Experiment 06

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

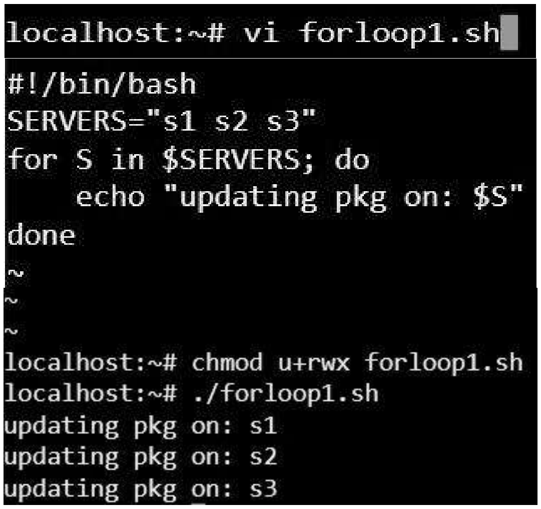
- Using a for loop in shell scripting can be handy for iterating through lists of items or performing operations on files.

- 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
```

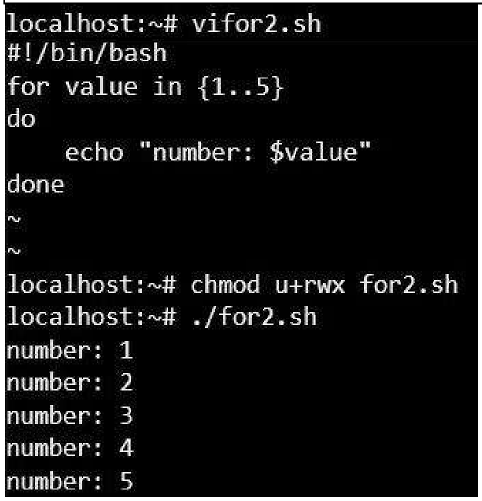


```
localhost:~# vi forloop1.sh
#!/bin/bash
SERVERS="s1 s2 s3"
for S in $SERVERS; do
    echo "updating pkg on: $S"
done
~
~
~
localhost:~# chmod u+rwx forloop1.sh
localhost:~# ./forloop1.sh
updating pkg on: s1
updating pkg on: s2
updating pkg on: s3
```

Program Case 2: Iterating through range of Numbers

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

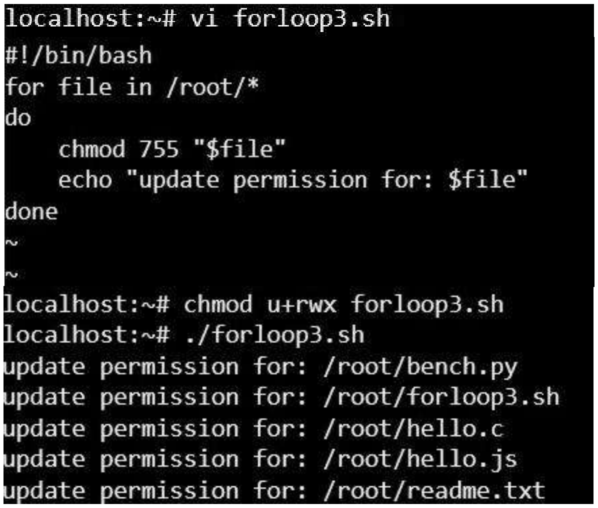
```
chmod u+rwx for2.sh
./for2.sh
```



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

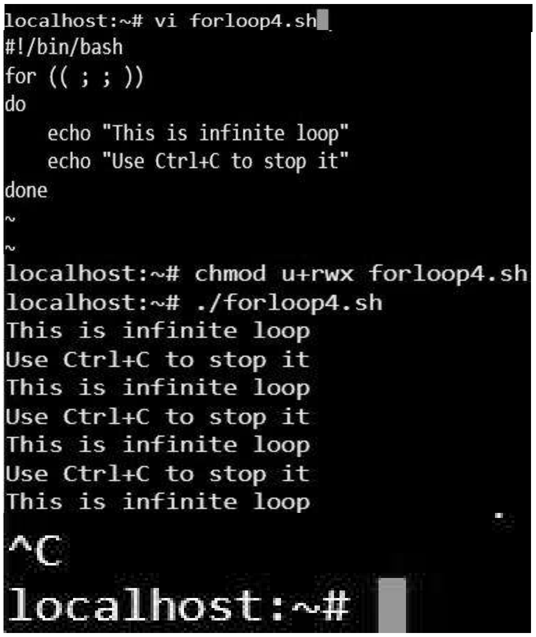


```
localhost:~# vi forloop3.sh
#!/bin/bash
for file in /root/*
do
    chmod 755 "$file"
    echo "update permission for: $file"
done
~
~
localhost:~# chmod u+rwx forloop3.sh
localhost:~# ./forloop3.sh
update permission for: /root/bench.py
update permission for: /root/forloop3.sh
update permission for: /root/hello.c
update permission for: /root/hello.js
update permission for: /root/readme.txt
```

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
```

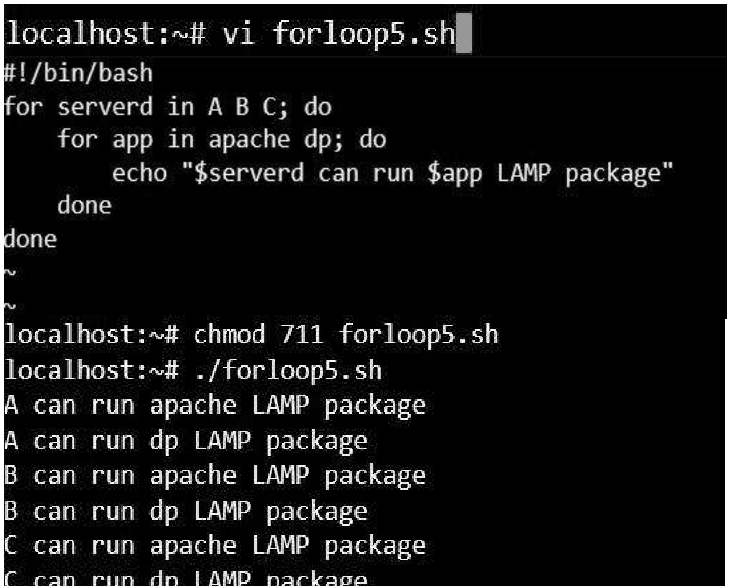
```
~
~
Chmod u+rwx forloop4.sh
./forloop4.sh
```



```
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
^C
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 apache LAMP package
B can run dp LAMP package
C can run apache LAMP package
C can run dp LAMP package
```