BASH CASE

1) Simple scenario to demonstrate the use of the case statement

Step1: Create a Bash Script

Step 2: Write the script in the editor.

Step 3: Run the script

2) Combined scenario where there is also a default case when no previous matched case is found.

Step1: Create a Bash Script

Step 2: Write the script in the editor.

Step 3: Run the script

BASH FOR LOOP

3) Basic For loop

Step1: Create a Bash Script

```
root@f304ea52daec59c:~# touch for1.sh
root@f304ea52daec59c:~# chmod +x for1.sh
root@f304ea52daec59c:~# vi for1.sh
```

Step 2: Write the script in the editor.

```
Learn="Start learning from javatpoint"
for learn in $learn
do
        echo $learn
done
echo "thank you"
```

Step 3: Run the script

```
root@f304ea52daec59c:~# ./for1.sh
Start
learning
from
javatpoint
thank you
```

4) For Loop to Read a Range

Step1: Create a Bash Script

```
root@f304ea52daec59c:~# touch for2.sh
root@f304ea52daec59c:~# chmod +x for2.sh
root@f304ea52daec59c:~# vi for2.sh
```

Step 2: Write the script in the editor.

```
for num in {1..10}
do
        echo $num
done
echo "series of number from 1 to 10."
```

Step 3: Run the script

```
root@f304ea52daec59c:~# ./for2.sh
1
2
3
4
5
6
7
8
9
10
series of number from 1 to 10.
```

5) For Loop to Read a Range with Increment.

Step1: Create a Bash Script

```
root@f304ea52daec59c:~# touch for3.sh
root@f304ea52daec59c:~# chmod +x for3.sh
root@f304ea52daec59c:~# vi for3.sh
```

Step 2: Write the script in the editor.

```
for num in {1..10..1}
do
        echo $num
done
```

Step 3: Run the script

```
root@f304ea52daec59c:~# ./for3.sh
1
2
3
4
5
6
7
8
9
10
```

6) For Loop to Read a Range with Decrement

Step1: Create a Bash Script

```
root@f304ea52daec59c:~# touch for3.sh
root@f304ea52daec59c:~# chmod +x for3.sh
root@f304ea52daec59c:~# vi for3.sh
```

Step 2: Write the script in the editor.

```
for num in {1..10..1}
do
        echo $num
done
```

Step 3: Run the script

```
root@f304ea52daec59c:~# ./for3.sh
10
9
8
7
6
5
4
3
2
1
0
```

7) For Loop to Read Array Variables

Step1: Create a Bash Script

```
root@f304ea52daec59c:~# touch for5.sh
root@f304ea52daec59c:~# chmod +x for5.sh
root@f304ea52daec59c:~# vi for5.sh
root@f304ea52daec59c:~# ./for5.sh
./for5.sh: line 1: syntax error near unexpected token `)'
./for5.sh: line 1: `arr="(welcome""to""javatpoint")'
root@f304ea52daec59c:~# vi for5.sh
root@f304ea52daec59c:~# ./for5.sh
./for5.sh: line 2: syntax error near unexpected token `in"${arr[@]}"'
./for5.sh: line 2: `for i in"${arr[@]}"'
root@f304ea52daec59c:~# vi for5.sh
```

Step 2: Write the script in the editor.

```
arr=("welcome""to""javatpoint")
for i in "${arr[@]}"
do
        echo $i
done
```

Step 3: Run the script

```
root@f304ea52daec59c:~# ./for5.sh
welcometojavatpoint
```

8) For Loop to Read white spaces in String as word separators.

Step1: Create a Bash Script

```
root@f304ea52daec59c:~# touch for6.sh
root@f304ea52daec59c:~# chmod +x for6.sh
root@f304ea52daec59c:~# vi for6.sh
```

Step 2: Write the script in the editor.

```
str="Let's start
Learning from javatpoint"
for i in $str;
do
        echo "$i"
done
```

Step 3: Run the script

```
root@f304ea52daec59c:~# ./for6.sh
Let's
start
learning
from
javatpoint
```

9) For Loop to Read each line in String as a word

Step1: Create a Bash Script

Step 2: Write the script in the editor.

Step 3: Run the script

10) For Loop to Read Three-expression

Step1: Create a Bash Script

Step 2: Write the script in the editor.

Step 3: Run the script

11) For Loop with a Break Statement

Step1: Create a Bash Script

Step 2: Write the script in the editor.

Step 3: Run the script

12) For Loop with a Continue Statement

Step1: Create a Bash Script

Step 2: Write the script in the editor.

Step 3: Run the script

13) Infinite Bash For Loop

Step1: Create a Bash Script

Step 2: Write the script in the editor.

