bin/bash
2 #Table of 2
3
4 for table in {2..100..2}
5 do
6 echo $table
7 if [ $table == 20 ]; then
8 break
9 fi
10 done
```

```
meghana@3148c6658f7456b:~$ touch brk.sh
meghana@3148c6658f7456b:~$ chmod 777 brk.sh
meghana@3148c6658f7456b:~$ gedit brk.sh
(gedit:2516): IBUS-WARNING **: 11:37:36.903: Failed to mkdir /home/meghana/snap/gedit/684/.config/ibus/bus: Not a directory
meghana@3148c6658f7456b:~$ ./brk.sh
2
4
6
8
10
12
14
16
18
20
meghana@3148c6658f7456b:~$
```

Activate

## 12. CONTINUE STATEMENT:

The screenshot shows a terminal window with the following content:

```
cont.sh
/home/meghana

1#!/bin/bash
2#Numbers from 1 to 20, ignoring from 6 to 15 using continue statement"
3
4for ((i=1; i<=20; i++));
5do
6if [[ $i -gt 5 && $i -lt 16 ]];
7then
8continue
9fi
10echo $i
11done |
```

```
meghana@3148c6658f7456b:~$ touch cont.sh
meghana@3148c6658f7456b:~$ chmod 777 cont.sh
meghana@3148c6658f7456b:~$ gedit cont.sh

(gedit:2628): IBUS-WARNING **: 11:39:44.744: Failed to mkdir /home/meghana/snap/gedit/684/.config/ibus/bus: Not a directory
meghana@3148c6658f7456b:~$ ./cont.sh
1
2
3
4
5
16
17
18
19
20
meghana@3148c6658f7456b:~$ -
```

## 13. INFINITE BASH FOR LOOP:

The screenshot shows a terminal window with the following content:

```
infinite.sh
/home/meghana

1#!/bin/bash
2
3i=1;
4for (( ; ; ))
5do
6sleep 1s
7echo "Current Number: $((i++))"
8done |
```

```
meghana@3148c6658f7456b:~$ touch infinite.sh
meghana@3148c6658f7456b:~$ chmod 777 infinite.sh
meghana@3148c6658f7456b:~$ gedit infinite.sh

(gedit:2847): IBUS-WARNING **: 11:42:16.625: Failed to mkdir /home/meghana/snap/gedit/684/.config/ibus/bus: Not a directory
meghana@3148c6658f7456b:~$ ./infinite.sh
Current Number: 1
Current Number: 2
Current Number: 3
Current Number: 4
Current Number: 5
Current Number: 6
Current Number: 7
Current Number: 8
Current Number: 9
Current Number: 10
Current Number: 11
Current Number: 12
Current Number: 13
Current Number: 14
Current Number: 15
Current Number: 16
```

## WHILE LOOP:

14. While loop with single condition:

The terminal window shows the following session:

```
neghana@3148c6658f7456b:~$ touch single.sh
neghana@3148c6658f7456b:~$ chmod 777 single.sh
neghana@3148c6658f7456b:~$ gedit single.sh

(gedit:3750): IBUS-WARNING **: 04:11:22.897: Failed to mkdir /home/meghana/snap/gedit/684/.config/ibus
** (gedit:3750): WARNING **: 04:11:52.139: atk-bridge: get_device_events_reply: unknown signature
neghana@3148c6658f7456b:~$ ./single.sh
Enter starting number: 23
Enter ending number: 30
23
24
25
26
27
28
29
30
This is the sequence that you wanted.
```

15. WHILE LOOP USING MULTIPLE CONDITIONS

The terminal window shows the following session:

```
neghana@3148c6658f7456b:~$ touch multiple.sh
neghana@3148c6658f7456b:~$ chmod 777 multiple.sh
neghana@3148c6658f7456b:~$ gedit multiple.sh

(gedit:3750): IBUS-WARNING **: 04:11:22.897: Failed to mkdir /home/meghana/snap/gedit/684/.config/ibus
** (gedit:3750): WARNING **: 04:11:52.139: atk-bridge: get_device_events_reply: unknown signature
neghana@3148c6658f7456b:~$ ./multiple.sh
Enter starting number: 23
Enter ending number: 30
23
24
25
26
27
28
29
30
This is the sequence that you wanted.
```

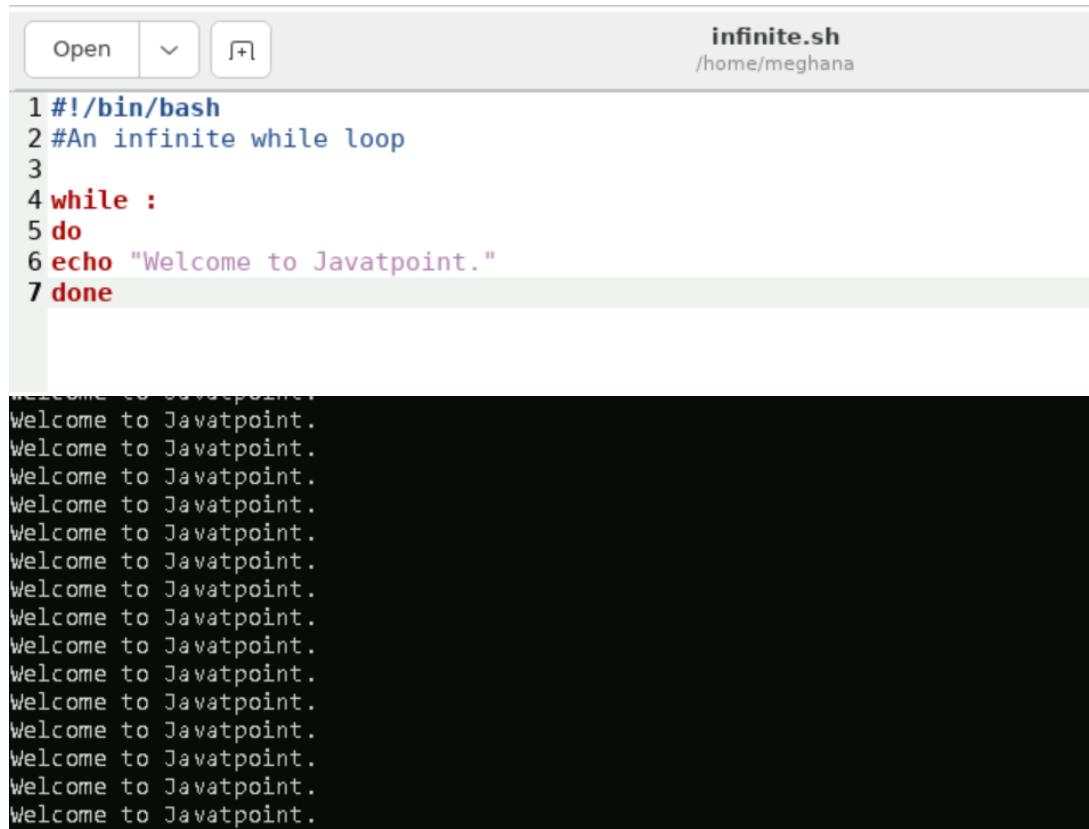
```

neghana@3148c6658f7456b:~$ touch multiple.sh
neghana@3148c6658f7456b:~$ chmod 777 multiple.sh
neghana@3148c6658f7456b:~$ gedit multiple.sh

(gedit:3877): IBUS-WARNING **: 04:15:12.942: Failed to mkdir /home/meghana/snap/gedit/684/.config/ibus/bus: Not a directory
neghana@3148c6658f7456b:~$ ./multiple.sh
Enter starting number: 4
Enter ending number: 15
4
5
6
7
8
9
10
11
12
13
14
15
This is the sequence that you wanted.

```

## 16. INFINITE LOOP:



The screenshot shows a terminal window with the title bar "infinite.sh /home/meghana". The terminal content displays the following script:

```

1#!/bin/bash
2#An infinite while loop
3
4while :
5do
6echo "Welcome to Javatpoint."
7done

```

Below the script, the terminal window shows the output of the command, which is the infinite loop itself:

```

Welcome to Javatpoint.

```

## 17. WHILE LOOP BREAK STATEMENT:



The screenshot shows a terminal window with the title bar "wh\_brk.sh /home/meghana". The terminal content displays the following script:

