

**Q1. A) Write and execute the following Commands on Linux**

- i) Copy the file MyFile.txt to MyFile1.txt  
`cp MyFile.txt MyFile1.txt`
- ii) Create a file file.txt and display file size in human readable format.  
`touch file.txt`  
`ls -lh file.txt`
- iii) Create the following text file a.txt and write commands based on it.  
**Unix distributed 05 server Linux virtual 3 server Unix distributed 05 server Distributed processing 6 system**  
Write a linux command to display number of occurrences of each line in a file.  
`sort a.txt | uniq -c`
- iv) Create the following text file a.txt and write commands based on it  
**welcome to ostechnix welcome to ostechnix**  
**Linus is the creator of Linux. Linux is secure by default**  
Write a linux command to display lines that contains starting letter L and ending with letter x.  
`grep -i '^L.*x$' a.txt`
- v) Write Vi command to join any two lines together.  
**Shift+J**

**Q1.B) Write a shell script to print out the length of longest (number of characters) line in a file.**

```
#!/bin/bash

echo "Enter file:"
read filename

longest_length=$(awk '{ if (length > max) max = length } END { print max }' "$filename")

echo "Length of the longest line in '$filename': $longest_length"
```

**Q2. Write a shell script to check whether given number is Palindrome or not.**

```
#!/bin/bash

echo -n "Enter a number: "

read num

original_num=$num
rev=0

while [ $num -gt 0 ]; do
    remainder=$(( $num % 10 ))
    rev=$(( $rev * 10 + $remainder ))
    num=$(( $num / 10 ))
done

if [ $original_num -eq $rev ]; then
    echo "$original_num is a palindrome."
else
    echo "$original_num is not a palindrome."
Fi
```

**Or**

**Q2 Write a shell script to print multiplication table using command line arguments.**

```
#!/bin/bash

number=$1

echo "Multiplication table for $number:"

for (( i=1; i<=10; i++ )); do
    echo "$number x $i = $((number * i))"
done
```