Step 3: Run the script

BASH WHILE LOOP

14) While Loop with Single Condition

Step1: Create a Bash Script

Step 2: Write the script in the editor.

```
root@f304ea52daec59c: ~
read -p "Enter starting number:" snum
read -p "Enter ending number:" enum
while [[ $snum -le $enum ]];
do
        echo $snum
        ((snum++))
done
echo "This is the sequence that you wanted."
```

Step 3: Run the script

```
root@f304ea52daec59c:~# ./while1.sh
Enter starting number:1
Enter ending number:10
1
2
3
4
5
6
7
8
9
10
This is the sequence that you wanted.
```

15) While Loop with Multiple Conditions

Step1: Create a Bash Script

```
root@f304ea52daec59c:~# touch while2.sh
root@f304ea52daec59c:~# vi while2.sh
```

Step 2: Write the script in the editor.

```
root@f304ea52daec59c: ~
read -p "Enter starting number:" snum
read -p "Enter ending number:" enum
while [[ $snum -lt $enum || $snum == $enum ]];
do
                echo $snum
                        ((snum++))
                done
                echo "This is the sequence that you wanted."
```

Step 3: Run the script

```
root@f304ea52daec59c:~# ./while2.sh
Enter starting number:2
Enter ending number:30
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
This is the sequence that you wanted.
```

16) Infinite While Loop

Step1: Create a Bash Script

```
root@f304ea52daec59c: ~
root@f304ea52daec59c:~# touch while4.sh
root@f304ea52daec59c:~# chmod +x while4.sh
root@f304ea52daec59c:~# vi while4.sh
root@f304ea52daec59c:~# ./while4.sh
```

Step 2: Write the script in the editor.

```
root@f304ea52daec59c: ~
while :
do
        echo "welcome to javatpoint."
done
```

Step 3: Run the script

```
root@f304ea52daec59c: ~
welcome to javatpoint.
welcome to javatpoint.
welcome to javatpoint.
welcome to javatpoint.
welcome to javatpoint.
welcome to javatpoint.
welcome to javatpoint.
welcome to javatpoint.
welcome to javatpoint.
welcome to javatpoint.
welcome to javatpoint.
welcome to javatpoint.
welcome to javatpoint.
welcome to javatpoint.
welcome to javatpoint.
welcome to javatpoint.
welcome to javatpoint.
welcome to javatpoint.
welcome to javatpoint.
welcome to javatpoint.
welcome to javatpoint.
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welcome to javatpoint.
welcome to javatpoint.
welcome to javatpoint.
welcome to javatpoint.
welcome to javatpoint.
welcome to javatpoint.
welcome to javatpoint.
welcome to javatpoint.
welcome to javatpoint.
welcome to javatpoint.
welcome to javatpoint.
welcome to javatpoint.
welcome to javatpoint.
welcome to javatpoint.
```

17) Infinite While Loop

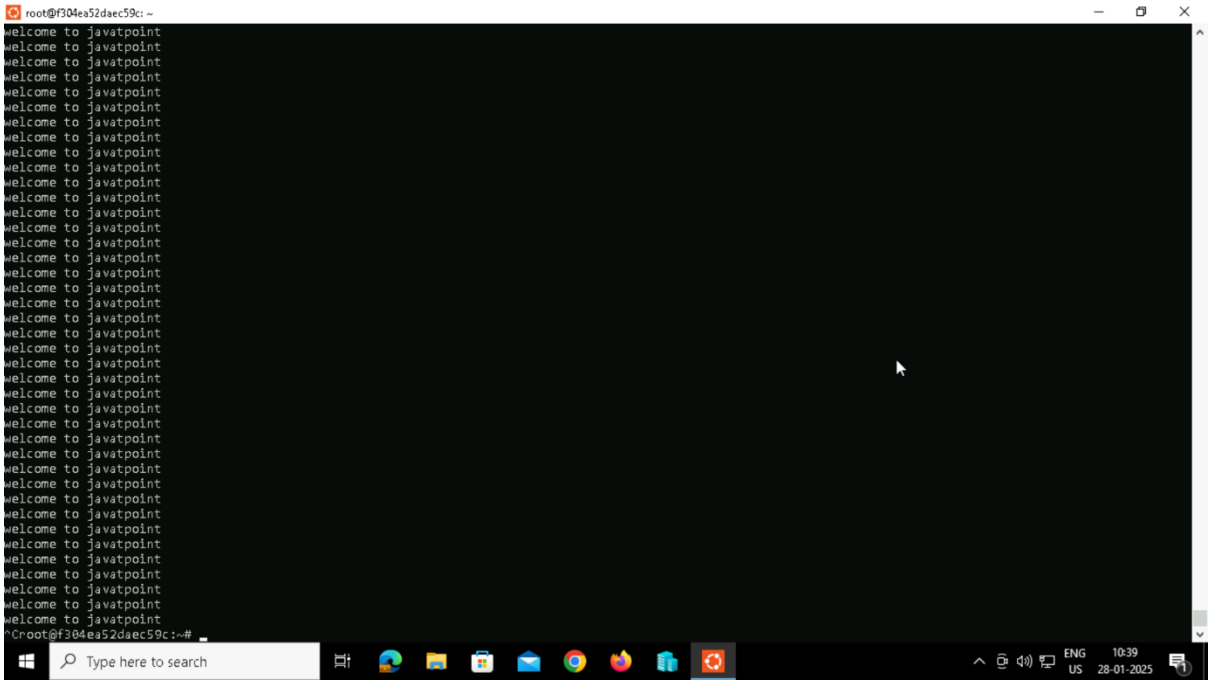
Step1: Create a Bash Script

```
root@f304ea52daec59c: ~
root@f304ea52daec59c:~# touch while4.sh
root@f304ea52daec59c:~# chmod +x while4.sh
root@f304ea52daec59c:~# vi while4.sh
root@f304ea52daec59c:~# ./while4.sh
```

