#### **Experiment 06**

#### Aim: To study the usage of For loop in shell.

- Using a for loop in shell scripting can be handy for iterating through lists of items or performing operations on files.
- In shell scripting, for loops typically follow this syntax:

```
for item in list
do
    # commands to be executed for each item
done
```

### Program Case 1: Echo Basic Manage

```
vi forloop1.sh
#!/bin/bash
SERVERS="s1 s2 s3"
for S in $SERVERS; do
echo "updating pkg on: $S"
done

chmod u+rwx forloop1.sh
./forloop1.sh
```

```
localhost:~# vi forloop1.sh
#!/bin/bash
SERVERS="s1 s2 s3"
for S in $SERVERS; do
    echo "updating pkg on: $S"
done
~
localhost:~# chmod u+rwx forloop1.sh
localhost:~# ./forloop1.sh
updating pkg on: s1
updating pkg on: s2
updating pkg on: s3
```

## **Program Case 2: Iterating through range of Numbers**

```
vi for2.sh
#!/bin/bash
for value in {1..5}
do
    echo "number: $value"
done
~
chmod u+rwx for2.sh
./for2.sh
```

```
localhost:~# vifor2.sh
#!/bin/bash
for value in {1..5}
do
echo "number: $value"
done

colocalhost:~# chmod u+rwx for2.sh
localhost:~# ./for2.sh
number: 1
number: 2
number: 3
number: 4
number: 5
```

#### **Program Case 3: Iterating through multiple files**

```
vi forloop3.sh
#!/bin/bash
for file in /root/*
do
    chmod 755 "$file"
    echo "update permission for: $file"
done
    chmod u+rwx forloop3.sh
./forloop3.sh
```

#### **Program Case 4: Creating an Infinite Loop**

```
vi forloop4.sh
#!/bin/bash
for ((;;))
do
    echo "This is infinite loop"
    echo "Use Ctrl+C to stop it"
done
    ~
Chmod u+rwx forloop4.sh
./forloop4.sh
```

```
localhost:~# vi forloop4.sh
#!/bin/bash
for ((;;))
do
    echo "This is infinite loop"
    echo "Use Ctrl+C to stop it"
done
    localhost:~# chmod u+rwx forloop4.sh
localhost:~# ./forloop4.sh
This is infinite loop
Use Ctrl+C to stop it
This is infinite loop
Use Ctrl+C to stop it
This is infinite loop
Use Ctrl+C to stop it
This is infinite loop
Use Ctrl+C to stop it
This is infinite loop

Use Ctrl+C to stop it
This is infinite loop

Use Ctrl+C to stop it
This is infinite loop

AC

localhost:~#
```

**Program Case 5: Implementing a Nested for loop** 

```
vi forloop5.sh

#!/bin/bash
for serverd in A B C; do
    for app in apache dp; do
        echo "$serverd can run $app LAMP package"
    done
    done
    ~
    Chmod 711 forloop5.sh
./forloop5.sh
```

```
localhost:~# vi forloop5.sh
#!/bin/bash
for serverd in A B C; do
    for app in apache dp; do
        echo "$serverd can run $app LAMP package"
    done
done
~
localhost:~# chmod 711 forloop5.sh
localhost:~# ./forloop5.sh
A can run apache LAMP package
A can run dp LAMP package
B can run dp LAMP package
B can run dp LAMP package
C can run apache LAMP package
C can run dp LAMP package
C can run dp LAMP package
```

#### Program Case 6: Array utilization in for loop

```
vi forloop6.sh

#!/bin/bash
apps=("apache" "mysql" "php")
for app in "${apps[@]}"
do
    echo "The application name is $app"
done
    ~
chmod 711 forloop6.sh
./forloop6.sh
```

```
localhost:~# vi forloop6.sh

#!/bin/bash

apps=("apache" "mysql" "php")

for app in "${apps[@]}"

do
    echo "The application name is $app"

done

localhost:~# chmod 711 forloop6.sh

localhost:~# ./forloop6.sh

The application name is apache

The application name is mysql

The application name is php
```

#### Program Case 7: Using break statement in for loop

```
vi forloop7.sh

#!/bin/bash

for file in ~/.*; do

if [[ "$file" == "./data.txt" ]]

then

echo "$file is available"

break

fi

done

chmod 711 forloop7.sh

./forloop7.sh
```

```
localhost:~# vi forloop7.sh
#!/bin/bash
for file in ~/.*; do
    if [[ "$file" == "./data.txt" ]]
    then
        echo "$file is available"
        break
    fi
done
~
localhost:~# chmod 711 forloop7.sh
localhost:~# ./forloop7.sh
```

# **Program Case 8: Use of command substitution**

```
vi forloop8.sh
#!/bin/bash
for log in $(cat ~/testfile)
do
    echo "Log entry: $log"
done
~
chmod 711 forloop8.sh
./forloop8.sh
```

```
localhost:~# vi forloop8.sh
#!/bin/bash

for log in $(cat ~/testfile)
do
     echo "Log entry:..$log"
done
~
localhost:~# chmod 711 forloop8.sh
localhost:~# ./forloop8.sh
```