```

1#!/bin/bash
2#While Loop Example with a Break Statement
3
4echo "Countdown for Website Launching..."
5i=10
6while [ $i -ge 1 ]
7do
8if [ $i == 2 ]
9then
10   echo "Mission Aborted, Some Technical Error Found."
11   break
12fi
13echo "$i"
14(( i-- ))
15done

```

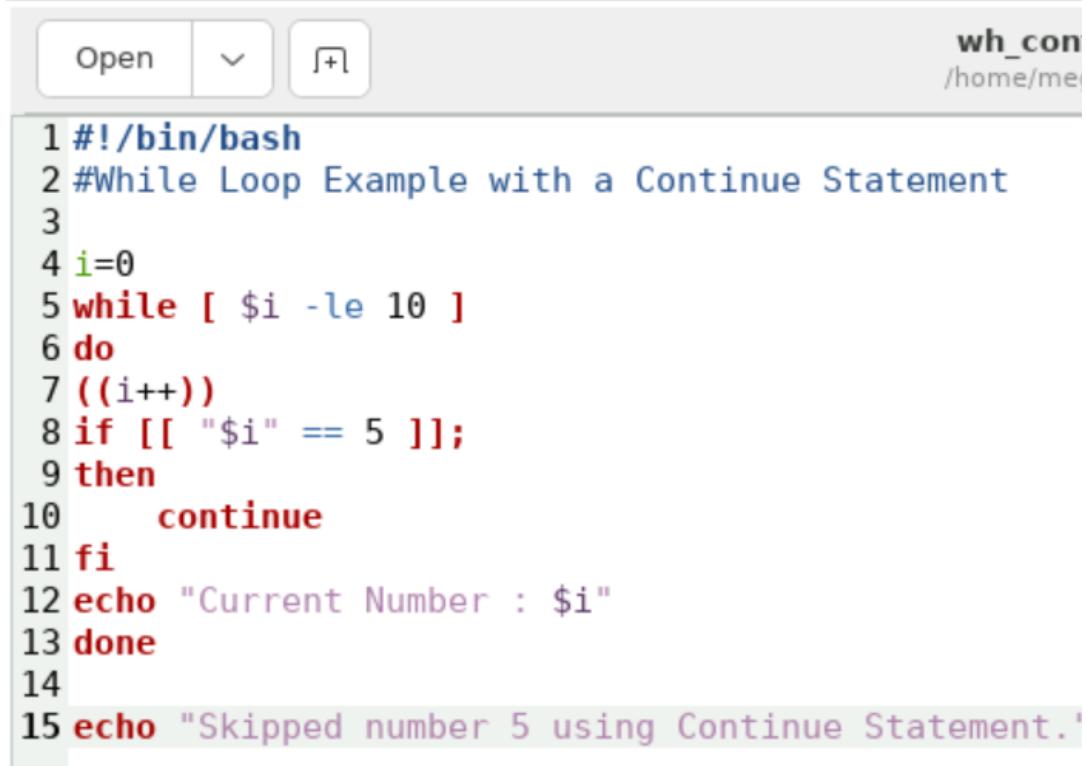
```

meghana@3148c6658f7456b: ~
meghana@3148c6658f7456b:~$ touch wh_brk.sh
meghana@3148c6658f7456b:~$ chmod 777 wh_brk.sh
meghana@3148c6658f7456b:~$ gedit wh_brk.sh

(gedit:4226): IBUS-WARNING **: 04:42:45.429: Failed to mkdir /home/meghana/snap/gedit/684/.config/ibus/bus: Not a directory
meghana@3148c6658f7456b:~$ ./wh_brk.sh
Countdown for Website Launching...
10
9
8
7
6
5
4
3
Mission Aborted, Some Technical Error Found.
meghana@3148c6658f7456b:~$ -

```

## 18. WHILE LOOP CONTINUE STATEMENT:



The screenshot shows a Gedit window with a file named 'wh\_con' located at '/home/me...'. The script content is as follows:

```

1 #!/bin/bash
2 #While Loop Example with a Continue Statement
3
4 i=0
5 while [ $i -le 10 ]
6 do
7 ((i++))
8 if [[ "$i" == 5 ]]; then
9     continue
10    fi
11 echo "Current Number : $i"
12 done
14
15 echo "Skipped number 5 using Continue Statement."

```

```

meghana@3148c6658f7456b:~$ touch wh_cont.sh
meghana@3148c6658f7456b:~$ chmod 777 wh_cont.sh
meghana@3148c6658f7456b:~$ gedit wh_cont.sh

(gedit:4335): IBUS-WARNING **: 04:46:28.319: Failed to mkdir /home/meghana/snap/gedit/684/
meghana@3148c6658f7456b:~$ ./wh_cont.sh
Current Number : 1
Current Number : 2
Current Number : 3
Current Number : 4
Current Number : 6
Current Number : 7
Current Number : 8
Current Number : 9
Current Number : 10
Current Number : 11
Skipped number 5 using Continue Statement.

```

## 19. WHILE LOOP IN C-STYLE:

The screenshot shows a terminal window with a title bar "c-style.sh" and path "/home/meghana". The terminal content displays a bash script named "c-style.sh" with the following code:

```
1#!/bin/bash
2 #While loop example in C style
3
4 i=1
5 while((i <= 10))
6 do
7 echo $i
8 let i++
9 done
```

Below the script, the terminal shows the command to touch the file, change permissions, and run it, followed by the output of the script itself.

## BASH UNTIL LOOP:

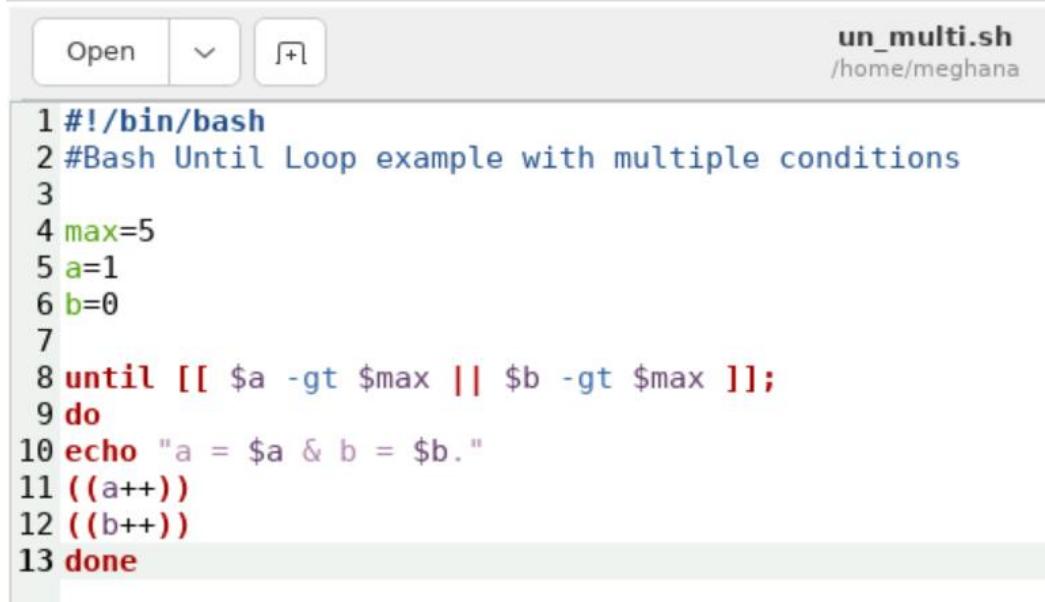
## 20. UNTIL LOOP USING SINGLE CONDITION:

The screenshot shows a terminal window with a title bar "un\_single.sh" and path "/home/meghana". The terminal content displays a bash script named "un\_single.sh" with the following code:

```
1#!/bin/bash
2 #Bash Until Loop example with a single condition
3
4 i=1
5 until [ $i -gt 10 ]
6 do
7 echo $i
8 ((i++))
9 done
```

Below the script, the terminal shows the command to touch the file, change permissions, and run it, followed by the output of the script itself.

## 21. UNTIL LOOP USING MULTIPLE CONDITIONS:

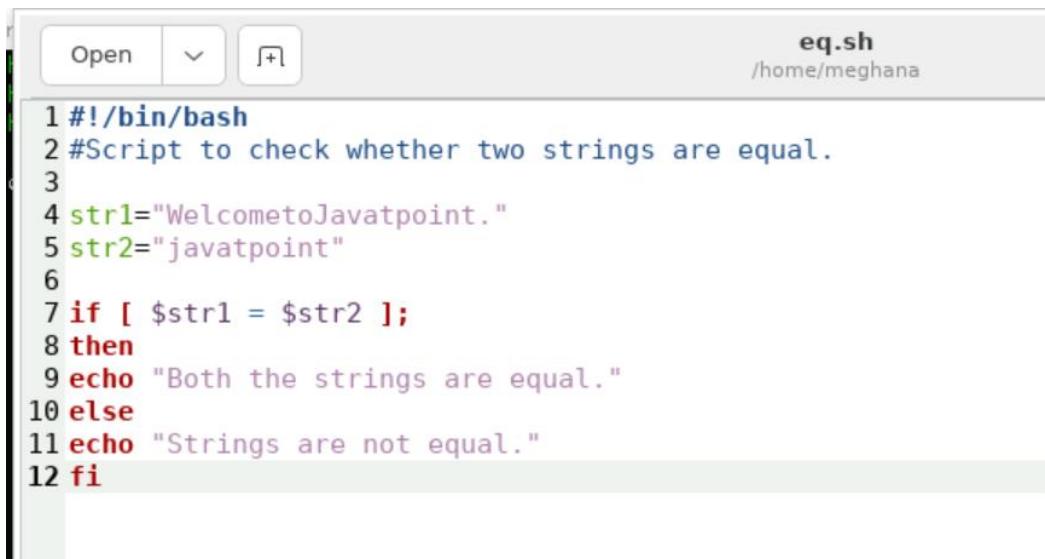