Step 2: Write the script in the editor.

```
root@f304ea52daec59c: ~
while true
do
        echo "welcome to javatpoint"
done
```

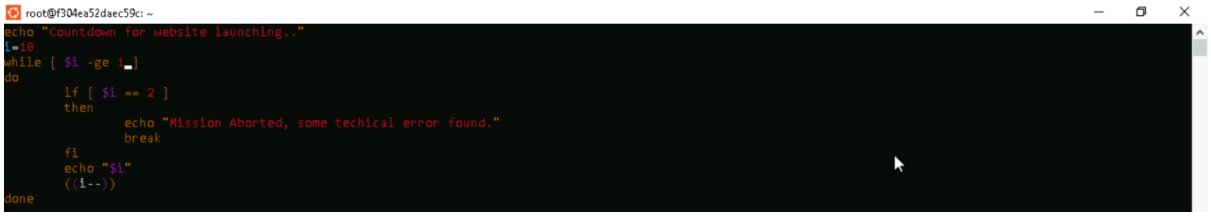
Step 3: Run the script



18) While Loop with a Break Statement

Step1: Create a Bash Script

Step 2: Write the script in the editor.



Step 3: Run the script

19) While Loop with a Continue Statement

Step1: Create a Bash Script

Step 2: Write the script in the editor.

```
root@f304ea52daec59c: ~
i=0
while [ $i -le 10 ]
do
        ((i++))
        if [[ "$i" == 5 ]];
        then
                continue
        fi
        echo "current number:$i"
done
echo "Skipped number 5 using continue statements."
```

Step 3: Run the script

```
root@f304ea52daec59c:~# ./while6.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 statements.
```

20) While Loop with C-Style.

Step1: Create a Bash Script

```
root@f304ea52daec59c: ~
root@f304ea52daec59c:~# touch while7.sh
root@f304ea52daec59c:~# chmod +x while7.sh
root@f304ea52daec59c:~# vi while7.sh
```

Step 2: Write the script in the editor.

```
root@f304ea52daec59c: ~
i=1
while ((i<=10))
do
        echo $i
        let i++
done
```

Step 3: Run the script

```
root@f304ea52daec59c:~# ./while7.sh
1
2
3
4
5
6
7
8
9
10
```

BASH UNTIL

21) Until loop which will print series of numbers from 1 to 10

Step1: Create a Bash Script

```
root@f304ea52daec59c:~# touch until1.sh
root@f304ea52daec59c:~# chmod until1.sh
chmod: missing operand after 'until1.sh'
Try 'chmod --help' for more information.
root@f304ea52daec59c:~# chmod  +x until1.sh
root@f304ea52daec59c:~# vi until1.sh
```

Step 2: Write the script in the editor.

```
root@f304ea52daec59c: ~
i=1
until [ $i -gt 10 ]
do
        echo $i
        ((i++))
done
```

Step 3: Run the script

```
root@f304ea52daec59c:~# ./until1.sh
1
2
3
4
5
6
7
8
9
10
```

22) Multiple conditions in an expression

Step1: Create a Bash Script

```
root@f304ea52daec59c: ~
root@f304ea52daec59c:~# touch until2.sh
root@f304ea52daec59c:~# chmod +x until2.sh
root@f304ea52daec59c:~# vi until2.sh
```

Step 2: Write the script in the editor.

```
root@f304ea52daec59c: ~
max=5
a=1
b=0
until [[ $a -gt $max || $b -gt $max ]];
do
        echo "a = $a &b = $b"
        ((a++))
        ((b++))
done
```

Step 3: Run the script

```
root@f304ea52daec59c:~# ./until2.sh
a = 1 &b = 0
a = 2 &b = 1
a = 3 &b = 2
a = 4 &b = 3
a = 5 &b = 4
```

BASH STRING

23) Equal Operator

Step1: Create a Bash Script

```
root@f304ea52daec59c: ~
root@f304ea52daec59c:~# touch string1.sh
root@f304ea52daec59c:~# chmod +x string1.sh
root@f304ea52daec59c:~# vi string1.sh
```

Step 2: Write the script in the editor.

```
root@f304ea52daec59c: ~
str1="welcometojavatpoint"
str2="javatpoint"
if [ $str1 = $str2 ];
then
        echo "both the strings are equal."
else
        echo "strings are not equal."
fi
```

Step 3: Run the script

```
root@f304ea52daec59c:~# ./string1.sh
strings are not equal.
```

24) Not Equal Operator

Step1: Create a Bash Script

```
root@f304ea52daec59c:~# touch string2.sh
root@f304ea52daec59c:~# chmod +x string2.sh
root@f304ea52daec59c:~# vi string2.sh
```

