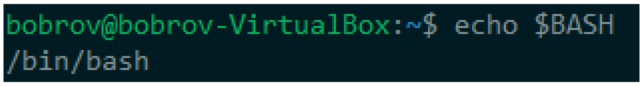
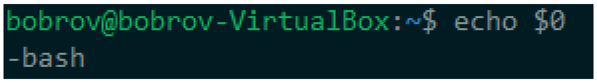
EPAM University Programs
DevOps external course
Module 4 Linux Essentials with Bash
TASK 4.9

4.9.1 Check the location of the bash shell and use this path in scripts #! / Full_path_to_program program_option

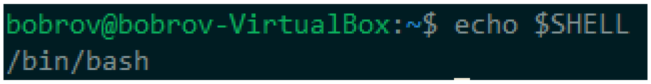


```
bobrov@bobrov-VirtualBox:~$ echo $BASH
/bin/bash
```

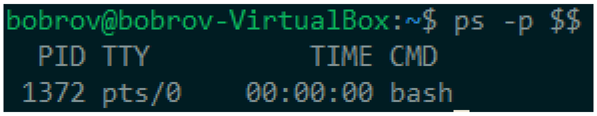
4.9.2 We verify that bash is running using a special built-in variable.



```
bobrov@bobrov-VirtualBox:~$ echo $0
-bash
```

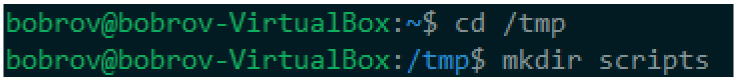


```
bobrov@bobrov-VirtualBox:~$ echo $SHELL
/bin/bash
```



```
bobrov@bobrov-VirtualBox:~$ ps -p $$
  PID TTY          TIME CMD
 1372 pts/0    00:00:00 bash
```

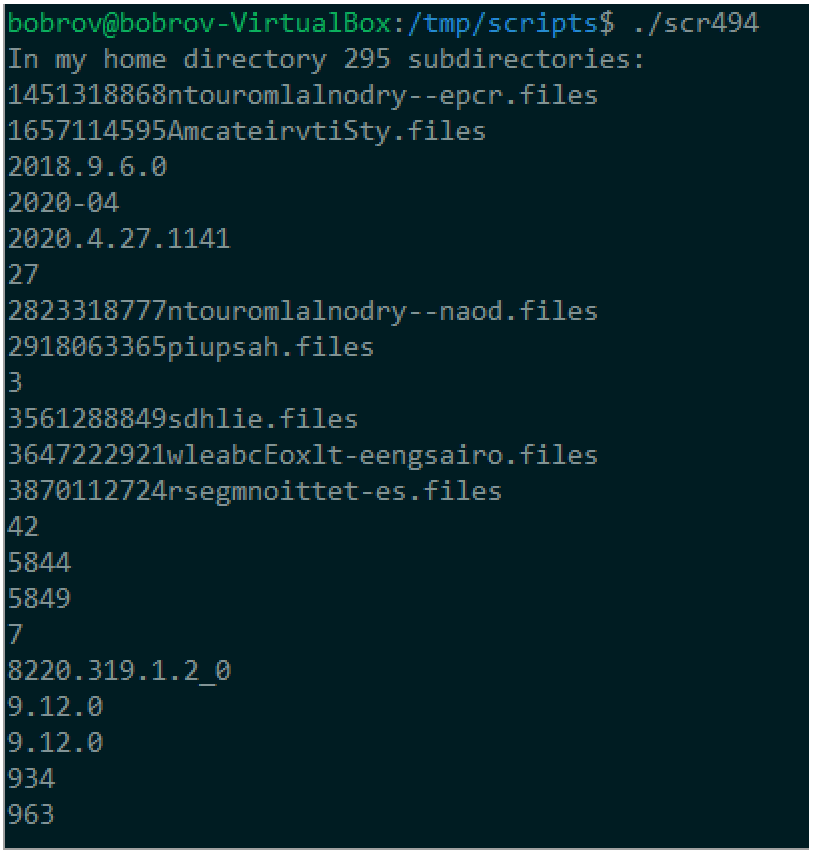
4.9.3 Create a directory where your scripts will be stored, for example, .../tmp/scripts.



```
bobrov@bobrov-VirtualBox:~$ cd /tmp
bobrov@bobrov-VirtualBox:/tmp$ mkdir scripts
```

4.9.4 Create a script that displays the following message: “In my home directory <n> subdirectory: <name>”. n - quantity, name - the name of the directory. Make this script an executable program and run using the interpretation commands in the current shell (this applies to all subsequent scripts).