```
1#!/bin/bash
2#Bash Until Loop example with multiple conditions
3
4max=5
5a=1
6b=0
7
8until [[ $a -gt $max || $b -gt $max ]];
9do
10echo "a = $a & b = $b."
11((a++))
12((b++))
13done
```

```
meghana@3148c6658f7456b:~$ touch un_multi.sh
meghana@3148c6658f7456b:~$ chmod 777 un_multi.sh
meghana@3148c6658f7456b:~$ gedit un_multi.sh
(gedit:4001): IBUS-WARNING **: 07:04:30.286: Failed to mkdir /home/meghana/snap/gedit/684/.config/ibus/bus: Not a directory
meghana@3148c6658f7456b:~$ ./un_multi.sh
a = 1 & b = 0.
a = 2 & b = 1.
a = 3 & b = 2.
a = 4 & b = 3.
a = 5 & b = 4.
meghana@3148c6658f7456b:~$
```

## BASH STRING:

## 22. EQUAL OPERATOR:



```
1#!/bin/bash
2#Script to check whether two strings are equal.
3
4str1="WelcometoJavatpoint."
5str2="javatpoint"
6
7if [ $str1 = $str2 ];
8then
9echo "Both the strings are equal."
10else
11echo "Strings are not equal."
12fi
```

```
meghana@3148c6658f7456b:~$ touch eq.sh
meghana@3148c6658f7456b:~$ chmod 777 eq.sh
meghana@3148c6658f7456b:~$ gedit eq.sh
(gedit:5025): IBUS-WARNING **: 08:51:41.840: Failed to mkdir /home/meghana/snap/gedit/684/.config/ibus/bus: Not a directory
meghana@3148c6658f7456b:~$ ./eq.sh
Strings are not equal.
meghana@3148c6658f7456b:~$
```

### 23. NOT EQUAL OPERATOR:

The screenshot shows a terminal window with the following session:

```
meghana@3148c6658f7456b:~$ touch noteq.sh
meghana@3148c6658f7456b:~$ chmod 777 noteq.sh
meghana@3148c6658f7456b:~$ gedit noteq.sh

(gedit:5139): IBUS-WARNING **: 08:55:44.173: Failed to mkdir /home/meghana/snap/gedit/684/.config/ibus/bus: Not a directory
** (gedit:5139): WARNING **: 08:56:16.518: atk-bridge: get_device_events_reply: unknown signature
meghana@3148c6658f7456b:~$ ./noteq.sh
Strings are not equal.
meghana@3148c6658f7456b:~$
```

### 24. LESS THAN OPERATOR:

The screenshot shows a terminal window with the following session:

```
meghana@3148c6658f7456b:~$ touch less.sh
meghana@3148c6658f7456b:~$ chmod 777 less.sh
meghana@3148c6658f7456b:~$ gedit less.sh

(gedit:5255): IBUS-WARNING **: 09:01:27.084: Failed to mkdir /home/meghana/snap/gedit/684/.config/ibus/bus: Not a directory
meghana@3148c6658f7456b:~$ ./less.sh
WelcometoJavatpoint is not less then Javatpoint
meghana@3148c6658f7456b:~$
```

### 25. GREATER THAN OPERATOR:

The screenshot shows a terminal window with the following session:

```
meghana@3148c6658f7456b:~$ touch greater.sh
meghana@3148c6658f7456b:~$ chmod 777 greater.sh
meghana@3148c6658f7456b:~$ gedit greater.sh

(gedit:5355): IBUS-WARNING **: 09:01:27.084: Failed to mkdir /home/meghana/snap/gedit/684/.config/ibus/bus: Not a directory
meghana@3148c6658f7456b:~$ ./greater.sh
WelcometoJavatpoint is greater then Javatpoint
meghana@3148c6658f7456b:~$
```

```

meghana@3148c6658f7456b:~$ touch greater.sh
meghana@3148c6658f7456b:~$ chmod 777 greater.sh
meghana@3148c6658f7456b:~$ gedit greater.sh

(gedit:5365): IBUS-WARNING **: 09:03:49.559: Failed to mkdir /home/meghana/snap/gedit/684/.config/ibus/bus: Not a directory
meghana@3148c6658f7456b:~$ ./greater.sh
WelcometoJavatpoint is greater then Javatpoint
meghana@3148c6658f7456b:~$ -

```

## 26. TO CHECK IF STRING LENGTH IS GREATER THAN ZERO

The screenshot shows a terminal window with the following content:

```

gt0.sh
/home/meghana

1#!/bin/sh
2
3 str="WelcometoJavatpoint"
4
5 if [ -n $str ];
6 then
7     echo "String is not empty"
8 else
9     echo "String is empty"
10 fi

WelcometoJavatpoint is greater then Javatpoint
meghana@3148c6658f7456b:~$ touch gt0.sh
meghana@3148c6658f7456b:~$ chmod 777 gt0.sh
meghana@3148c6658f7456b:~$ gedit gt0.sh

(gedit:5480): IBUS-WARNING **: 09:11:14.737: Failed to mkdir /home/meghana/snap/gedit/684/.config/ibus/bus: Not a directory
meghana@3148c6658f7456b:~$ ./gt0.sh
String is not empty
meghana@3148c6658f7456b:~$ -

```

## 27. TO CHECK IF STRING LENGTH IS EQUAL TO ZERO

The screenshot shows a terminal window with the following content:

```

et0.sh

1#!/bin/sh
2
3 str=""
4
5 if [ -z $str ];
6 then
7     echo "String is empty."
8 else
9     echo "String is non-empty."
10 fi

meghana@3148c6658f7456b:~$ touch et0.sh
meghana@3148c6658f7456b:~$ chmod 777 et0.sh
meghana@3148c6658f7456b:~$ gedit et0.sh

(gedit:5594): IBUS-WARNING **: 09:15:15.083: Failed to mkdir /home/meghana/snap/gedit/684/.config/ibus/bus: Not a directory
meghana@3148c6658f7456b:~$ ./et0.sh
String is empty.
meghana@3148c6658f7456b:~$ -

```

### BASH FIND STRING:

### TO FIND LENGTH OF STRING IN BASH

## 28. EXAMPLE 1

---

```

1#!/bin/bash
2#Bash program to find the length of a string
3
4str="Welcome to Javatpoint"
5length=${#str}
6
7echo "Length of '$str' is $length"

```

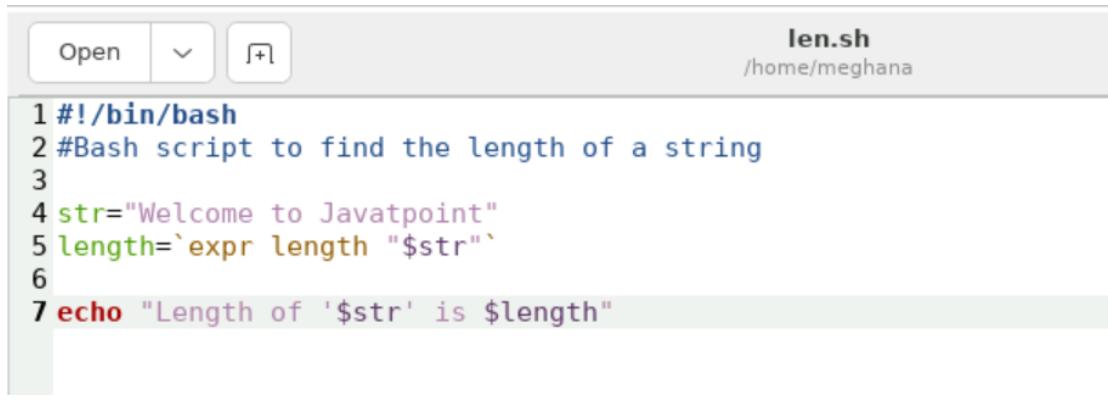
```

meghana@3148c6658f7456b:~$ touch find.sh
meghana@3148c6658f7456b:~$ chmod 777 find.sh
meghana@3148c6658f7456b:~$ gedit find.sh

(gedit:5822): IBUS-WARNING **: 09:22:48.796: Failed to mkdir /home/meghana/snap/gedit/684/.config/ibus/bus: Not a directory
meghana@3148c6658f7456b:~$ ./find.sh
Length of 'Welcome to Javatpoint' is 21
meghana@3148c6658f7456b:~$ -

```

## 29. EXAMPLE 2



The screenshot shows a terminal window with the following content:

