

Arrays for Bash Shell Scripting

NarendraP

Concepts of Arrays

- > What is an Array?
- ➤ How to define array?
- **➤** How to access Array Values ?
- > Different Types of Arrays
- ➤ How to store the command output into an array?
- ➤ How to delete and update exiting array with new values?
- ➤ How to read array using read command?

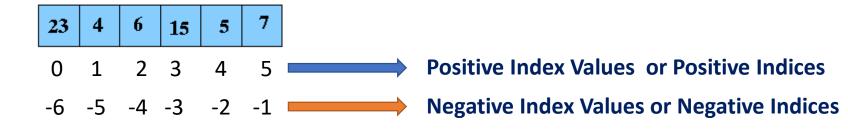
What is an Array and How to define or declare it?

- ➤ What is an array?
 - > An Array is the data structure of the bash shell, which is used to store multiple data's.
 - ➤ Simple array: myarray=(ls pwd date 2 5.6) #No limit for length of an array
- ➤ How to Define/declare an array?
 - > There are different ways to define an array in bash shell scripting.
 - > Empty Array: myArray=()
 - > mycmds=(ls pwd date 2 5.6)
 - > myNewArray=(ls-lrt hostname-s)
 - > myNewArray=("ls -lrt" "hostname -s")
 - declare -a NewArray
 - NewArray=(1 3 4 5 bash scripting)

How to access Array values/elements?

- ➤ Basically, Bash Shell Array is the zero-based Array (i.e., indexing start with 0) Then what is an index?
- \rightarrow myarray=(23 4 6 15 5 7)

myarray



- echo "\$myarray"
- > echo "\${myarray}"
- > echo "\${myarray[*]}"
- > echo "\${myarray[@]"
- ➤ echo "\${myarray[0]" → Prints first value
- > echo "\${myarray[-1]}" → Prints last value

How to access Array values/elements?...

```
> echo "${myarray[*]:0}"
                              → Prints all the values starting from index-0
> echo "${myarray[*]:1}"
                              → Prints all the values starting from index-1
➤ echo "${myarray[*]:0:2}" → Prints two values starting from index-o
\rightarrow echo "${myarray[*]:1:2}" \rightarrow Prints two values starting from index-1
                              → Prints index values of array
> echo "${!myarray[*]}"
                             → Find the length (number elements) of array
> echo "${#myarray[*]}"
```

- **▶** We can also customize index numbers:
 - > newarray[5]="bash"
 - hewarray[9]="shell scriting"
 - \triangleright Or
 - \triangleright newarray=($\lceil 5 \rceil$ ="bash" $\lceil 9 \rceil$ ="shell scripting")

Note: We can also take indices as strings and that array is called Associative Array.

Different Types of Arrays

- **▶** We have two types of arrays in Bash Shell Scripting.
- > They are:
 - ➤ Index Based Arrays or Arrays
 - > Associative Arrays.

How to store the command output into an array?

- > Storing the output of a command into array:
 - arraywithcmd=(\$(command))

How to delete and update an exiting array?

- > Delete an array or even normal variable:
 - > unset variable/arrayvariable
- > Updating an exiting array:
 - \rightarrow myarray=(1,2,3)
 - \rightarrow myarray+=(4,5,6)

How to read an array using read command?

- > Syntax:
 - > read -a myarray
 - > read -p "Enter your array" -a myarray

Thank you