

IZMIR INSTITUTE OF TECHNOLOGY

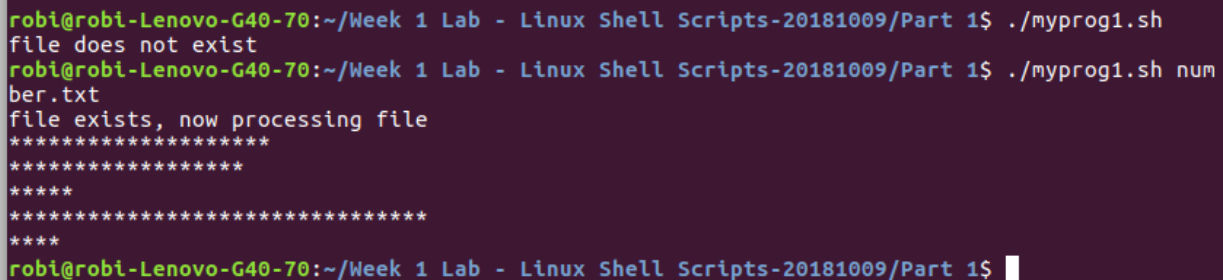
CENG313 - Operating System
Assignment 1

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myprog1.sh

In this program shell script take single argument which is a file . Program read the file line by line and each line contains integer. Each integer value in the file is passed to **generate_star** function and that function print out a row of stars of the given length for each integer on the terminal. If the file does not exist, it will show "file does not exist" error message.

Following screen shot displays the output:



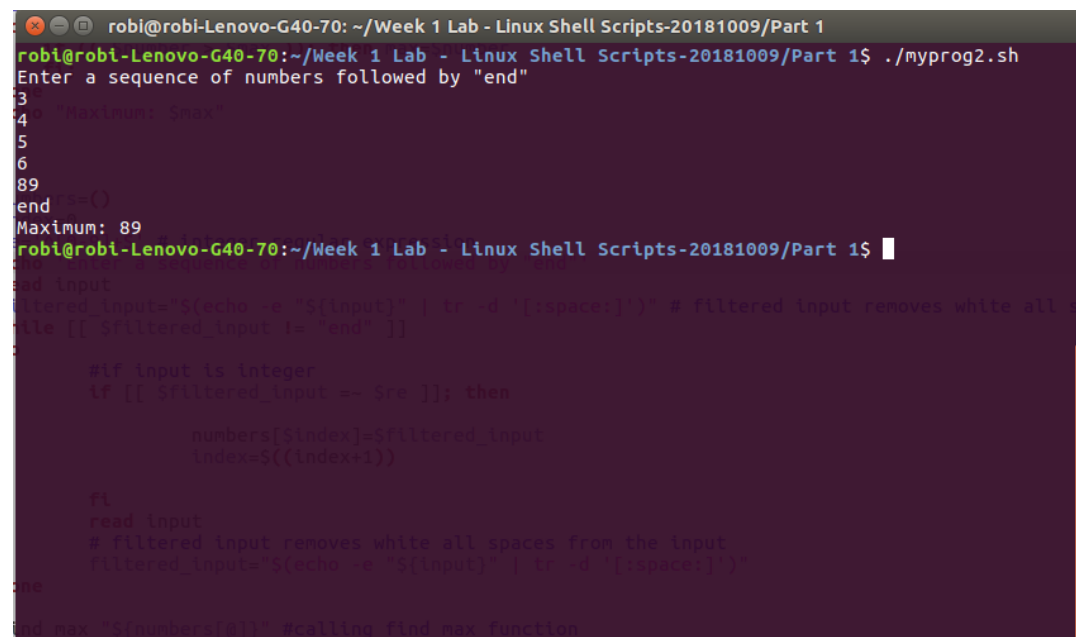
```
robi@robi-Lenovo-G40-70:~/Week 1 Lab - Linux Shell Scripts-20181009/Part 1$ ./myprog1.sh
file does not exist
robi@robi-Lenovo-G40-70:~/Week 1 Lab - Linux Shell Scripts-20181009/Part 1$ ./myprog1.sh number.txt
file exists, now processing file
*****
*****
*****
*****
*****
robi@robi-Lenovo-G40-70:~/Week 1 Lab - Linux Shell Scripts-20181009/Part 1$
```

myprog2.sh

In this program, program reads input **one per line** and then input is filtered. A while loop controls each user inputs and check if the input is “end” (loop termination condition). If a input is integer then it is added into the array of integers otherwise that input is omitted. After while loop is done, program calls **find_max** function which takes array of integers as argument and find maximum number and print it on terminal.

Note that filtering user input involves removing spaces inside the inputs. So “e n d” or “e nd” kind of inputs also acceptable.

Following screen shot displays the output:



```
robi@robi-Lenovo-G40-70: ~/Week 1 Lab - Linux Shell Scripts-20181009/Part 1
robi@robi-Lenovo-G40-70:~/Week 1 Lab - Linux Shell Scripts-20181009/Part 1$ ./myprog2.sh
Enter a sequence of numbers followed by "end"
3
4
5
6
89
end
Maximum: 89
robi@robi-Lenovo-G40-70:~/Week 1 Lab - Linux Shell Scripts-20181009/Part 1$

# if input is integer
if [[ $filtered_input =~ $re ]]; then
    numbers[$index]=$filtered_input
    index=$((index+1))
fi
read input
# filtered input removes white all spaces from the input
filtered_input=$(echo -e "$input" | tr -d '[:space:]')
while [[ $filtered_input != "end" ]]
do
done
find_max "${numbers[@]}" #calling find_max function
```

myprog3.sh

This shell script program that takes an optional argument as a directory. If no directory is given as argument then program works on current directory (“.”). The program first check the existence of the directory , if directory exist then it loop through the files and call **delete_zero_file** function. The function check if the file exist or not. If exist then it check if the file size is zero or not. If size is zero then return 1 otherwise return 0. After loop operation, total number of removed zero length file is printed on the terminal.