```

Open   ▾   +   len.sh
/home/meghana

1#!/bin/bash
2#Bash script to find the length of a string
3
4str="Welcome to Javatpoint"
5length=`expr length "$str"`
6
7echo "Length of '$str' is $length"

```

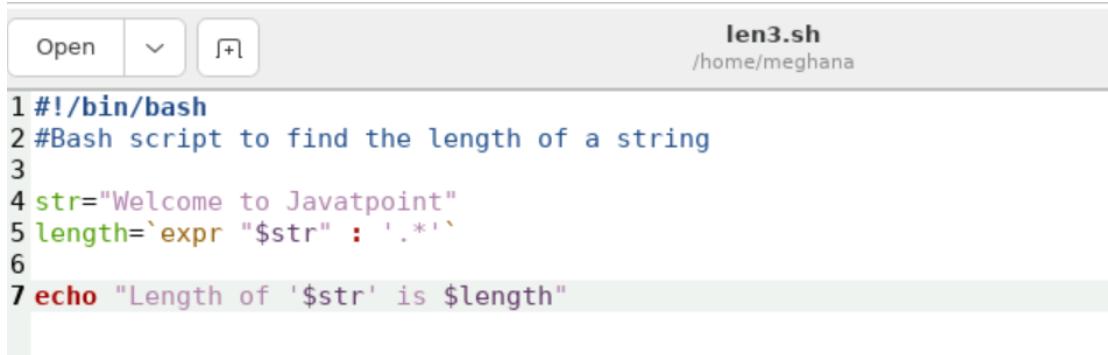
```

meghana@3148c6658f7456b:~$ touch len.sh
meghana@3148c6658f7456b:~$ chmod 777 len.sh
meghana@3148c6658f7456b:~$ gedit len.sh

(gedit:6048): IBUS-WARNING **: 09:25:47.679: Failed to mkdir /home/meghana/snap/gedit/684/.config/ibus/bus: Not a directory
** (gedit:6048): WARNING **: 09:26:16.944: atk-bridge: get_device_events_reply: unknown signature
meghana@3148c6658f7456b:~$ ./len.sh
Length of 'Welcome to Javatpoint' is 21
meghana@3148c6658f7456b:~$ -

```

## 30. EXAMPLE 3:



The screenshot shows a terminal window with the following content:

```

Open   ▾   +   len3.sh
/home/meghana

1#!/bin/bash
2#Bash script to find the length of a string
3
4str="Welcome to Javatpoint"
5length=`expr "$str" : '\.*'`
6
7echo "Length of '$str' is $length"

```

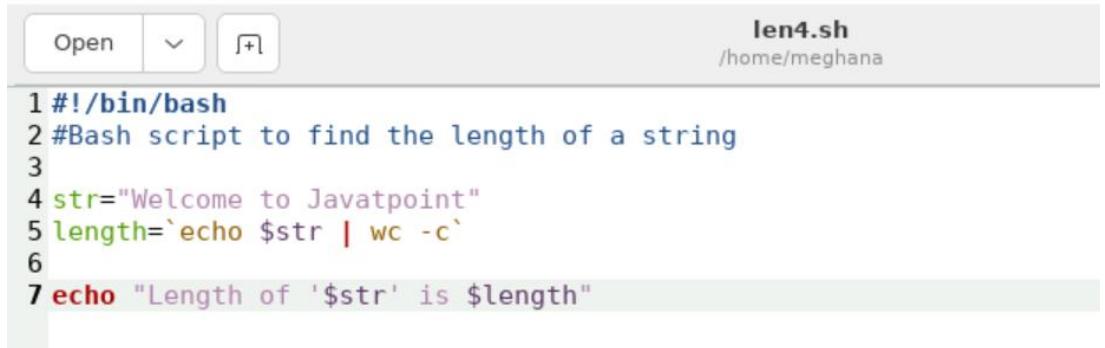
```

meghana@3148c6658f7456b:~$ touch len3.sh
meghana@3148c6658f7456b:~$ chmod 777 len3.sh
meghana@3148c6658f7456b:~$ gedit len3.sh

(gedit:6163): IBUS-WARNING **: 09:30:30.028: Failed to mkdir /home/meghana/snap/gedit/684/.config/ibus/bus: Not a directory
meghana@3148c6658f7456b:~$ ./len3.sh
Length of 'Welcome to Javatpoint' is 21
meghana@3148c6658f7456b:~$ -

```

### 31. EXAMPLE 4



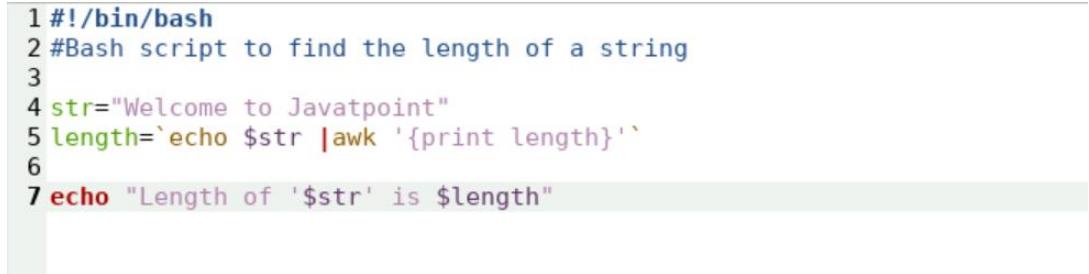
```
len4.sh
/home/meghana

1#!/bin/bash
2#Bash script to find the length of a string
3
4str="Welcome to Javatpoint"
5length=`echo $str | wc -c`
6
7echo "Length of '$str' is $length"
```

```
meghana@3148c6658f7456b:~$ touch len4.sh
meghana@3148c6658f7456b:~$ chmod 777 len4.sh
meghana@3148c6658f7456b:~$ gedit len4.sh

(gedit:6277): IBUS-WARNING **: 09:34:13.750: Failed to mkdir /home/meghana/snap/gedit/684/.config/ibus/bus: Not a directory
meghana@3148c6658f7456b:~$ ./len4.sh
Length of 'Welcome to Javatpoint' is 22
meghana@3148c6658f7456b:~$
```

### 32. EXAMPLE 5



```
len5.sh
/home/meghana

1#!/bin/bash
2#Bash script to find the length of a string
3
4str="Welcome to Javatpoint"
5length=`echo $str | awk '{print length}'`
6
7echo "Length of '$str' is $length"
```

```
meghana@3148c6658f7456b:~$ touch len5.sh
meghana@3148c6658f7456b:~$ chmod 777 len5.sh
meghana@3148c6658f7456b:~$ gedit len5.sh

(gedit:6392): IBUS-WARNING **: 09:36:13.456: Failed to mkdir /home/meghana/snap/gedit/684/.config/ibus/bus: Not a directory
meghana@3148c6658f7456b:~$ ./len5.sh
Length of 'Welcome to Javatpoint' is 21
meghana@3148c6658f7456b:~$
```

## BASH SPLIT

### 33. SPLITTING THE STRING BASED ON SPACE



```
*space.sh
/home/meghana

1#!/bin/bash
2
3# Example for bash split string by space
4read -p "Enter any string separated by space: " str # reading string value
5
6IFS=' ' # setting space as delimiter
7read -ra ADDR <<< "$str" # reading str as an array as tokens separated by IFS
8
9for i in "${ADDR[@]}"; # accessing each element of array
10do
11    echo "$i"
12done
13|
```

```
meghana@3148c6658f7456b:~$ touch space.sh
meghana@3148c6658f7456b:~$ chmod 777 space.sh
meghana@3148c6658f7456b:~$ gedit space.sh

(gedit:6666): IBUS-WARNING **: 12:18:44.907: Failed to mkdir /home/meghana/snap/gedit/684/.config/ibus/bus: Not a directory
meghana@3148c6658f7456b:~$ ./space.sh
Enter any string separated by space: meghana valluri is gud gurl
meghana
valluri
is
gud
gurl
meghana@3148c6658f7456b:~$
```

### 34. BASH STRING SPLIT BY SYMBOL (COMMA)

```
symbol.sh
/home/meghana
Save
1 #!/bin/bash
2 #Example for bash split string by Symbol (comma)
3
4 read -p "Enter Name, State and Age separated by a comma: " entry #reading string value
5
6 IFS=',' #setting comma as delimiter
7 read -a strarr <<<"$entry" #reading str as an array as tokens separated by IFS
8
9 echo "Name : ${strarr[0]} "
10 echo "State : ${strarr[1]} "
11 echo "Age : ${strarr[2]} "
meghana@3148c6658f7456b:~$ touch symbol.sh
meghana@3148c6658f7456b:~$ chmod 777 symbol.sh
meghana@3148c6658f7456b:~$ gedit symbol.sh
(gedit:6772): IBUS-WARNING **: 12:22:12.622: Failed to mkdir /home/meghana/snap/gedit/684/.config/ibus/bus: Not a directory
meghana@3148c6658f7456b:~$ ./symbol.sh
Enter Name, State and Age separated by a comma: meghana, telangana, 22
Name : meghana
State : telangana
Age : 22
meghana@3148c6658f7456b:~$
```

### 35. BASH STRING SPLIT WITHOUT IFS