Step 2: Write the script in the editor.

```
root@f304ea52daec59c: ~
str1="welcometojavatpoint"
str2="javatpoint"
if [ $str1 != $str2 ];
then
        echo "both the strings are equal."
    else
        echo "strings are not equal."
fi
```

Step 3: Run the script

```
root@f304ea52daec59c:~# ./string2.sh
both the strings are equal.
root@f304ea52daec59c:~#
```

25) Less than Operator

Step1: Create a Bash Script

```
root@f304ea52daec59c: ~
root@f304ea52daec59c:~# touch string3.sh
root@f304ea52daec59c:~# chmod +x string3.sh
root@f304ea52daec59c:~# vi string3.sh
```

Step 2: Write the script in the editor.

```
root@f304ea52daec59c: ~
str1="WelcometoJavatpoint"
str2="Javatpoint"
if [ $str1 \<  $str2 ];
then
        echo "$str1 is less then $str2."
    else
        echo "$str1 is not less then $str2."
fi
```

Step 3: Run the script

```
root@f304ea52daec59c:~# ./string3.sh
WelcometoJavatpoint is not less then Javatpoint.
```

26) Greater than Operator

Step1: Create a Bash Script

```
root@f304ea52daec59c: ~
root@f304ea52daec59c:~# touch string4.sh
root@f304ea52daec59c:~# chmod +x string4.sh
root@f304ea52daec59c:~# vi string4.sh
```

Step 2: Write the script in the editor.

```
root@f304ea52daec59c: ~
str1="WelcometoJavatpoint"
str2="Javatpoint"
if [ $str1 \>  $str2 ];
then
        echo "$str1 is greater then $str2."
    else
        echo "$str1 is less then $str2."
fi
```

Step 3: Run the script

```
root@f304ea52daec59c:~# ./string4.sh
WelcometoJavatpoint is greater then Javatpoint.
```

27) To check if the string length is greater than Zero:

Step1: Create a Bash Script

```
root@f304ea52daec59c: ~
root@f304ea52daec59c:~# touch string5.sh
root@f304ea52daec59c:~# chmod +x string5.sh
root@f304ea52daec59c:~# vi string5.sh
```

Step 2: Write the script in the editor.

```
root@f304ea52daec59c: ~
str="welcometojavapoint"
if [ -n $str ];
then
        echo "String is not empty"
else
        echo "String is empty"
fi
```

Step 3: Run the script

```
root@f304ea52daec59c:~# ./string5.sh
String is not empty
```

28) To check if the string length is equal to Zero

Step1: Create a Bash Script

```
root@f304ea52daec59c: ~
root@f304ea52daec59c:~# touch string6.sh
root@f304ea52daec59c:~# chmod +x string6.sh
root@f304ea52daec59c:~# vi string6.sh
```

Step 2: Write the script in the editor.

```
root@f304ea52daec59c: ~
str=" "
if [ -z $str ];
then
                echo "String is  empty"
        else
                        echo "String is not  empty"
fi
```

Step 3: Run the script

```
root@f304ea52daec59c:~# ./string6.sh
String is  empty
```

BASH FIND STRING

29) The simplest way to calculate the length of a string is to use '#' symbol.

Step1: Create a Bash Script

```
root@f304ea52daec59c: ~
root@f304ea52daec59c:~# touch fstring1.sh
root@f304ea52daec59c:~# chmod +x fstring1.sh
root@f304ea52daec59c:~# vi fstring1.sh
```

Step 2: Write the script in the editor.

```
root@f304ea52daec59c: ~
str="Welcome to javatpoint"
length=${#str}
echo "Length of '$str' is $length"
```

Step 3: Run the script

```
root@f304ea52daec59c:~# ./fstring1.sh
Length of 'Welcome to javatpoint' is 21
```

30) Calculate the length of a string is to use `expr` command with the 'length' keyword

Step1: Create a Bash Script

```
root@f304ea52daec59c: ~
root@f304ea52daec59c:~# touch fstring2.sh
root@f304ea52daec59c:~# chmod +x fstring2.sh
root@f304ea52daec59c:~# vi fstring2.sh
```

Step 2: Write the script in the editor.

```
root@f304ea52daec59c: ~
str="Welcome to javatpoint"
length=`expr length "$str"`
echo "length of '$str' is $length"
```

Step 3: Run the script

```
root@f304ea52daec59c:~# ./fstring2.sh
Length of 'Welcome to Javatpoint' is 21
```

31) Use `expr "$str": '.*'` to find the length of a string

Step1: Create a Bash Script

```
root@f304ea52daec59c:~# touch fstring3.sh
root@f304ea52daec59c:~# chmod +x fstring3.sh
root@f304ea52daec59c:~# vi fstring3.sh
```

Step 2: Write the script in the editor.

```
str="Welcome to Javatpoint"
length=`expr length "$str"`
echo "Length of '$str' is $length"
```

Step 3: Run the script

```
root@f304ea52daec59c:~# ./fstring3.sh
Length of 'Welcome to Javatpoint' is 21
```

32) Use `wc` command to find the length of a string

Step1: Create a Bash Script

```
root@f304ea52daec59c:~# touch fstring4.sh
root@f304ea52daec59c:~# chmod +x fstring4.sh
root@f304ea52daec59c:~# vi fstring4.sh
```

Step 2: Write the script in the editor.

```
str="Welcome to Javatpoint"
length=`echo $str | wc -c`

echo "Length of '$str' is $length"
```

Step 3: Run the script

```
root@f304ea52daec59c:~# ./fstring4.sh
Length of 'Welcome to Javatpoint' is 22
```

33) Use `awk` command to find the length of a string.

