SLIIT
Discover Your Future

BSc (Hons) in Information Technology
IT– Year 2

Lab Exercise 6

IT2060 – Operating Systems and Systems Programming

Exercise 1:
Using loops in shell scripts

Type in the following shell script and save it as Exercise1A. Try to understand what it does and how to run it. Run the script by giving necessary positional parameter\s and get the expected output.

```
#!/bin/bash

if [ $# -ne 1 ]
then
echo "Usage: $0          number"
echo "  I will find reverse of given positive number" echo "  For eg. $0 123, I will print 321"
exit 1 fi

n=$1 rev=0
sd=0

while [ $n -gt 0 ]
do
sd=`expr $n % 10`
rev=`expr $rev \* 10  + $sd`
n=`expr $n / 10`
done
echo     "Reverse number is $rev"
```

Use a different syntax for the while loop structure and redo the exercise.

Type in the following shell script and save it as Exercise1B. Try to understand what it does and how to run it. Run the script by giving necessary positional parameters and get the expected output.

```
#!/bin/bash

if [ $# -ge 2 ]
then
echo "Valid Usage" else
echo "Invalid Usage" exit 1
fi
```

```
echo "Script name is $0"
echo "Number of positional parameters is $#" echo "First positional parameter is $1"
echo "Second positional parameter is $2"

maximum=$1 for num in $@ do
if [ $maximum –lt $num ]
then
fi done

maximum=$num

echo “The maximum number in the list of positional parameters is $maximum”
```

Exercise 2:

Run the script by giving any number of positional parameters and determine the difference between $@ and $* special shell variables.

Type in the following shell script and save it as Exercise2.

```
#!/bin/bash

for string in $@
do
echo $string
done


for string in $*
do
echo $string
done


for string in ”$@”
do
echo $string
done
```

```
for string in "$*"
do
echo $string
done
```

Exercise 3

1. Write a menu driven shell script to perform the following tasks.

   [1] Show Today's date/time.
   [2] Show files in current directory.
   [3] Show calendar.
   [4] Start editor to write letters.
   [5] Exit/Stop

   It will execute repeatedly until the user selects exit (option 5) from the menu.

2. Write Script to find out biggest number from given three numbers. Numbers are supplies as command line argument. Print error if sufficient arguments are not supplied.

3. Write a function called "myCal", using case statement to perform the basic math operations given below. (arg1 – number1, arg2 – number2 and agr3 - operator)

   + -- addition
   - -- subtraction
   x -- multiplication
   / -- division