```
wolfs.sh
/home/meghana
Save
1 #!/bin/bash
2 #Example for bash split string without $IFS
3
4 read -p "Enter any string separated by colon(:) " str #reading string value
5
6 readarray -d : -t strarr <<<"$str" #split a string based on the delimiter ':'
7
8 printf "\n"
9
10 #Print each value of Array with the help of loop
11 for (( n=0; n < ${#strarr[*]}; n++ ))
12 do
13 echo "${strarr[n]}"
14 done
meghana@3148c6658f7456b:~$ touch wolfs.sh
meghana@3148c6658f7456b:~$ chmod 777 wolfs.sh
meghana@3148c6658f7456b:~$ gedit wolfs.sh
(gedit:6919): IBUS-WARNING **: 12:30:50.717: Failed to mkdir /home/meghana/snap/gedit/684/.config/ibus/bus: Not a directory
meghana@3148c6658f7456b:~$ ./wolfs.sh
Enter any string separated by colon(:) meghana:valluri
meghana
valluri
meghana@3148c6658f7456b:~$
```

Activate Windows  
Go to Settings to activate Windows.

Type here to search

17:44 28-01-2025

18:02 28-01-2025

## 36. BASH SPRING SPLIT WITH ANOTHER STRING

The screenshot shows a terminal window with the following content:

```
neghana@3148c6658f7456b:~$ touch another.sh
neghana@3148c6658f7456b:~$ chmod 777 another.sh
neghana@3148c6658f7456b:~$ gedit another.sh

(gedit:597): IBUS-WARNING **: 11:56:24.519: Failed to mkdir /home/meghana/snap/gedit/684/.config/ibus/bus: Not a directory
meghana@3148c6658f7456b:~$ ./another.sh
declare -a array=(["0"]="We" ["1"]="Welcome" ["2"]="You" ["3"]="On" ["4"]="Javatpoint")
meghana@3148c6658f7456b:~$
```

## 37. BASH SPRING SPLIT USING TRIM

```
1#!/bin/bash
2# Example to split a string using tr command
3
4my_str="We;welcome;you;on;javatpoint."
5my_arr=($(echo $my_str | tr ';' '\n'))
6
7for i in "${my_arr[@]}"
8do
9    echo $i
10done
```

meghana@3148c6658f7456b:~\$ touch trim.sh  
meghana@3148c6658f7456b:~\$ chmod 777 trim.sh  
meghana@3148c6658f7456b:~\$ gedit trim.sh

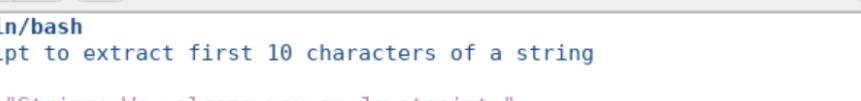
(gedit:1329): IBUS-WARNING \*\*: 12:07:07.190: Failed to mkdir /home/meghana/snap/gedit/684/.config/ibus/bus: Not a directory

\*\* (gedit:1329): WARNING \*\*: 12:07:36.414: atk-bridge: get\_device\_events\_reply: unknown signature

meghana@3148c6658f7456b:~\$ ./trim.sh

We  
welcome  
you  
on  
javatpoint.

### **38. To Extract till Specific Characters from Starting**



The screenshot shows a terminal window with the following details:

- File menu buttons: Open, Save.
- Title bar: extract.sh, /home/meghana.
- Text area:

```
1#!/bin/bash
2#Script to extract first 10 characters of a string
3
4echo "String: We welcome you on Javatpoint."
5str="We welcome you on Javatpoint."
6
7echo "Total characters in a String: ${#str} "
8
9substr="\${str:0:10}"
10
11echo "Substring: $substr"
12echo "Total characters in Substring: ${#substr} "
```

```

meghana@3148c6658f7456b:~$ touch extract.sh
meghana@3148c6658f7456b:~$ chmod 777 extract.sh
meghana@3148c6658f7456b:~$ gedit extract.sh

(gedit:1448): IBUS-WARNING **: 12:10:50.980: Failed to mkdir /home/meghana/snap/gedit/684/.config/ibus/bus: Not a directory
meghana@3148c6658f7456b:~$ ./extract.sh
String: We welcome you on Javatpoint.
Total characters in a String: 29
Substring: We welcome
Total characters in Substring: 10
meghana@3148c6658f7456b:~$ -

```

### 39. To Extract from Specific Character onwards



```

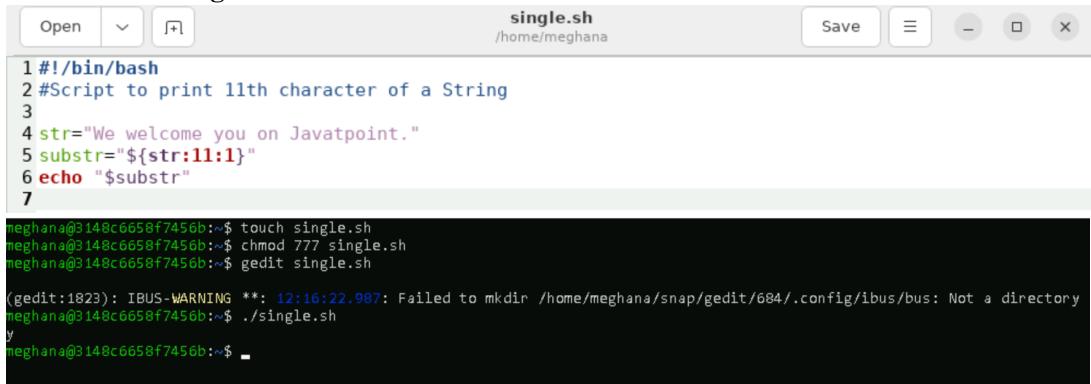
Open   ↻   +   char.sh   /home/meghana   Save   ⌂
1 #!/bin/bash
2 #Script to print from 11th character onwards
3
4 str="We welcome you on Javatpoint."
5 substr="${str:11}"
6 echo "$substr"

meghana@3148c6658f7456b:~$ touch char.sh
meghana@3148c6658f7456b:~$ chmod 777 char.sh
meghana@3148c6658f7456b:~$ gedit char.sh

(gedit:1697): IBUS-WARNING **: 12:13:31.273: Failed to mkdir /home/meghana/snap/gedit/684/.config/ibus/bus: Not a directory
meghana@3148c6658f7456b:~$ ./char.sh
you on Javatpoint.
meghana@3148c6658f7456b:~$ -

```

### 40. To Extract a Single Character



```

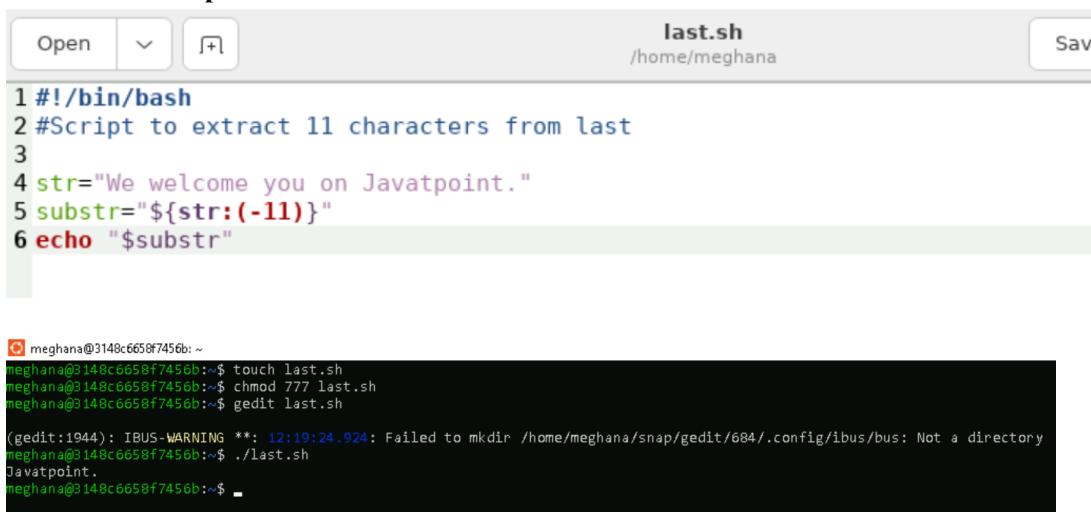
Open   ↻   +   single.sh   /home/meghana   Save   ⌂   -   ×
1 #!/bin/bash
2 #Script to print 11th character of a String
3
4 str="We welcome you on Javatpoint."
5 substr="${str:11:1}"
6 echo "$substr"
7

meghana@3148c6658f7456b:~$ touch single.sh
meghana@3148c6658f7456b:~$ chmod 777 single.sh
meghana@3148c6658f7456b:~$ gedit single.sh