Following screen shot displays the output:

```
robi@robi-Lenovo-G40-70: ~/Week 1 Lab - Linux Shell Scripts-20181009/Part 1
robi@robi-Lenovo-G40-70:~/Week 1 Lab - Linux Shell Scripts-20181009/Part 1$ ls -l
total 48
-rwxr--r-- 1 robi robi 24 Eki 16 00:36 1.sh
-rw-r--r-- 1 robi robi 0 Eki 16 16:46 1.txt
-rw-r--r-- 1 robi robi 0 Eki 16 16:46 2.txt
-rw-r--r-- 1 robi robi 0 Eki 16 16:46 3.txt
-rw-r--r-- 1 robi robi 80 Eki 5 11:35 compile.sh
drwxr-xr-x 2 robi robi 4096 Eki 16 00:36 empty
-rwxr--r-- 1 robi robi 310 Eki 9 20:29 example.sh
-rw-r--r-- 1 robi robi 66 Eki 5 11:35 hello.c
-rwxr--r-x 1 robi robi 32 Eki 9 20:10 hello.sh
-rwxr--r-- 1 robi robi 225 Eki 11 18:09 loop.sh
-rwxr--r-- 1 robi robi 518 Eki 16 15:38 myprog1.sh
-rwxr--r-- 1 robi robi 830 Eki 16 00:08 myprog2.sh
-rwxr--r-- 1 robi robi 898 Eki 16 15:58 myprog3.sh
-rwxr--r-- 1 robi robi 13 Eki 9 21:27 number.txt
-rw-r--r-- 1 robi robi 59 Eki 5 11:37 pipeline.sh
robi@robi-Lenovo-G40-70:~/Week 1 Lab - Linux Shell Scripts-20181009/Part 1$
```

```
robi@robi-Lenovo-G40-70: ~/Week 1 Lab - Linux Shell Scripts-20181009/Part 1
robi@robi-Lenovo-G40-70:~/Week 1 Lab - Linux Shell Scripts-20181009/Part 1$ ./myprog3.sh
./1.txt File has size zero and deleted
./2.txt File has size zero and deleted
./3.txt File has size zero and deleted
3 zero-length files are removed from the directory: "."
robi@robi-Lenovo-G40-70:~/Week 1 Lab - Linux Shell Scripts-20181009/Part 1$
```

```
robi@robi-Lenovo-G40-70: ~/Week 1 Lab - Linux Shell Scripts-20181009/Part 1
robi@robi-Lenovo-G40-70:~/Week 1 Lab - Linux Shell Scripts-20181009/Part 1$ ls -l
total 48
-rwxr--r-- 1 robi robi 24 Eki 16 00:36 1.sh
-rw-r--r-- 1 robi robi 80 Eki 5 11:35 compile.sh
drwxr-xr-x 2 robi robi 4096 Eki 16 00:36 empty life
-rwxr--r-- 1 robi robi 310 Eki 9 20:29 example.sh
-rw-r--r-- 1 robi robi 66 Eki 5 11:35 hello.c
-rwxr--r-x 1 robi robi 32 Eki 9 20:10 hello.sh
-rwxr--r-- 1 robi robi 225 Eki 11 18:09 loop.sh
-rwxr--r-- 1 robi robi 566 Eki 17 19:09 myprog1.sh
-rwxr--r-- 1 robi robi 853 Eki 17 19:29 myprog2.sh
-rwxr--r-- 1 robi robi 903 Eki 17 20:23 myprog3.sh
-rwxr--r-- 1 robi robi 13 Eki 9 21:27 number.txt
-rw-r--r-- 1 robi robi 59 Eki 5 11:37 pipeline.sh
robi@robi-Lenovo-G40-70:~/Week 1 Lab - Linux Shell Scripts-20181009/Part 1$
```

So when a file does not have zero size files or directory is empty it gives following output.

```
robi@robi-Lenovo-G40-70: ~/Week 1 Lab - Linux Shell Scripts-20181009/Part 1
robi@robi-Lenovo-G40-70:~/Week 1 Lab - Linux Shell Scripts-20181009/Part 1$ ./my
prog3.sh "./empty life"
0 zero-length files are removed from the directory: "./empty life"
robi@robi-Lenovo-G40-70:~/Week 1 Lab - Linux Shell Scripts-20181009/Part 1$
```

The file named “empty life ” is empty.

```
robi@robi-Lenovo-G40-70: ~/Week 1 Lab - Linux Shell Scripts-20181009/Part 1
robi@robi-Lenovo-G40-70:~/Week 1 Lab - Linux Shell Scripts-20181009/Part 1$ ls -l "./empty
life"
total 0
robi@robi-Lenovo-G40-70:~/Week 1 Lab - Linux Shell Scripts-20181009/Part 1$
```

