

EPAM University Programs

DevOps external course

Module 4 Linux & Bash Essentials

TASK 4.8

Работа предполагается в скриптах, поэтому все командные последовательности оформляем в скрипт, текст которого ставим перед файлом с выполненным заданием. С той же целью вывод каждого задания перенаправляем в отдельный файл отчета (скрипт при этом можно сделать общим для всех заданий 4.8).

Кроме того, для выполнения данного задания создать на git-репозитории отдельную папку, в которую поместить все созданные скрипты и результаты их выполнения.

В итоге от вас я ожидаю увидеть отчет по работе, включающий в себя скрипт по каждому пункту задания и результаты его выполнения, а также папку со скриптом (скриптами) и отчетами по каждому из пунктов.

4.8.1 Создать файл с результатом расширенного рекурсивного листинга домашней папки.

```
#!/bin/bash
```

```
ls -lahR ~ | tee ./task48.txt
```

```

user@user-VirtualBox:~$ cat task48.txt |more
/home/user:
total 124M
drwxr-xr-x 19 user user 4,0K тpa  3 20:11 .
drwxr-xr-x  5 root root 4,0K кvi 23 23:51 ..
-rw-----  1 user user  722 кvi 29 01:23 .bash_history
-rw-r--r--  1 user user  220 бep 31 12:45 .bash_logout
-rw-r--r--  1 user user 3,7K бep 31 12:45 .bashrc
drwx----- 13 user user 4,0K кvi 24 00:10 .cache
-rw-r--r--  1 user user  158 кvi 16 23:52 compressed.tgz
drwx----- 13 user user 4,0K кvi 24 00:10 .config
drwxr-xr-x  2 user user 4,0K бep 31 14:47 Desktop
drwxr-xr-x  2 user user 4,0K бep 31 14:47 Documents
drwxr-xr-x  2 user user 4,0K бep 31 14:47 Downloads
drwx-----  3 user user 4,0K бep 31 14:47 .gnupg
-rw-----  1 user user 1,4K кvi 14 23:42 .ICEauthority
drwxr-x---  4 user user 4,0K кvi  6 11:53 .kube
drwx-----  3 user user 4,0K бep 31 14:47 .local
drwx-----  5 user user 4,0K кvi 20 17:02 .mozilla
drwxr-xr-x  2 user user 4,0K бep 31 14:47 Music
drwxr-xr-x  2 user user  36K кvi 20 03:44 Pictures
-rw-r--r--  1 user user  807 бep 31 12:45 .profile
drwxr-xr-x  2 user user 4,0K бep 31 14:47 Public
-rwxrwxr-x  1 user user   42 тpa  3 19:25 scl.sh
-rwxrwxr-x  1 user user   64 тpa  3 20:14 sc2.sh
-rw-r--r--  1 user user   72 кvi 24 00:11 .selected_editor
drwxr-xr-x  3 user user 4,0K кvi  6 11:53 snap
-rw-rw-r--  1 user user 123M жов 13 2018 SQLEXPR_x64_ENU.exe
-rw-r--r--  1 user user    0 бep 31 14:51 .sudo_as_admin_successful
-rw-rw-r--  1 user user 348K тpa  3 20:15 task482a.txt
-rw-rw-r--  1 user user 332K тpa  3 19:28 task48.txt
drwxr-xr-x  2 user user 4,0K бep 31 14:47 Templates