(gedit:1823): IBUS-WARNING **: 12:16:22.987: Failed to mkdir /home/meghana/snap/gedit/684/.config/ibus/bus: Not a directory
meghana@3148c6658f7456b:~$ ./single.sh
y
meghana@3148c6658f7456b:~$ -

```

### 41. To Extract the specific characters from last



```

Open   ↻   +   last.sh   /home/meghana   Sav
1 #!/bin/bash
2 #Script to extract 11 characters from last
3
4 str="We welcome you on Javatpoint."
5 substr="${str:(-11)}"
6 echo "$substr"

meghana@3148c6658f7456b:~$ touch last.sh
meghana@3148c6658f7456b:~$ chmod 777 last.sh
meghana@3148c6658f7456b:~$ gedit last.sh

(gedit:1944): IBUS-WARNING **: 12:19:24.924: Failed to mkdir /home/meghana/snap/gedit/684/.config/ibus/bus: Not a directory
meghana@3148c6658f7456b:~$ ./last.sh
Javatpoint.
meghana@3148c6658f7456b:~$ -

```

## 42. Write Variables Side by Side

```
Open ▾ + sidebyside.sh /home/meghana Save ⌂ - X
1 #!/bin/bash
2 #Script to Concatenate Strings
3
4 #Declaring the first String
5 str1="We welcome you"
6
7 #Declaring the Second String
8 str2=" on Javatpoint."
9
10 #Combining first and second string
11 str3="$str1$str2"
12
13 #Printing a new string by combining both
14 echo $str3

meghana@3148c6658f7456b:~$ touch sidebyside.sh
meghana@3148c6658f7456b:~$ chmod 777 sidebyside.sh
meghana@3148c6658f7456b:~$ gedit sidebyside.sh

(gedit:2059): IBUS-WARNING **: 12:20:32.248: Failed to mkdir /home/meghana/snap/gedit/684/.config/ibus/bus: Not a directory
meghana@3148c6658f7456b:~$ ./sidebyside.sh
We welcome you on Javatpoint.
meghana@3148c6658f7456b:~$
```

## 43. Using Double Quotes

```
Open ▾ + double.sh /home/meghana Save ⌂ - X
1 #!/bin/bash
2 #Script to Concatenate Strings
3
4 #Declaring String Variable
5 str="We welcome you"
6
7 #Add the variable within the string
8 echo "$str on Javatpoint."

meghana@3148c6658f7456b:~$ touch double.sh
meghana@3148c6658f7456b:~$ chmod 777 double.sh
meghana@3148c6658f7456b:~$ gedit double.sh

(gedit:2175): IBUS-WARNING **: 12:21:40.276: Failed to mkdir /home/meghana/snap/gedit/684/.config/ibus/bus: Not a directory
meghana@3148c6658f7456b:~$ ./double.sh
We welcome you on Javatpoint.
meghana@3148c6658f7456b:~$
```

## 44. Using Append Operator with Loop

```
Open ▾ + op.sh /home/meghana Save ⌂ - X
1 #!/bin/bash
2 echo "Printing the name of the programming languages"
3 #Initializing the variable before combining
4 lang=""
5 #for loop for reading the list
6 for value in 'java' 'python' 'C' 'C++';
7 do
8 lang+="$value " #Combining the list values using append operator
9 done
10 #Printing the combined values
11 echo "$lang"

meghana@3148c6658f7456b:~$ ./op.sh
Printing the name of the programming languages
java python C C++
```

```

meghana@3148c6658f7456b:~ 
meghana@3148c6658f7456b:~$ touch op.sh
meghana@3148c6658f7456b:~$ chmod 777 op.sh
meghana@3148c6658f7456b:~$ gedit op.sh
(gedit:2291): IBUS-WARNING **: 12:30:06.979: Failed to mkdir /home/meghana/snap/gedit/684/.config/ibus/bus: Not a directory
meghana@3148c6658f7456b:~$ ./op.sh
Printing the name of the programming languages
javavpythonCC+
meghana@3148c6658f7456b:~$ 

```

## 45. Using Literal Strings



```

meghana@3148c6658f7456b:~ 
meghana@3148c6658f7456b:~$ touch printf.sh
meghana@3148c6658f7456b:~$ chmod 777 printf.sh
meghana@3148c6658f7456b:~$ gedit printf.sh
(gedit:2404): IBUS-WARNING **: 12:30:59.134: Failed to mkdir /home/meghana/snap/gedit/684/.config/ibus/bus: Not a directory
meghana@3148c6658f7456b:~$ ./printf.sh
Welcome to Javatpoint.
meghana@3148c6658f7456b:~$ 

```

## 46. Using Underscore

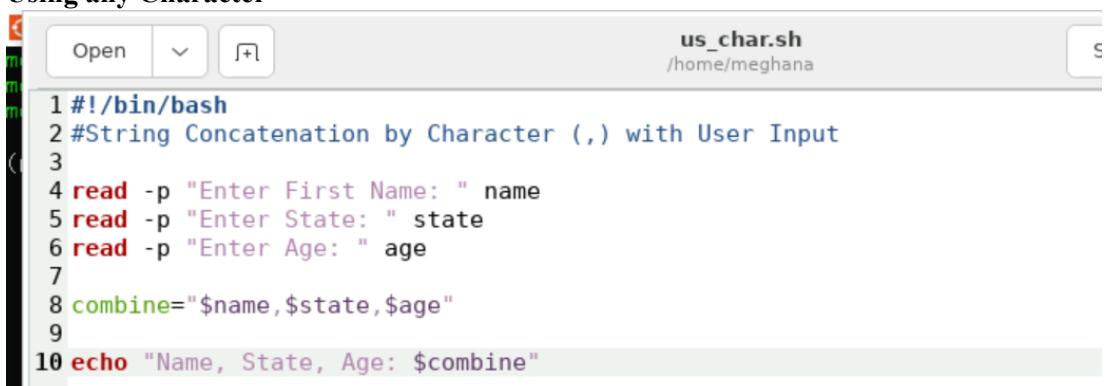


```

meghana@3148c6658f7456b:~$ touch under.sh
meghana@3148c6658f7456b:~$ chmod 777 under.sh
meghana@3148c6658f7456b:~$ gedit under.sh
(gedit:2955): IBUS-WARNING **: 03:58:59.303: Failed to mkdir /home/meghana/snap/gedit/684/.config/ibus/bus: Not a directory
meghana@3148c6658f7456b:~$ ./under.sh
Hello_World!
meghana@3148c6658f7456b:~$ 

```

## 47. Using any Character



```

meghana@3148c6658f7456b:~ 
meghana@3148c6658f7456b:~$ touch us_char.sh
meghana@3148c6658f7456b:~$ chmod 777 us_char.sh
meghana@3148c6658f7456b:~$ gedit us_char.sh
(gedit:3055): IBUS-WARNING **: 03:58:59.303: Failed to mkdir /home/meghana/snap/gedit/684/.config/ibus/bus: Not a directory
meghana@3148c6658f7456b:~$ ./us_char.sh
String Concatenation by Character (,) with User Input
Enter First Name: name
Enter State: state
Enter Age: age
Name, State, Age: $combine
meghana@3148c6658f7456b:~$ 

```

```

meghana@3148c6658f7456b:~$ touch us_char.sh
meghana@3148c6658f7456b:~$ chmod 777 us_char.sh
meghana@3148c6658f7456b:~$ gedit us_char.sh

(gedit:3071): IBUS-WARNING **: 04:01:34.438: Failed to mkdir /home/meghana/snap/gedit/684/.config/ibus/bus: Not a directory
meghana@3148c6658f7456b:~$ ./us_char.sh
Enter First Name: meghana
Enter State: t.s.
Enter Age: 22
Name, State, Age: meghana,t.s.,22
meghana@3148c6658f7456b:~$ -

```

## Bash Functions

### 48. Passing Arguments

```

Open  Save  /home/meghana
pass_arg.sh
1 #!/bin/bash
2 #Script to pass and access arguments
3
4 function_arguments()
5 {
6     echo $1
7     echo $2
8     echo $3
9     echo $4
10    echo $5
11 }
12
13 #Calling function_arguments
14 function_arguments "We""welcome""you""on""Javatpoint."

```

```

meghana@3148c6658f7456b:~$ touch pass_arg.sh
meghana@3148c6658f7456b:~$ chmod 777 pass_arg.sh
meghana@3148c6658f7456b:~$ gedit pass_arg.sh

(gedit:3187): IBUS-WARNING **: 04:08:24.087: Failed to mkdir /home/meghana/snap/gedit/684/.config/ibus/bus: Not a directory
meghana@3148c6658f7456b:~$ ./pass_arg.sh
WelcomemyouonJavatpoint.

