Lab 2: Bash Programming

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Dear Linux Programming Newbees

- I think the OpenStack experiment exhausts your strength and intellect on finding a good solution
- We will leave it as it is for now, and begin the journey of another path
- Before heading on the road, sit and enjoy the poem in the next slide

Linux Poem: The Reentrant Kernel

By Morgan Phillips

A reentrant function,
if interrupted,
will return a result,
which is not perturbed.

```
int global_int;int is_not_reentrant(int x) { int x = x; return global_int + x; },
```

depends on a global variable,
which may change during execution.

```
int global_int;int is_reentrant(int x) { int saved = global_int; return saved + x; },
```

mitigates external dependency,
it is reentrant, though not thread safe.

Test Some Cmds

- Objectives:
  - To write shell scripts to solve problems
  - To implement some standard Linux utilities such as ls,cp,etc using system calls.

Use Bash for Shell scripts

1. Write a Shell script that accepts a filename, starting and ending line numbers as arguments and displays all the lines between the given line numbers.

2. Write a Shell script that deletes all lines containing a specified word in one or more files supplied as arguments to it.

3. Write a Shell script that displays list of all the files in the current directory to which the user has read, Write and execute permissions.

4. Write a Shell script that receives any number of file names as arguments checks if every argument supplied is a file or a directory and reports accordingly. Whenever the argument is a file, the number of lines on it is also reported.

5. Write a Shell script that accepts a list of file names as its arguments, counts and reports the occurrence of each word that is present in the first argument file on other argument files.

6. Write a Shell script to list all of the directory files in a directory

7. Write a Shell script to find factorial of a given integer.

Note

- The file to test is the poem in the third slide
- It is not a big one and you would like
- Enjoy an easy lab as it is what you deserve
- If you read this well, this is a poem, too.