```

4.8.2a Заменить Имя пользователя на любое другое при помощи sed

```
#!/bin/bash
```

```
sed 's/user/task48/g' task48.txt > task482a.txt
```

```

user@user-VirtualBox:~$ cat task482a.txt |more
/home/task48:
total 124M
drwxr-xr-x 19 task48 task48 4,0K tpa  3 20:11 .
drwxr-xr-x  5 root root 4,0K кби 23 23:51 ..
-rw----- 1 task48 task48  722 кби 29 01:23 .bash_history
-rw-r--r-- 1 task48 task48  220 беп 31 12:45 .bash_logout
-rw-r--r-- 1 task48 task48 3,7K беп 31 12:45 .bashrc
drwx----- 13 task48 task48 4,0K кби 24 00:10 .cache
-rw-r--r-- 1 task48 task48  158 кби 16 23:52 compressed.tgz
drwx----- 13 task48 task48 4,0K кби 24 00:10 .config
drwxr-xr-x  2 task48 task48 4,0K беп 31 14:47 Desktop
drwxr-xr-x  2 task48 task48 4,0K беп 31 14:47 Documents
drwxr-xr-x  2 task48 task48 4,0K беп 31 14:47 Downloads
drwx-----  3 task48 task48 4,0K беп 31 14:47 .gnupg
-rw-----  1 task48 task48 1,4K кби 14 23:42 .ICEauthority
drwxr-x---  4 task48 task48 4,0K кби  6 11:53 .kube
drwx-----  3 task48 task48 4,0K беп 31 14:47 .local
drwx-----  5 task48 task48 4,0K кби 20 17:02 .mozilla
drwxr-xr-x  2 task48 task48 4,0K беп 31 14:47 Music
drwxr-xr-x  2 task48 task48  36K кби 20 03:44 Pictures
-rw-r--r--  1 task48 task48  807 беп 31 12:45 .profile
drwxr-xr-x  2 task48 task48 4,0K беп 31 14:47 Public
-rwxrwxr-x  1 task48 task48   42 tpa  3 19:25 scl.sh
-rwxrwxr-x  1 task48 task48   64 tpa  3 20:14 sc2.sh
-rw-r--r--  1 task48 task48   72 кби 24 00:11 .selected_editor
drwxr-xr-x  3 task48 task48 4,0K кби  6 11:53 snap
-rw-rw-r--  1 task48 task48 123M жов 13  2018 SQLEXPR_x64_ENU.exe
-rw-r--r--  1 task48 task48    0 беп 31 14:51 .sudo_as_admin_successful
-rw-rw-r--  1 task48 task48 348K tpa  3 20:15 task482a.txt
-rw-rw-r--  1 task48 task48 332K tpa  3 19:28 task48.txt

```

4.8.2b Заменить Имя пользователя на любое другое при помощи awk

```
#!/bin/bash
```

```
awk '{sub("user","awk_demo");print}' task48.txt > task482b.txt
```

```

user@user-VirtualBox:~$ ./sc3.sh
user@user-VirtualBox:~$ cat task482b.txt |more
/home/awk_demo:
total 124M
drwxr-xr-x 19 awk_demo user 4,0K tpa 3 20:11 .
drwxr-xr-x 5 root root 4,0K kbi 23 23:51 ..
-rw----- 1 awk_demo user 722 kbi 29 01:23 .bash_history
-rw-r--r-- 1 awk_demo user 220 бep 31 12:45 .bash_logout
-rw-r--r-- 1 awk_demo user 3,7K бep 31 12:45 .bashrc
drwx----- 13 awk_demo user 4,0K kbi 24 00:10 .cache
-rw-r--r-- 1 awk_demo user 158 kbi 16 23:52 compressed.tgz
drwx----- 13 awk_demo user 4,0K kbi 24 00:10 .config
drwxr-xr-x 2 awk_demo user 4,0K бep 31 14:47 Desktop
drwxr-xr-x 2 awk_demo user 4,0K бep 31 14:47 Documents
drwxr-xr-x 2 awk_demo user 4,0K бep 31 14:47 Downloads
drwx----- 3 awk_demo user 4,0K бep 31 14:47 .gnupg
-rw----- 1 awk_demo user 1,4K kbi 14 23:42 .ICEauthority
drwxr-x--- 4 awk_demo user 4,0K kbi 6 11:53 .kube
drwx----- 3 awk_demo user 4,0K бep 31 14:47 .local
drwx----- 5 awk_demo user 4,0K kbi 20 17:02 .mozilla
drwxr-xr-x 2 awk_demo user 4,0K бep 31 14:47 Music
drwxr-xr-x 2 awk_demo user 36K kbi 20 03:44 Pictures
-rw-r--r-- 1 awk_demo user 807 бep 31 12:45 .profile
drwxr-xr-x 2 awk_demo user 4,0K бep 31 14:47 Public
-rwxrwxr-x 1 awk_demo user 42 tpa 3 19:25 scl.sh
-rwxrwxr-x 1 awk_demo user 64 tpa 3 20:14 sc2.sh
-rw-r--r-- 1 awk_demo user 72 kbi 24 00:11 .selected_editor
drwxr-xr-x 3 awk_demo user 4,0K kbi 6 11:53 snap
-rw-rw-r-- 1 awk_demo user 123M жов 13 2018 SQLEXP_x64_ENU.exe
-rw-r--r-- 1 awk_demo user 0 бep 31 14:51 .sudo_as_admin_successful
-rw-rw-r-- 1 awk_demo user 348K tpa 3 20:15 task482a.txt
-rw-rw-r-- 1 awk_demo user 332K tpa 3 19:28 task48.txt
drwxr-xr-x 2 awk_demo user 4,0K бep 31 14:47 Templates
drwxr-xr-x 2 awk_demo user 4,0K kbi 24 01:36 test
-rw-r--r-- 1 awk_demo user 10K kbi 16 23:50 test.tar
drwxr-xr-x 3 awk_demo user 4,0K kbi 19 23:19 tmp
-rw-r----- 1 awk_demo user 5 kbi 14 23:42 .vboxclient-display.pid