Step1: Create a Bash Script

```
root@f304ea52daec59c:~# touch fstring5.sh
root@f304ea52daec59c:~# chmod +x fstring5.sh
root@f304ea52daec59c:~# vi fstring5.sh
```

Step 2: Write the script in the editor.

```
str="Welcome to Javatpoint"
length=`echo $str |awk '{print length}'`

echo "Length of '$str' is $length"
```

Step 3: Run the script

```
root@f304ea52daec59c:~# ./fstring5.sh
Length of 'Welcome to Javatpoint' is 21
```

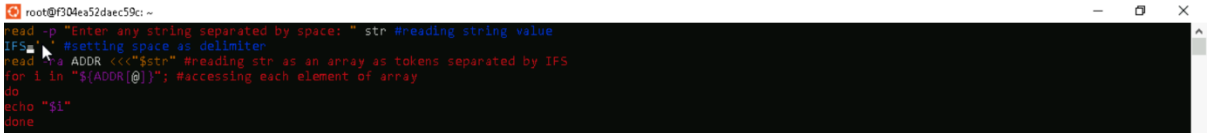
BASH SPLIT STRING

34) Bash Split String by Space

Step1: Create a Bash Script

```
root@f304ea52daec59c:~# touch split1.sh
root@f304ea52daec59c:~# chmod +x split1.sh
root@f304ea52daec59c:~# vi split1.sh
```

Step 2: Write the script in the editor.

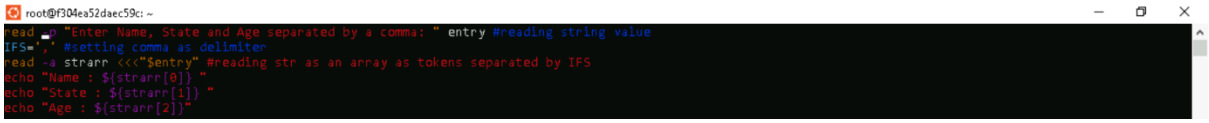


Step 3: Run the script

35) Bash Split String by Symbol

Step1: Create a Bash Script

Step 2: Write the script in the editor.

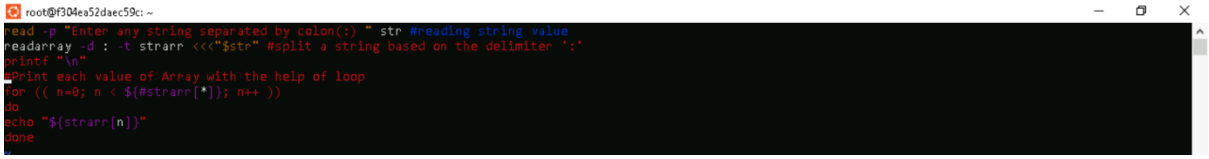


Step 3: Run the script

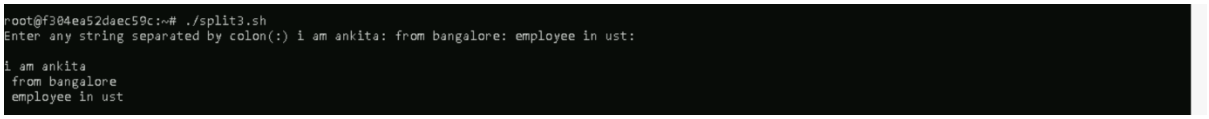
36) Bash Split String by Symbol

Step1: Create a Bash Script

Step 2: Write the script in the editor.



Step 3: Run the script



37) Bash Split String by another string

Step1: Create a Bash Script

Step 2: Write the script in the editor.

```
root@f304ea52daec59c: ~
str="WeLearnWelcomeLearnYouLearnOnLearnJavatpoint"
delimiter=Learn
s=$str$delimiter
array=();
while [[ $s ]];
do
        array+=( "${s%%"$delimiter"*}" );
        s=${s#*"$delimiter"};
done;
declare -p array
```

Step 3: Run the script

```
root@f304ea52daec59c:~# ./split4.sh
declare -a array=([0]="We" [1]="Welcome" [2]="You" [3]="On" [4]="Javatpoint")
```

38) Bash Split String using Trim Command

Step1: Create a Bash Script

```
root@f304ea52daec59c: ~
root@f304ea52daec59c:~# touch split5.sh
root@f304ea52daec59c:~# chmod +x split5.sh
root@f304ea52daec59c:~# vi split5.sh
```

