**Отчет по лабораторной работе № 12** по курсу “Фундаментальная информатика”

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Преподаватель: каф. 806 Севастьянов Виктор Сергеевич

Отчет сдан « » \_\_\_\_\_\_\_\_\_20\_\_ г., итоговая оценка \_\_\_\_\_\_\_\_

Подпись преподавателя \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

* 1. **Тема:** Стандартные утилиты UNIX для обработки файлов

1. **Цель работы:** Познакомиться с основными утилитами UNIX, написать скрипт используя возможности awk/sed
2. **Задание**:

Для выполнения лабораторной работы необходимо:

1. Изучить основные команды обработки текстовых файлов ОС UNIX по литературным источникам, системным электронным мануалам Wikipedia и т. п. публикациям в сети Интернет. Обратить внимание на некоторые различия в реализациях команд на разных платформах и в разных версиях UNIX.
2. В среде ОС UNIX опробовать указанные ниже утилиты и получить навыки работы с ними. Исследовать возможности применения кириллицы в обрабатываемых файлах. Для генерации тестовых данных в необходимых случаях использовать специально написанные программы.
3. Сдать промежуточный зачёт VI (программа зачёта приведена ниже).
4. Подготовить нетривиальные текстовые файлы для иллюстрации работы трёх утилит, допускающих не интерактивный режим. Распределение утилит по студентам производится преподавателем. При выполнении работы рекомендуется использовать простые командные файлы или последовательности команд в командной строке и конвейеры.
5. Запротоколировать подготовленные примеры и иллюстрации работы для не менее, чем 20 «обязательных» утилит пакетного режима с распечаткой используемых текстовых файлов.
6. **Оборудование** (студента):

*Процессор Intel Core i7-1165G7 @ 4x2.8GH с ОП 16384 Мб, НМД 512 Гб. Монитор 1920x1080*

1. **Программное обеспечение (**студента**):**

Операционная система семейства: *linux*, наименование: *ubuntu*, версия 20.04.3 *LTS*

интерпретатор команд: *bash* версия *5.0*.17(1)

Система программирования Visual studio code

Редактор текстов *emacs* версия *27.1*

Утилиты операционной системы --

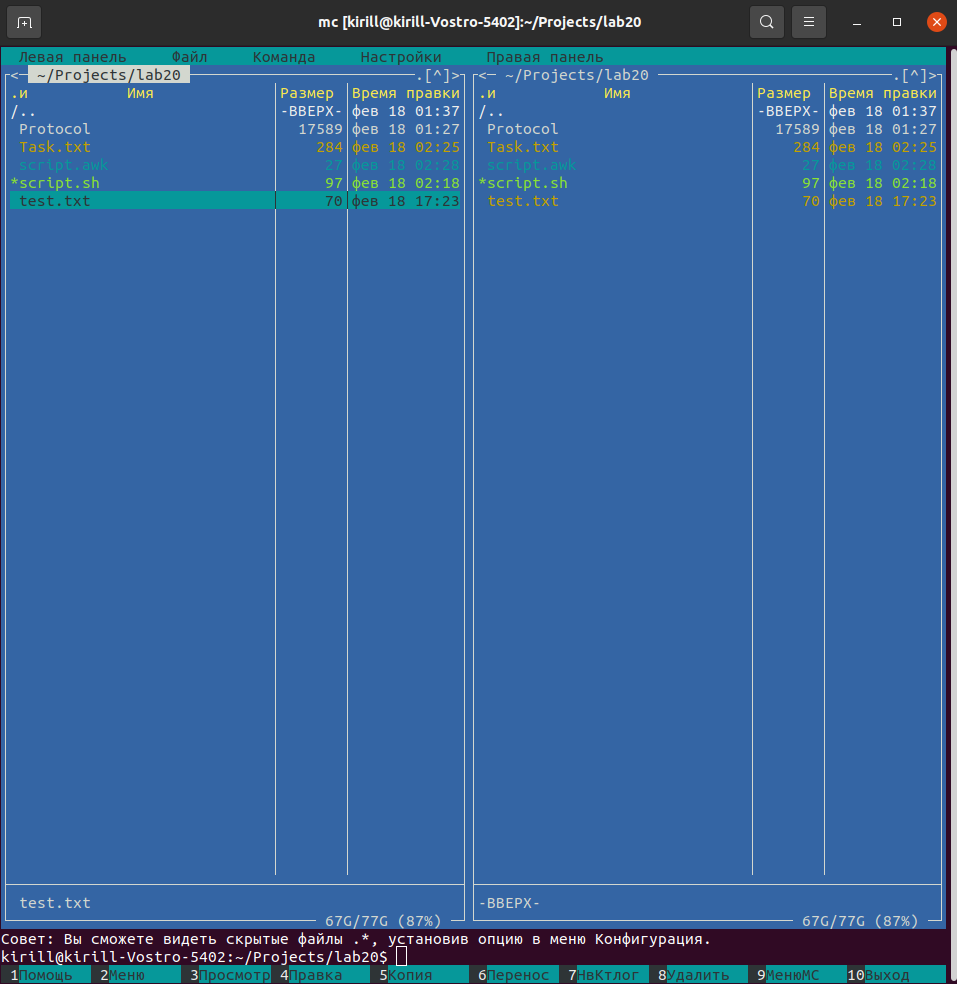
Прикладные системы и программы

Местонахождение и имена файлов программ и данных на домашнем компьютере –

1. **Идея, метод, алгоритм**

Алгоритм заключается в протоколировании 20 утилит и написании скрипта с использованием утилиты awk