```

NOTE: 'gsub' can be used instead of 'sub' for global substitution, not only the first entry per string

```

user@user-VirtualBox:~$ awk '{gsub("user","awk_demo");print}' task48.txt |more
/home/awk_demo:
total 124M
drwxr-xr-x 19 awk_demo awk_demo 4,0K тpa 3 20:11 .
drwxr-xr-x 5 root root 4,0K кbi 23 23:51 ..
-rw----- 1 awk_demo awk_demo 722 кbi 29 01:23 .bash_history
-rw-r--r-- 1 awk_demo awk_demo 220 бep 31 12:45 .bash_logout
-rw-r--r-- 1 awk_demo awk_demo 3,7K бep 31 12:45 .bashrc
drwx----- 13 awk_demo awk_demo 4,0K кbi 24 00:10 .cache
-rw-r--r-- 1 awk_demo awk_demo 158 кbi 16 23:52 compressed.tgz
drwx----- 13 awk_demo awk_demo 4,0K кbi 24 00:10 .config
drwxr-xr-x 2 awk_demo awk_demo 4,0K бep 31 14:47 Desktop
drwxr-xr-x 2 awk_demo awk_demo 4,0K бep 31 14:47 Documents
drwxr-xr-x 2 awk_demo awk_demo 4,0K бep 31 14:47 Downloads
drwx----- 3 awk_demo awk_demo 4,0K бep 31 14:47 .gnupg
-rw----- 1 awk_demo awk_demo 1,4K кbi 14 23:42 .ICEauthority
drwxr-x--- 4 awk_demo awk_demo 4,0K кbi 6 11:53 .kube
drwx----- 3 awk_demo awk_demo 4,0K бep 31 14:47 .local
drwx----- 5 awk_demo awk_demo 4,0K кbi 20 17:02 .mozilla
drwxr-xr-x 2 awk_demo awk_demo 4,0K бep 31 14:47 Music
drwxr-xr-x 2 awk_demo awk_demo 36K кbi 20 03:44 Pictures
-rw-r--r-- 1 awk_demo awk_demo 807 бep 31 12:45 .profile
drwxr-xr-x 2 awk_demo awk_demo 4,0K бep 31 14:47 Public
-rwxrwxr-x 1 awk_demo awk_demo 42 тpa 3 19:25 scl.sh
-rwxrwxr-x 1 awk_demo awk_demo 64 тpa 3 20:14 sc2.sh
-rw-r--r-- 1 awk_demo awk_demo 72 кbi 24 00:11 .selected_editor
drwxr-xr-x 3 awk_demo awk_demo 4,0K кbi 6 11:53 snap
-rw-rw-r-- 1 awk_demo awk_demo 123M жов 13 2018 SQLEXPR_x64_ENU.exe
-rw-r--r-- 1 awk_demo awk_demo 0 бep 31 14:51 .sudo_as_admin_successful
-rw-rw-r-- 1 awk_demo awk_demo 348K тpa 3 20:15 task482a.txt
-rw-rw-r-- 1 awk_demo awk_demo 332K тpa 3 19:28 task48.txt
drwxr-xr-x 2 awk_demo awk_demo 4,0K бep 31 14:47 Templates
drwxr-xr-x 2 awk_demo awk_demo 4,0K кbi 24 01:36 test
-rw-r--r-- 1 awk_demo awk_demo 10K кbi 16 23:50 test.tar
drwxr-xr-x 3 awk_demo awk_demo 4,0K кbi 19 23:19 tmp
-rw-r----- 1 awk_demo awk_demo 5 кbi 14 23:42 .vboxclient-display.pid