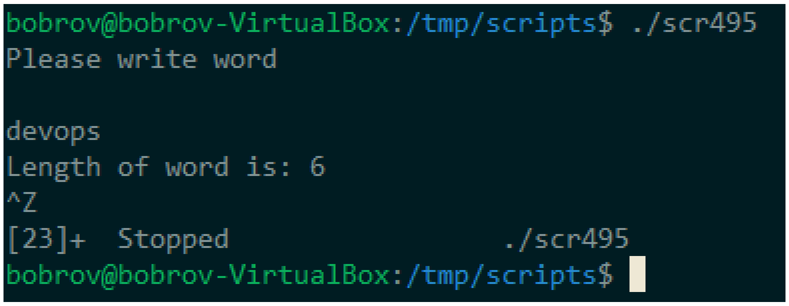
```
#!/bin/bash
# Create a variable with a link to my home directory
varDir=$(echo $HOME)
# Count how many subdirectories in my home directory and create the variable
countSubdir=$(find "$varDir" -type d | sed 's/\// /g' |\
awk '{$1=$2=""; print $0}' | awk 'NF > 0' | awk 'END{print NR}')
# Display a message with count a directories
echo "In my home directory "$countSubdir" subdirectories:"
# Display directory names
find "$varDir" -type d | sed 's/\// /g' |\
awk '{$1=$2=""; print $0}' | awk 'NF > 0' | awk '{print $NF}' | sort > file494
cat file494
```



```
bobrov@bobrov-VirtualBox:/tmp/scripts$ ./scr494
In my home directory 295 subdirectories:
1451318868ntouromlalnodry--epcr.files
1657114595AmcateirvtiSty.files
2018.9.6.0
2020-04
2020.4.27.1141
27
2823318777ntouromlalnodry--naod.files
2918063365piupsah.files
3
3561288849sdhlie.files
3647222921wleabcEoxlt-eengsairo.files
3870112724rsegmnoittet-es.files
42
5844
5849
7
8220.319.1.2_0
9.12.0
9.12.0
934
963
```

4.9.5 Create a script that reads a word from the screen and displays the number of characters in that word.

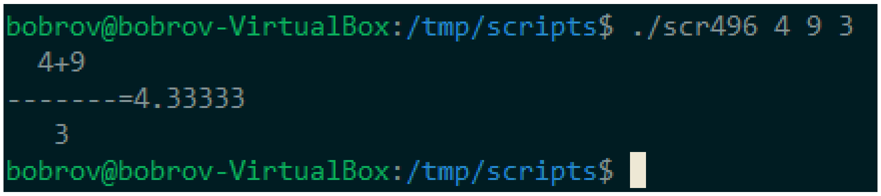
```
#!/bin/bash
awk 'BEGIN {print "Please write word"; print}\
{print "Length of word is: " length($0)}'
```



```
bobrov@bobrov-VirtualBox:/tmp/scripts$ ./scr495
Please write word

devops
Length of word is: 6
^Z
[23]+  Stopped                 ./scr495
bobrov@bobrov-VirtualBox:/tmp/scripts$ 
```

4.9.6 Write a script that sequentially (using positional parameters) takes three arguments a, b and c and displays the value (a + b) / c as a simple fraction.

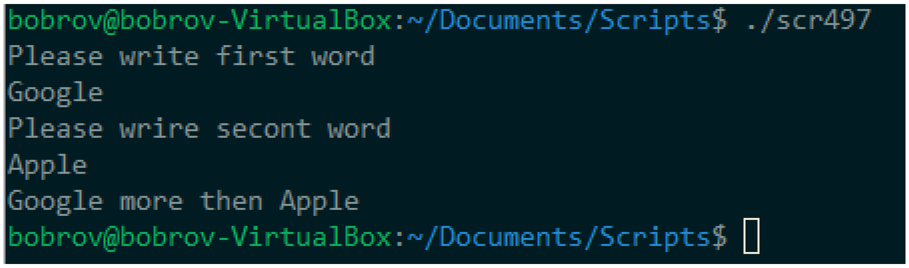
```
#!/bin/bash

var1=$(echo "scale=5; $1+$2" | bc)
var2=$(echo "scale=5; $var1/$3" | bc)

echo "  $1+$2"
echo "-------=$var2"
echo "   $3"
```



```
bobrov@bobrov-VirtualBox:/tmp/scripts$ ./scr496 4 9 3
  4+9
-------=4.33333
   3
bobrov@bobrov-VirtualBox:/tmp/scripts$ 
```