meghana@3148c6658f7456b:~$ -

```

### 49. Variable Scope

```

Open  Save  /home/meghana
var.sh
1 #!/bin/bash
2
3 v1='A'
4 v2='B'
5
6 my_var () {
7     local v1='C'
8     v2='D'
9     echo "Inside Function"
10    echo "v1 is $v1."
11    echo "v2 is $v2."
12 }
13
14 echo "Before Executing the Function"
15 echo "v1 is $v1."
16 echo "v2 is $v2."
17
18 my_var
19 echo "After Executing the Function"
20 echo "v1 is $v1."
21 echo "v2 is $v2."

```

```

meghana@3148c6658f7456b:~$ touch var.sh
meghana@3148c6658f7456b:~$ chmod 777 var.sh
meghana@3148c6658f7456b:~$ gedit var.sh

(gedit:3412): IBUS-WARNING **: 04:13:43.012: Failed to mkdir /home/meghana/snap/gedit/684/.config/ibus/bus: Not a directory
meghana@3148c6658f7456b:~$ ./var.sh
Before Executing the Function
v1 is A.
v2 is B.
Inside Function
v1 is C.
v2 is D.
After Executing the Function
v1 is A.
v2 is D.
meghana@3148c6658f7456b:~$ -

```

## 50. Return Values

```
return.sh
/home/meghana
Save
Open ▾ + ↻ ×

1 #!/bin/bash
2 #Setting up a return status for a function
3
4 print_it () {
5     echo Hello $1
6     return 5
7 }
8
9 print_it User
10 print_it Reader
11 echo The previous function returned a value of $?

meghana@3148c6658f7456b:~$ touch return.sh
meghana@3148c6658f7456b:~$ chmod 777 return.sh
meghana@3148c6658f7456b:~$ gedit return.sh

(gedit:3528): IBUS-WARNING **: 04:16:49.160: Failed to mkdir /home/meghana/snap/gedit/684/.config/ibus/bus: Not a directory
** (gedit:3528): WARNING **: 04:17:15.494: atk-bridge: get_device_events_reply: unknown signature
meghana@3148c6658f7456b:~$ ./return.sh
Hello User
Hello Reader
The previous function returned a value of 5
meghana@3148c6658f7456b:~$
```

## 51. Return values using Printf and echo

```
ret_print.sh
/home/meghana
Save
Open ▾ + ↻ ×

1 #!/bin/bash
2
3 print_it () {
4     local my_greet="Welcome to Javatpoint."
5     echo "$my_greet"
6 }
7
8 my_greet=$(print_it)
9 echo $my_greet

meghana@3148c6658f7456b:~$ touch ret_print.sh
meghana@3148c6658f7456b:~$ chmod 777 ret_print.sh
meghana@3148c6658f7456b:~$ gedit ret_print.sh

(gedit:3645): IBUS-WARNING **: 04:21:24.712: Failed to mkdir /home/meghana/snap/gedit/684/.config/ibus/bus: Not a directory
meghana@3148c6658f7456b:~$ ./ret_print.sh
Welcome to Javatpoint.
meghana@3148c6658f7456b:~$
```

## 52. Overriding Commands

```
override.sh
/home/meghana
Save
Open ▾ + ↻ ×

1 #!/bin/bash
2 #Script to override command using function
3
4 echo () {
5     builtin echo -n `date +[%m-%d %H:%M:%S]` ":" "
6     builtin echo $1
7 }
8
9 echo "Welcome to Javatpoint."

meghana@3148c6658f7456b:~$ touch override.sh
meghana@3148c6658f7456b:~$ chmod 777 override.sh
meghana@3148c6658f7456b:~$ gedit override.sh

(gedit:3762): IBUS-WARNING **: 04:24:35.340: Failed to mkdir /home/meghana/snap/gedit/684/.config/ibus/bus: Not a directory
** (gedit:3762): WARNING **: 04:25:03.120: atk-bridge: get_device_events_reply: unknown signature
meghana@3148c6658f7456b:~$ ./override.sh
[01-30 04:25:19] : Welcome to Javatpoint.
meghana@3148c6658f7456b:~$
```

## Bash Array

### 53. Print element of an array with an index of 2

The screenshot shows a terminal window with the following session:

```
meghana@3148c6658f7456b:~$ touch index2.sh
meghana@3148c6658f7456b:~$ chmod 777 index2.sh
meghana@3148c6658f7456b:~$ gedit index2.sh

(gedit:3882): IBUS-WARNING **: 04:30:29.607: Failed to mkdir /home/meghana/snap/gedit/684/.config/ibus/bus: Not a directory
meghana@3148c6658f7456b:~$ ./index2.sh

meghana@3148c6658f7456b:~$ gedit index2.sh

(gedit:3993): IBUS-WARNING **: 04:31:18.214: Failed to mkdir /home/meghana/snap/gedit/684/.config/ibus/bus: Not a directory
** (gedit:3993): WARNING **: 04:31:45.575: atk-bridge: get_device_events_reply: unknown signature
meghana@3148c6658f7456b:~$ ./index2.sh
Javatpoint
meghana@3148c6658f7456b:~$ -
```

### 54. Print all the elements without specified index

The screenshot shows a terminal window with the following session:

```
meghana@3148c6658f7456b:~$ touch unspecified.sh
meghana@3148c6658f7456b:~$ chmod 777 unspecified.sh
meghana@3148c6658f7456b:~$ gedit unspecified.sh

(gedit:4221): IBUS-WARNING **: 04:36:28.378: Failed to mkdir /home/meghana/snap/gedit/684/.config/ibus/bus: Not a directory
meghana@3148c6658f7456b:~$ ./unspecified.sh
WelcomeToJavatpoint
meghana@3148c6658f7456b:~$ -
```

### 55. Print Keys of array

The screenshot shows a terminal window with the following session:

```
meghana@3148c6658f7456b:~$ touch keysofarray.sh
meghana@3148c6658f7456b:~$ chmod 777 keysofarray.sh
meghana@3148c6658f7456b:~$ gedit keysofarray.sh

(gedit:4336): IBUS-WARNING **: 04:38:51.628: Failed to mkdir /home/meghana/snap/gedit/684/.config/ibus/bus: Not a directory
meghana@3148c6658f7456b:~$ ./keysofarray.sh
B
meghana@3148c6658f7456b:~$ -
```

## 56. Finding length of array



```
Open ▾ + ar_len.sh /home/meghana Save ⌂
1 #!/bin/bash
2
3 #Declaring the Array
4 declare -a example_array=( "Welcome" "To" "Javatpoint" )
5
6 #Printing Array Length
7 echo "The array contains ${#example_array[@]} elements"
```

```
meghana@3148c6658f7456b:~$ touch ar_len.sh
meghana@3148c6658f7456b:~$ chmod 777 ar_len.sh
meghana@3148c6658f7456b:~$ gedit ar_len.sh

(gedit:4451): IBUS-WARNING **: 04:41:31.177: Failed to mkdir /home/meghana/snap/gedit/684/.config/ibus/bus: Not a directory
meghana@3148c6658f7456b:~$ ./ar_len.sh
The array contains 3 elements
meghana@3148c6658f7456b:~$
```

## 57. Loop through the Array

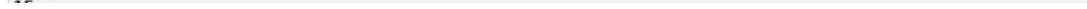


```
Open ▾ + loop.sh /home/meghana Save
1 #!/bin/bash
2 # Script to print all keys and values using a loop through the array
3
4 # Declaring the array correctly (elements must be space-separated)
5 declare -a example_array=( "Welcome" "To" "Javatpoint" )
6
7 # Array Loop to print index (key) and corresponding value
8 for i in "${!example_array[@]}"
9 do
10 echo "The key value of element '${example_array[$i]}' is '$i'"
11 done
12
```

```
meghana@3148c6658f7456b:~$ touch loop.sh
meghana@3148c6658f7456b:~$ chmod 777 loop.sh
meghana@3148c6658f7456b:~$ gedit loop.sh

(gedit:4566): IBUS-WARNING **: 04:43:48.003: Failed to mkdir /home/meghana/snap/gedit/684/.config/ibus/bus: Not a directory
** (gedit:4566): WARNING **: 04:44:16.721: atk-bridge: get_device_events_reply: unknown signature
meghana@3148c6658f7456b:~$ ./loop.sh
The key value of element 'Welcome' is 0
The key value of element 'To' is 1
The key value of element 'Javatpoint' is 2
meghana@3148c6658f7456b:~$
```

## 58. C-style loop



```
Open ▾ + c-loop.sh /home/meghana Save ⌂
1 #!/bin/bash
2 # Script to loop through an array in C-style
3
4 # Declaring the array correctly (elements must be space-separated)
5 declare -a example_array=( "Welcome" "To" "Javatpoint" )
6
7 # Length of the array
8 length=${#example_array[@]}
9
10 # Array Loop
11 for (( i=0; i < length; i++ ))
12 do
13 echo "$i ${example_array[$i]}"
14 done
```