Step 2: Write the script in the editor.

```
root@f304ea52daec59c: ~
my_str="We;welcome;you;on;javatpoint."
my_arr=($(echo $my_str | tr ";" "\n"))
for i in "${my_arr[@]}"
do
        echo $i
done
```

Step 3: Run the script

```
root@f304ea52daec59c:~# ./split5.sh
We
welcome
you
on
javatpoint.
```

BASH SUBSTRING

39) To Extract till Specific Characters from Starting

Step1: Create a Bash Script

```
root@f304ea52daec59c: ~
root@f304ea52daec59c:~# touch sub1.sh
root@f304ea52daec59c:~# chmod sub1.sh
chmod: missing operand after 'sub1.sh'
Try 'chmod --help' for more information.
root@f304ea52daec59c:~# chmod +x sub1.sh
root@f304ea52daec59c:~# vi sub1.sh
```

Step 2: Write the script in the editor

```
root@f304ea52daec59c: ~
echo "String: We welcome you on Javatpoint."
str="We welcome you on Javatpoint."
echo "Total characters in a String: ${#str} "
substr="${str:0:10}"
echo "Substring: $substr"
echo "Total characters in Substring: ${#substr}"
```

Step 3: Run the script

```
root@f304ea52daec59c:~# ./sub1.sh
String: We welcome you on Javatpoint.
Total characters in a String: 29
Substring: We welcome
Total characters in Substring: 10
```

40) To Extract from Specific Character onwards

Step1: Create a Bash Script

```
root@f304ea52daec59c:~# touch sub2.sh
root@f304ea52daec59c:~# chmod +x sub2.sh
root@f304ea52daec59c:~# vi sub2.sh
```

Step 2: Write the script in the editor

Step 3: Run the script

41) To Extract a Single Character

Step1: Create a Bash Script

Step 2: Write the script in the editor

Step 3: Run the script

42) To Extract the specific characters from last

Step1: Create a Bash Script

Step 2: Write the script in the editor

Step 3: Run the script

BASH CONCATENATE

43) Write Variables Side by Side

Step1: Create a Bash Script

Step 2: Write the script in the editor

```
str1="We welcome you"
#Declaring the Second String
str2=" on Javatpoint."
##Combining first and second string
str3="$str1$str2"
##Printing a new string by combining both
echo $str3
```

Step 3: Run the script

```
root@f304ea52daec59c:~# ./cat1.sh
We welcome you on Javatpoint.
```

44) Using Double Quotes

Step1: Create a Bash Script

```
root@f304ea52daec59c:~# touch cat2.sh
root@f304ea52daec59c:~# chmod +x cat2.sh
root@f304ea52daec59c:~# vi cat2.sh
```

Step 2: Write the script in the editor

```
str="We welcome you"
#Add the variable within the string
echo "$str on Javatpoint."
```

Step 3: Run the script

```
root@f304ea52daec59c:~# ./cat2.sh
We welcome you on Javatpoint.
```

45) Using Append Operator with Loop

Step1: Create a Bash Script

```
root@f304ea52daec59c:~# touch cat3.sh
root@f304ea52daec59c:~# chmod +x cat3.sh
root@f304ea52daec59c:~# vi cat3.sh
```

Step 2: Write the script in the editor

```
#!/bin/bash
echo "Printing the name of the programming languages"
lang=""
#For loop for reading the list
for value in 'java' 'python' 'C' 'C++';
do
lang+="$value " #Combining the list values using append operator
done
##Printing the combined values
echo "$lang"
```

Step 3: Run the script

```
root@f304ea52daec59c:~# ./cat3.sh
Printing the name of the programming languages
java python C C++
```

46) Using the Printf Function

Step1: Create a Bash Script

```
root@f304ea52daec59c:~# touch cat4.sh
root@f304ea52daec59c:~# chmod +x cat4.sh
root@f304ea52daec59c:~# vi cat4.sh
```

Step 2: Write the script in the editor

```
str="Welcome"
printf -v new_str "$str to Javatpoint."
echo $new_str
```

Step 3: Run the script

```
root@f304ea52daec59c:~# ./cat4.sh
Welcome to Javatpoint.
```

47) Using Literal Strings

Step1: Create a Bash Script

```
root@f304ea52daec59c:~# touch cat5.sh
root@f304ea52daec59c:~# chmod +x cat5.sh
root@f304ea52daec59c:~# vi cat5.sh
```

Step 2: Write the script in the editor

```
str="Welcome to"
newstr="${str} Javatpoint."
echo "$newstr"
```

Step 3: Run the script

```
root@f304ea52daec59c:~# ./cat5.sh
Welcome to Javatpoint.
```

48) Using Underscore

Step1: Create a Bash Script

```
root@f304ea52daec59c:~# touch cat6.sh
root@f304ea52daec59c:~# chmod +x cat6.sh
root@f304ea52daec59c:~# vi cat6.sh
```

Step 2: Write the script in the editor

```
str1="Hello"
str2="World!"
echo "${str1}_${str2}"
```