```

4.8.3 Удалить строку с общим количеством файлов.

```
#!/bin/bash
```

```
sed '/total/d' task48.txt > task483.txt
```

```

user@user-VirtualBox:~$ ./sc4.sh
user@user-VirtualBox:~$ cat task483.txt |more
/home/user:
drwxr-xr-x 19 user user 4,0K тpa 3 20:11 .
drwxr-xr-x 5 root root 4,0K кви 23 23:51 ..
-rw----- 1 user user 722 кви 29 01:23 .bash_history
-rw-r--r-- 1 user user 220 бер 31 12:45 .bash_logout
-rw-r--r-- 1 user user 3,7K бер 31 12:45 .bashrc
drwx----- 13 user user 4,0K кви 24 00:10 .cache
-rw-r--r-- 1 user user 158 кви 16 23:52 compressed.tgz
drwx----- 13 user user 4,0K кви 24 00:10 .config
drwxr-xr-x 2 user user 4,0K бер 31 14:47 Desktop
drwxr-xr-x 2 user user 4,0K бер 31 14:47 Documents
drwxr-xr-x 2 user user 4,0K бер 31 14:47 Downloads
drwx----- 3 user user 4,0K бер 31 14:47 .gnupg
-rw----- 1 user user 1,4K кви 14 23:42 .ICEauthority
drwxr-x--- 4 user user 4,0K кви 6 11:53 .kube
drwx----- 3 user user 4,0K бер 31 14:47 .local
drwx----- 5 user user 4,0K кви 20 17:02 .mozilla
drwxr-xr-x 2 user user 4,0K бер 31 14:47 Music
drwxr-xr-x 2 user user 36K кви 20 03:44 Pictures
-rw-r--r-- 1 user user 807 бер 31 12:45 .profile
drwxr-xr-x 2 user user 4,0K бер 31 14:47 Public
-rwxrwxr-x 1 user user 42 тpa 3 19:25 scl.sh
-rwxrwxr-x 1 user user 64 тpa 3 20:14 sc2.sh
-rw-r--r-- 1 user user 72 кви 24 00:11 .selected_editor
drwxr-xr-x 3 user user 4,0K кви 6 11:53 snap
-rw-rw-r-- 1 user user 123M жов 13 2018 SQLEXPR_x64_ENU.exe
-rw-r--r-- 1 user user 0 бер 31 14:51 .sudo_as_admin_successful
-rw-rw-r-- 1 user user 348K тpa 3 20:15 task482a.txt
-rw-rw-r-- 1 user user 332K тpa 3 19:28 task48.txt
drwxr-xr-x 2 user user 4,0K бер 31 14:47 Templates
drwxr-xr-x 2 user user 4,0K кви 24 01:36 test
-rw-r--r-- 1 user user 10K кви 16 23:50 test.tar
drwxr-xr-x 3 user user 4,0K кви 19 23:19 tmp
-rw-r----- 1 user user 5 кви 14 23:42 .vboxclient-display.pid
-rw-r----- 1 user user 5 кви 14 23:42 .vboxclient-draganddrop.pid

```

4.8.4 Вывести столбцы: дату создания файла и его имя.

```
#!/bin/bash
```

```
awk '{print "The date of creation is" "\t| " $6 " " $7 " " $8 " " "\t| " "for a file" "\t| " $9}' task48.txt > task484.txt
```

```

user@user-VirtualBox:~$ ./sc5.sh
user@user-VirtualBox:~$ cat task484.txt |more
The date of creation is |      | for a file |
The date of creation is |      | for a file |
The date of creation is | tpa 3 20:11 | for a file | .
The date of creation is | kbi 23 23:51 | for a file | ..
The date of creation is | kbi 29 01:23 | for a file | .bash_history
The date of creation is | бep 31 12:45 | for a file | .bash_logout
The date of creation is | бep 31 12:45 | for a file | .bashrc
The date of creation is | kbi 24 00:10 | for a file | .cache
The date of creation is | kbi 16 23:52 | for a file | compressed.tgz
The date of creation is | kbi 24 00:10 | for a file | .config
The date of creation is | бep 31 14:47 | for a file | Desktop
The date of creation is | бep 31 14:47 | for a file | Documents
The date of creation is | бep 31 14:47 | for a file | Downloads
The date of creation is | бep 31 14:47 | for a file | .gnupg
The date of creation is | kbi 14 23:42 | for a file | .ICEauthority
The date of creation is | kbi 6 11:53 | for a file | .kube
The date of creation is | бep 31 14:47 | for a file | .local
The date of creation is | kbi 20 17:02 | for a file | .mozilla
The date of creation is | бep 31 14:47 | for a file | Music
The date of creation is | kbi 20 03:44 | for a file | Pictures
The date of creation is | бep 31 12:45 | for a file | .profile
The date of creation is | бep 31 14:47 | for a file | Public
The date of creation is | tpa 3 19:25 | for a file | scl.sh
The date of creation is | tpa 3 20:14 | for a file | sc2.sh
The date of creation is | kbi 24 00:11 | for a file | .selected_editor
The date of creation is | kbi 6 11:53 | for a file | snap
The date of creation is | жов 13 2018 | for a file | SQLEXPR_x64_ENU.exe
The date of creation is | бep 31 14:51 | for a file | .sudo_as_admin_successful
The date of creation is | tpa 3 20:15 | for a file | task482a.txt
The date of creation is | tpa 3 19:28 | for a file | task48.txt
The date of creation is | бep 31 14:47 | for a file | Templates
The date of creation is | kbi 24 01:36 | for a file | test
The date of creation is | kbi 16 23:50 | for a file | test.tar
The date of creation is | kbi 19 23:19 | for a file | tmp
The date of creation is | kbi 14 23:42 | for a file | .vboxclient-display.pid
The date of creation is | kbi 14 23:42 | for a file | .vboxclient-draganddrop.pid