4.9.7 Write a script that sequentially takes two arguments and displays the larger one. If there are more than two arguments, display an error message.

```
#!/bin/bash

echo "Please write first word"
read first

echo "Please wrire secont word"
read second

var1=$(echo "$first" | awk "END {print NF}")
var2=$(echo "$second" | awk "END {print NF}")

if [[ -z "$first" || -z "$second" ]]; then
  echo "ERROR 1 Too few words in the field"
elif [[ "$var1">1 || "$var2">1 ]]; then
  echo "ERROR 2 Too many words in the field"
elif [[ "$first">"$second" ]]; then
  echo "$first more then $second"
elif [[ "$first"<"$second" ]]; then
  echo "$second more then $first"
else
  echo "$first and $second are the same"
fi
```

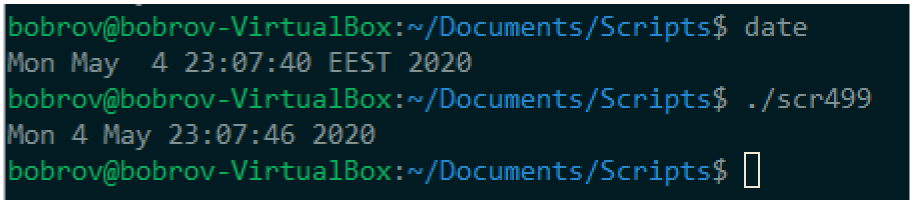


```
bobrov@bobrov-VirtualBox:~/Documents/Scripts$ ./scr497
Please write first word
Google
Please wrire secont word
Apple
Google more then Apple
bobrov@bobrov-VirtualBox:~/Documents/Scripts$ 
```

4.9.8 Проверить, на какой позиции находится символ 'a' в path.

4.9.9 Remove the time zone name (EEST) from the date. Rearrange the day and month.

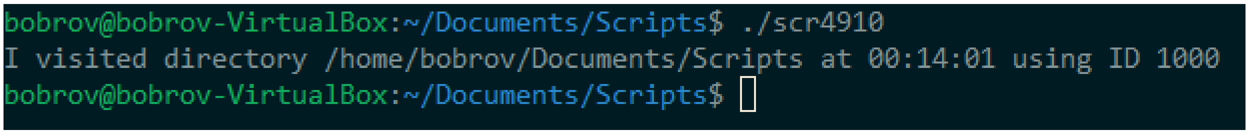
```
#!/bin/bash
# Display date and delete field with timezone and swap columns 2;3
date | awk '{$5=""; print $0}' |\
awk '{t = $2; $2 = $3; $3 = t; print $0}'
```



```
bobrov@bobrov-VirtualBox:~/Documents/Scripts$ date
Mon May  4 23:07:40 EEST 2020
bobrov@bobrov-VirtualBox:~/Documents/Scripts$ ./scr499
Mon 4 May 23:07:46 2020
bobrov@bobrov-VirtualBox:~/Documents/Scripts$
```

4.9.10 Print a line containing the sentence: ”I went to the <current directory> at <time> using the identifier <UID>”.

```
#!/bin/bash
vartime=$(date | awk '{print $4}')
varlink=$(pwd)
varid=$(echo $UID)
echo "I visited directory $varlink at $vartime using ID $varid"
```



```
bobrov@bobrov-VirtualBox:~/Documents/Scripts$ ./scr4910
I visited directory /home/bobrov/Documents/Scripts at 00:14:01 using ID 1000
bobrov@bobrov-VirtualBox:~/Documents/Scripts$
```

4.9.11 Вывести из $PATH путь до последнего в списке каталога (3 способа).

4.9.12 Попытаться вывести значение переменной, не объявленной ранее и получить указанное вами сообщение об ошибке.

4.9.13 В скрипте с помощью wget скачать документ с головной страницы сервера mail.ru и перенаправить полученный документ на вход links (lynx).