Step 3: Run the script

```
root@f304ea52daec59c:~# ./cat6.sh
Hello_World!
```

49) Using any Character

Step1: Create a Bash Script

```
root@f304ea52daec59c:~# touch cat7.sh
root@f304ea52daec59c:~# chmod +x cat7.sh
root@f304ea52daec59c:~# vi cat7.sh
```

Step 2: Write the script in the editor

```
read -p "Enter First Name: " name
read -p "Enter State: " state
read -p "Enter Age: " age
combine="$name,$state,$age"
echo "Name, State, Age: $combine"
```

Step 3: Run the script

```
root@f304ea52daec59c:~# ./cat7.sh
Enter First Name: ankita
Enter State: karnataka
Enter Age: 22
Name, State, Age: ankita,karnataka,22
```

BASH FUNCTIONS

50) Function Name

Step1: Create a Bash Script

Step 2: Write the script in the editor

Step 3: Run the script

51) Function Name

Step1: Create a Bash Script

Step 2: Write the script in the editor

Step 3: Run the script

52) Script to pass and access arguments

Step1: Create a Bash Script

Step 2: Write the script in the editor

```
function_arguments()
{
        echo $1
         echo $2
          echo $3
           echo $4
            echo $5

    }
    function_arguments "We" "welcome" "you" "on" "Javatpoint."
```

Step 3: Run the script

```
root@f304ea52daec59c:~# touch function3.sh
root@f304ea52daec59c:~# chmod +x function3.sh
root@f304ea52daec59c:~# vi function3.sh
root@f304ea52daec59c:~# ./function3.sh
root@f304ea52daec59c:~# vi function3.sh
root@f304ea52daec59c:~# ./function3.sh
Wewelcomeyouonjavatpoint.



root@f304ea52daec59c:~# vi function3.sh
root@f304ea52daec59c:~# ./function3.sh
We
welcome
you
on
Javatpoint.
```

53) Variable Scope

Step1: Create a Bash Script

```
root@f304ea52daec59c:~# touch function4.sh
root@f304ea52daec59c:~# chmod +x function4.sh
root@f304ea52daec59c:~# vi function4.sh
root@f304ea52daec59c:~# ./function4.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.
```

Step 2: Write the script in the editor

```
v1='A'
v2='B'
my_var () {
        local v1='C'
        v2='D'
        echo "Inside Function"
        echo "v1 is $v1."
        echo "v2 is $v2."
}
echo "Before Executing the Function"
echo "v1 is $v1."
echo "v2 is $v2."
my_var
echo "After Executing the Function"
echo "v1 is $v1."
echo "v2 is $v2."
```

Step 3: Run the script

```
root@f304ea52daec59c:~# touch function4.sh
root@f304ea52daec59c:~# chmod +x function4.sh
root@f304ea52daec59c:~# vi function4.sh
root@f304ea52daec59c:~# ./function4.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.
```

54) Return Values

Step1: Create a Bash Script

Step 2: Write the script in the editor

Step 3: Run the script

55) Return Values

Step1: Create a Bash Script

Step 2: Write the script in the editor

Step 3: Run the script

56) Overriding Commands

Step1: Create a Bash Script

Step 2: Write the script in the editor

```
root@f304ea52daec59c: ~
echo () {
    builtin echo -n `date +"[%m-%d %H:%M:%S]"` ": "
    builtin echo $1
    }

    echo "Welcome to Javatpoint."
```

Step 3: Run the script

```
root@f304ea52daec59c: ~
root@f304ea52daec59c:~#
root@f304ea52daec59c:~# touch function7.sh
root@f304ea52daec59c:~# chmod +x function7.sh
root@f304ea52daec59c:~# vi function7.sh
root@f304ea52daec59c:~# ./function7.sh
[01-29 12:31:33] : Welcome to Javatpoint.
```

BASH ARRAY

57) Reference Elements

Step1: Create a Bash Script

```
root@f304ea52daec59c: ~
root@f304ea52daec59c:~# touch array1.sh
root@f304ea52daec59c:~# chmod +x array1.sh
root@f304ea52daec59c:~# vi array1.sh
root@f304ea52daec59c:~# ./array1.sh

root@f304ea52daec59c:~# vi array1.sh
root@f304ea52daec59c:~# ./array1.sh
Javatpoint
```

Step 2: Write the script in the editor

```
root@f304ea52daec59c: ~
declare -a example_array=( "Welcome" "To" "Javatpoint" )

#printing the element with index of 2
echo ${example_array[2]}
```

Step 3: Run the script

```
root@f304ea52daec59c: ~
root@f304ea52daec59c:~# touch array1.sh
root@f304ea52daec59c:~# chmod +x array1.sh
root@f304ea52daec59c:~# vi array1.sh
root@f304ea52daec59c:~# ./array1.sh

root@f304ea52daec59c:~# vi array1.sh
root@f304ea52daec59c:~# ./array1.sh
Javatpoint
```