```

240 words Russian

4.8.5 Найти и вывести все имена файлов, которые содержат цифру.

```
#!/bin/bash
```

```
awk '$9 ~ /[0-9]/ {print $9}' task48.txt > task485.txt
```



```

user@user-VirtualBox:~$ ./sc6.sh
user@user-VirtualBox:~$ cat task485.txt |more
sc1.sh
sc2.sh
SQLEXPR_x64_ENU.exe
task482a.txt
task48.txt
event-sound-cache.tdb.0555dbf6736e42328c05400bf2783e9a.x86_64-pc-linux-gnu
gstreamer-1.0
a41116dafaf8b233ac2c61cb73f2ea5f-1e64.cache-7
4b6d3287f3158943cc8a891855c6721c8dfcc8d3-minetestheader.png
6495eebc301f5c373d005a423eab05d966a71be2-notepad-plus-plus.png
a6738e117c8a8ed8021d8b5ada7e03d463ddd3cf-glimpse-snapcraft-banner.png
007538c3ca09d4f6399a5d1a45a132f8e3b33f66-ags.png
02ac947b65fe68dfc4e4917a08fed128768e5d2c-icon.svg_5bDGvFr.png
03d7afe821e8ef090584c80e62ed44928595ce87-vidcutter.png
047f48b6aa3672f7374b229ca5167618c3f33485-icon_512.png
05d757076ea53db1caea4bd69a2d5ac9e6da69bb-qalculate_q0JaGnf.png
05df2e59b062932cbc01d41d30ebb51f50483ae7-icon_w5YG1FC.png
0695116214c356dcd95b85372fc0eea2b183ea53-bomber.svg.png
070b513cbfe3c07f89a133f75fccc194f52222ae-icon_SJSWxTL.png
0739ad5213c5693404ebd0f1550b07a515969eec-1024snapcraft.png
081489bbd4fd4921f56d140b9alf4b2cc533e6c0-picmi.svg.png
089c003f27cela2b01bdc03797d56c23e606e0d3-SongBuilderColourIcon256.png
08fd94dec0e71edb3ef60573bd0e6d046f2e3591-heartbeat.png
0904c77d45c89301293ba50309ad33ea4b8abfee-supertuxkart-256.png
096fc810fa2eb884alc7979a6fab9f144f0b0a06-icon_2.png
097de07337d981df36f5aa9bf36cfc0af0058067-default48.png
0afda213028020934adf451e5bedc0385fb78659-icon_mD8Hvdi.png
0c307falc053fff34fcf9384ecf365c7ede235377-icon.svg.png
0c7107flaec450371709ecdd38bb673ba35709a2-audio-switcher_96x96.png
0cda02fb6e328ff19c0b8548b92266b5bc344836-handbrake-jz.png
0dlfefba5305851af4f8106615196c8d093eb7b4-multipass.png
0d46914ea561fcf57155689d602a0f64c608bf99-mpv.png
0e349a546e1d04095c0fd7c734edde2cad19dd19-mutt256.png
0f19306c15b56c6932e9a51acb56ecf63322f0b9-256x256_6ileytI.png

```

4.8.6 Найти и вывести все имена файлов, которые имеют расширение.

```
#!/bin/bash
```

```
awk '$9 ~ /\.(.+)$/ {print $9}' task48.txt > task486.txt
```



```
user@user-VirtualBox:~$ ./sc7.sh
user@user-VirtualBox:~$ cat task486.txt |more
..
58. .bash_history
    .bash_logout
ocu .bashrc
ad  .cache
ise compressed.tgz
    .config
    .gnupg
    .ICEauthority
    .kube
not .local
    .mozilla
    .profile
    scl.sh
    sc2.sh
    .selected_editor
    SQLEXPR_x64_ENU.exe
    .sudo_as_admin_successful
    task482a.txt
    task48.txt
    test.tar
    .vboxclient-display.pid
    .vboxclient-draganddrop.pid
    .vboxclient-seamless.pid
    .viminfo
    ..
    event-sound-cache.tdb.0555dbf6736e42328c05400bf2783e9a.x86_64-pc-linux-gnu
    gstreamer-1.0
    motd.legal-displayed
```