

## Operating Systems Lab:

### • Some basic rules of shell script:

- ★ Always have the shebang at the top of the document, before any instruction.

shebang is given by:

`#!/bin/bash`

- ★ Use # for commenting a line. Multiline comments are not allowed, so use # one after other.
- ★ `$variable_name` will give value of the variable.
- ★ All the input taken by read command is in string format.
- ★ strings can be compared directly using `==`, `<`, `>` operators.
- ★ `${string:position}` gives substring from that position to the end of the string.
- ★ `${string:position:length}` gives substring of given length from given position.
- ★ `${#string}` provides the total length of the string.
- ★ `(( ))` is used for arithmetic expressions and in for loop.
- ★ `[ [ ]` is used for comparisons in if statements,

while loops and until loops.

\* Syntax of if else statements:

```
if [[ condition1 ]]  
then  
    statements  
elif [[ condition-2 ]]  
then  
    statements  
else  
    statements  
fi
```

\* for ((condition-1; condition-2; condition 3)) # C-style for loop  
do  
 statements  
done

\* for variable. in array # Another variation  
do  
 statements  
done

\* until loop acts similar to a do-while loop.  
until [[ condition ]]  
do  
 statements  
done

\* while [[condition]]  
do  
 statements  
done

\* echo prints the output

\* read takes the input.

\* declare is used with following flags for declaring

-A for array.

-i for integer

-l to convert to lowercase

-u to convert to uppercase

\* switch statement syntax :

case \${choice} in

op)

statements

;;

⋮

\*) # default case

statements

;;

esac

• For compiling :

-lm for math.h header

-lrt for shm\_open function

-lpthread for pthread.h header.