58) Reference Elements

Step1: Create a Bash Script

```
root@f304ea52daec59c: ~
root@f304ea52daec59c:~# touch array1.sh
root@f304ea52daec59c:~# touch array2.sh
root@f304ea52daec59c:~# chmod +x array2.sh
root@f304ea52daec59c:~# vi array2.sh
root@f304ea52daec59c:~# ./array2.sh
WelcomeToJavatpoint
```

Step 2: Write the script in the editor

```
root@f304ea52daec59c: ~
declare -a example_array=( "Welcome""To""Javatpoint" )

#Printing all the elements
echo "${example_array[@]}"
```

Step 3: Run the script

59) Printing the Keys of an Array

Step1: Create a Bash Script

Step 2: Write the script in the editor

Step 3: Run the script

60) Finding Array Length

Step1: Create a Bash Script

Step 2: Write the script in the editor

Step 3: Run the script

61) Loop through the Array

Step1: Create a Bash Script

```
root@f304ea52daec59c:~# touch array5.sh
root@f304ea52daec59c:~# chmod +x array5.sh
root@f304ea52daec59c:~# vi array5.sh
root@f304ea52daec59c:~# ./array5.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
```

Step 2: Write the script in the editor

```
declare -a example_array=( "Welcome" "To" "Javatpoint" )

#Array Loop
for i in "${!example_array[@]}"
do
echo The key value of element "${example_array[$i]}" is "$i"
done
```

Step 3: Run the script

```
root@f304ea52daec59c:~# touch array5.sh
root@f304ea52daec59c:~# chmod +x array5.sh
root@f304ea52daec59c:~# vi array5.sh
root@f304ea52daec59c:~# ./array5.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
```

62) Loop through the Array

Step1: Create a Bash Script

```
root@f304ea52daec59c:~# touch array6.sh
root@f304ea52daec59c:~# chmod +x array6.sh
root@f304ea52daec59c:~# vi array6.sh
root@f304ea52daec59c:~# ./array6.sh
0 Welcome
1 To
2 Javatpoint
```

Step 2: Write the script in the editor

```
declare -a example_array=( "Welcome" "To" "Javatpoint" )

#Length of the Array
length=${#example_array[@]}
#
# #Array Loop
for (( i=0; i < ${length}; i++ ))
do
echo $i ${example_array[$i]}
done
```

Step 3: Run the script

```
root@f304ea52daec59c:~# touch array6.sh
root@f304ea52daec59c:~# chmod +x array6.sh
root@f304ea52daec59c:~# vi array6.sh
root@f304ea52daec59c:~# ./array6.sh
0 Welcome
1 To
2 Javatpoint
```

63) Adding Elements to an Array

Step1: Create a Bash Script

```
root@f304ea52daec59c:~# touch array7.sh
root@f304ea52daec59c:~# chmod +x array7.sh
root@f304ea52daec59c:~# vi array7.sh
```

Step 2: Write the script in the editor

Step 3: Run the script

64) Adding Elements to an Array

Step1: Create a Bash Script

Step 2: Write the script in the editor

Step 3: Run the script

65) Updating Array Element

Step1: Create a Bash Script

Step 2: Write the script in the editor

Step 3: Run the script

66) Deleting an Element from an Array

Step1: Create a Bash Script

```
root@f304ea52daec59c:~# touch array10.sh
root@f304ea52daec59c:~# chmod +x array10.sh
root@f304ea52daec59c:~# vi array10.sh
```

Step 2: Write the script in the editor

```
declare -a example_array=( "Java" "Python" "HTML" "CSS" "JavaScript" )

#Removing the element
unset example_array[1]
#
# #Printing all the elements after deletion
echo "${example_array[@]}"
```

Step 3: Run the script

```
root@f304ea52daec59c:~# ./array10.sh
Java HTML CSS JavaScript
```

67) Deleting the Entire Array

Step1: Create a Bash Script

```
root@f304ea52daec59c:~# touch array11.sh
root@f304ea52daec59c:~# vi array11.sh
root@f304ea52daec59c:~# chmod +x array11.sh
```

Step 2: Write the script in the editor

```
declare -a example_array=( "Java" "Python" "HTML" "CSS" "JavaScript" )

#Deleting Entire Array
unset example_array
#
# #Printing the Array Elements
echo ${!example_array[@]}
#
#  #Printing the keys
echo ${!example_array[@]}
```

Step 3: Run the script

```
root@f304ea52daec59c:~# ./array11.sh
```

68) Slice Array Elements

Step1: Create a Bash Script

```
root@f304ea52daec59c:~# touch array12.sh
root@f304ea52daec59c:~# chmod +x array12.sh
root@f304ea52daec59c:~# vi array12.sh
```

Step 2: Write the script in the editor

```
example_array=( "Java" "Python" "HTML" "CSS" "JavaScript" )

#Slicing the Array
sliced_array=("${example_array[@]:1:3}")
#
# #Applying for loop to iterate over each element in Array
for i in "${sliced_array[@]}"
do
echo $i
done
```

Step 3: Run the script

```
root@f304ea52daec59c:~# ./array12.sh
Python
HTML
CSS
```