```

meghana@3148c6658f7456b:~$ touch c-loop.sh
meghana@3148c6658f7456b:~$ chmod 777 c-loop.sh
meghana@3148c6658f7456b:~$ gedit c-loop.sh

(gedit:4792): IBUS-WARNING **: 04:52:04.255: Failed to mkdir /home/meghana/snap/gedit/684/.config/ibus/bus: Not a directory
** (gedit:4792): WARNING **: 04:52:32.340: atk-bridge: get_device_events_reply: unknown signature
meghana@3148c6658f7456b:~$ ./c-loop.sh
0 WelcomeToJavatpoint
meghana@3148c6658f7456b:~$ gedit c-loop.sh

(gedit:4904): IBUS-WARNING **: 04:54:25.458: Failed to mkdir /home/meghana/snap/gedit/684/.config/ibus/bus: Not a directory
** (gedit:4904): WARNING **: 04:54:53.287: atk-bridge: get_device_events_reply: unknown signature
meghana@3148c6658f7456b:~$ ./c-loop.sh
0 Welcome
1 To
2 Javatpoint
meghana@3148c6658f7456b:~$ -

```

Activate View  
Go to Settings

## 59. Adding elements to array

```

Open ▾ + Save
adding_el.sh
/home/meghana
1 #!/bin/bash
2
3 #Declaring an array
4 declare -a example_array=( "Java""Python""PHP""HTML" )
5
6 #Adding new element
7 example_array[4]="JavaScript"
8
9 #Printing all the elements
10 echo "${example_array[@]}"

meghana@3148c6658f7456b:~$ touch adding_el.sh
meghana@3148c6658f7456b:~$ chmod 777 adding_el.sh
meghana@3148c6658f7456b:~$ gedit adding_el.sh

(gedit:5021): IBUS-WARNING **: 05:07:22.287: Failed to mkdir /home/meghana/snap/gedit/684/.config/ibus/bus: Not a directory
meghana@3148c6658f7456b:~$ ./adding_el.sh
JavaPythonPHPHTML JavaScript
meghana@3148c6658f7456b:~$ -

```

## 60. Updating elements in array

```

Open ▾ + Save
updating.sh
/home/meghana
1 #!/bin/bash
2 #Script to update array element
3
4 #Declaring the array
5 declare -a example_array=( "We""welcome""you""on""SSSIT" )
6
7 #Updating the Array Element
8 example_array[4]=Javatpoint
9
10 #Printig all the elements of the Array
11 echo ${example_array[@]}

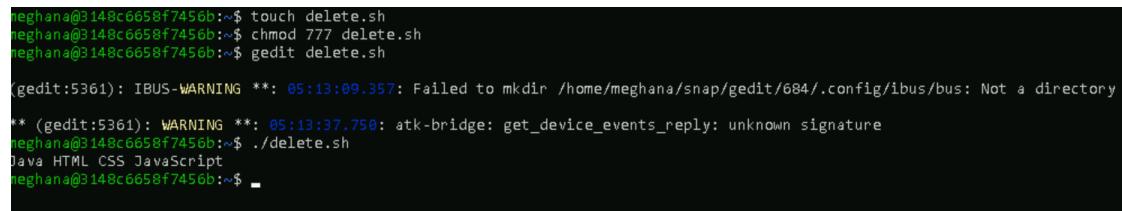
meghana@3148c6658f7456b:~$ touch updating.sh
meghana@3148c6658f7456b:~$ chmod 777 updating.sh
meghana@3148c6658f7456b:~$ gedit updating.sh

(gedit:5138): IBUS-WARNING **: 05:09:51.395: Failed to mkdir /home/meghana/snap/gedit/684/.config/ibus/bus: Not a directory
meghana@3148c6658f7456b:~$ ./updating.sh
We welcome you on SSSIT Javatpoint
meghana@3148c6658f7456b:~$ gedit updating.sh

(gedit:5248): IBUS-WARNING **: 05:10:47.829: Failed to mkdir /home/meghana/snap/gedit/684/.config/ibus/bus: Not a directory
meghana@3148c6658f7456b:~$ ./updating.sh
We welcome you on Javatpoint
meghana@3148c6658f7456b:~$ -

```

## 61. Deleting array elements

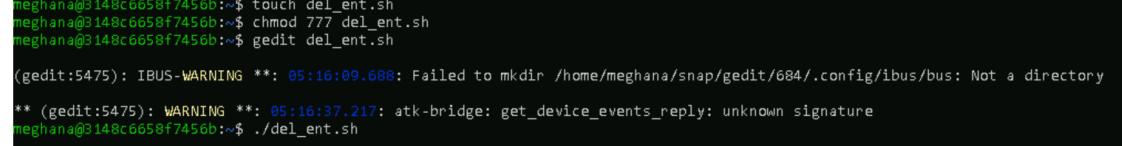


```
Open ▾ F+ delete.sh /home/meghana Save
1 #!/bin/bash
2 # Script to delete an element from the array
3
4 # Declaring the array correctly (elements must be space-separated)
5 declare -a example_array=( "Java" "Python" "HTML" "CSS" "JavaScript" )
6
7 # Removing the element at index 1 (Python)
8 unset example_array[1]
9
10 # Printing all the elements after deletion
11 echo "${example_array[@]}"
12
```

```
meghana@3148c6658f7456b:~$ touch delete.sh
meghana@3148c6658f7456b:~$ chmod 777 delete.sh
meghana@3148c6658f7456b:~$ gedit delete.sh

(gedit:5361): IBUS-WARNING **: 05:13:09.357: Failed to mkdir /home/meghana/snap/gedit/684/.config/ibus/bus: Not a directory
** (gedit:5361): WARNING **: 05:13:37.750: atk-bridge: get_device_events_reply: unknown signature
meghana@3148c6658f7456b:~$ ./delete.sh
Java HTML CSS JavaScript
meghana@3148c6658f7456b:~$
```

## 62. Deleting an entire array

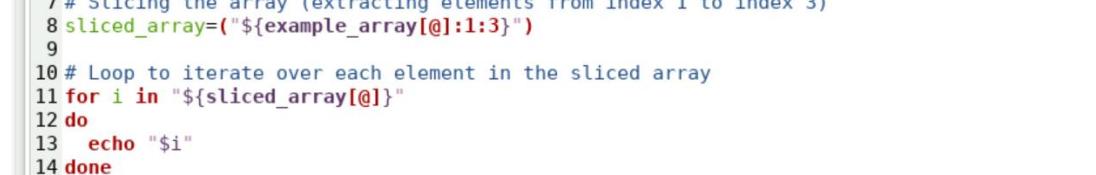


```
Open ▾ F+ del_ent.sh /home/meghana Save ⌂
1 #!/bin/bash
2 # Script to delete the entire array
3
4 # Declaring the array correctly (elements must be space-separated)
5 declare -a example_array=( "Java" "Python" "HTML" "CSS" "JavaScript" )
6
7 # Deleting the entire array
8 unset example_array
9
10 # Printing the array elements (should print nothing)
11 echo "${example_array[@]}"
12
13 # Printing the keys (should print nothing)
14 echo "${!example_array[@]}"
15
```

```
meghana@3148c6658f7456b:~$ touch del_ent.sh
meghana@3148c6658f7456b:~$ chmod 777 del_ent.sh
meghana@3148c6658f7456b:~$ gedit del_ent.sh

(gedit:5475): IBUS-WARNING **: 05:16:09.688: Failed to mkdir /home/meghana/snap/gedit/684/.config/ibus/bus: Not a directory
** (gedit:5475): WARNING **: 05:16:37.217: atk-bridge: get_device_events_reply: unknown signature
meghana@3148c6658f7456b:~$ ./del_ent.sh
```

## 63. Slice array elements



```
Open ▾ F+ slice.sh /home/meghana Save ⌂
1 #!/bin/bash
2 # Script to slice array elements from index 1 to index 3
3
4 # Declaring the array correctly (elements must be space-separated)
5 example_array=( "Java" "Python" "HTML" "CSS" "JavaScript" )
6
7 # Slicing the array (extracting elements from index 1 to index 3)
8 sliced_array=("${example_array[@]:1:3}")
9
10 # Loop to iterate over each element in the sliced array
11 for i in "${sliced_array[@]}"
12 do
13   echo "$i"
14 done
```

```
meghana@3148c6658f7456b:~$ touch slice.sh
meghana@3148c6658f7456b:~$ chmod 777 slice.sh
meghana@3148c6658f7456b:~$ gedit slice.sh
(gedit:5595): IBUS-WARNING **: 05:19:21.791: Failed to mkdir /home/meghana/snap/gedit/684/.config/ibus/bus: Not a directory
** (gedit:5595): WARNING **: 05:19:49.315: atk-bridge: get_device_events_reply: unknown signature
meghana@3148c6658f7456b:~$ ./slice.sh
Python
HTML
CSS
meghana@3148c6658f7456b:~$
```