1. **Сценарий выполнения работы.**



#!/bin/bash

indexes=$(awk -F"\n" '/TaskInProgress=\*/ {

x = $0

if (index(x,"no") == 0)

{

printf "yes"

} else {

printf "no"

}

}' Task.txt)

if [ $indexes = no ]

then

name=$(awk -F"\n" '/CreateDir=\*/ {

x = $0

printf "%s", substr(x, 11, length(x) - 10)

}' Task.txt)

mkdir ~/Projects/$name

files=$(awk -F"\n" '/CreateFiles:/ {

printf "start"

}' Task.txt)

if [ $files = "start" ]

then

namefile=$(awk -F"\n" '/-\*.\*[.,]/ {

x = $0

printf "%s ", substr(x, 0, length(x) - 1)

}' Task.txt)

cd ..

cd $name

touch $namefile

cd ..

cd lab20

awk -F"\n" '{

if ($0 ~ /TaskInProgress=no/) {

print "TaskInProgress=yes"

} else {

print $0

}

}' Task.txt > New.txt

rm Task.txt

mv New.txt Task.txt

fi

else

name=$(awk -F"\n" '/CreateDir=\*/ {

x = $0

printf "%s", substr(x, 11, length(x) - 10)

}' Task.txt)

files=$(awk -F"\n" '/Flags:/ {

printf "start"

}' Task.txt)

if [ $files = start ]

then

flags=$(awk -F"\n" '/(\-)+/ {

x = $0

printf "%s ", x

}' Task.txt)

gcc $flags ~/Projects/$name/main ~/Projects/$name/main.c

cd ..

cd $name

./main

fi

fi

1. **Распечатка протокола**

\_\_\_\_\_\_\_\_cmp\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

kirill@kirill-Vostro-5402:~$ cd Projects/

kirill@kirill-Vostro-5402:~/Projects$ cd lab20

kirill@kirill-Vostro-5402:~/Projects/lab20$ cat > file1.txt

Hello world!

This is first file

kirill@kirill-Vostro-5402:~/Projects/lab20$ cat > file2.txt

Hello world!

This is second file

kirill@kirill-Vostro-5402:~/Projects/lab20$ cmp file1.txt file2.txt

file1.txt file2.txt различаются: байт 22, строка 2

kirill@kirill-Vostro-5402:~/Projects/lab20$ cmp -b file1.txt file2.txt

file1.txt file2.txt различаются: байт 22, строка 2 равен 146 f 163 s

kirill@kirill-Vostro-5402:~/Projects/lab20$ cmp -l file1.txt file2.txt

22 146 163

23 151 145

24 162 143

25 163 157

26 164 156

27 40 144

28 146 40

29 151 146

30 154 151

31 145 154

32 12 145

cmp: EOF в file1.txt после байта 32

kirill@kirill-Vostro-5402:~/Projects/lab20$

\_\_\_\_\_\_\_\_\_comm\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

kirill@kirill-Vostro-5402:~/Projects/lab20$ cat > comm1

aaa

bbb

ddd

ffff

kirill@kirill-Vostro-5402:~/Projects/lab20$ cat > comm2

cccc

ggggg

kkkkkkk

kirill@kirill-Vostro-5402:~/Projects/lab20$ comm comm1 comm2

aaa

bbb

cccc

ddd

ffff

ggggg

kkkkkkk

kirill@kirill-Vostro-5402:~/Projects/lab20$ comm -1 comm1 comm2

cccc

ggggg

kkkkkkk

kirill@kirill-Vostro-5402:~/Projects/lab20$ comm -2 comm1 comm2

aaa

bbb

ddd

ffff

kirill@kirill-Vostro-5402:~/Projects/lab20$ cat > comm3

aaa

bbb

hhhhh

kirill@kirill-Vostro-5402:~/Projects/lab20$ comm -12 comm1 comm3

aaa

bbb

kirill@kirill-Vostro-5402:~/Projects/lab20$ ^C

kirill@kirill-Vostro-5402:~/Projects/lab20$

\_\_\_\_\_\_\_\_\_wc\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

kirill@kirill-Vostro-5402:~/Projects/lab20$ cat > fileWC.txt

Hello world

this test file

i will show you

power of wc command

kirill@kirill-Vostro-5402:~/Projects/lab20$ wc

Linux

Is

Best

Os

4 4 17

kirill@kirill-Vostro-5402:~/Projects/lab20$ wc fileWC.txt

4 13 63 fileWC.txt

kirill@kirill-Vostro-5402:~/Projects/lab20$ wc -c fileWC.txt

63 fileWC.txt

kirill@kirill-Vostro-5402:~/Projects/lab20$ wc -m fileWC.txt

63 fileWC.txt

kirill@kirill-Vostro-5402:~/Projects/lab20$ wc -l fileWC.txt

4 fileWC.txt

kirill@kirill-Vostro-5402:~/Projects/lab20$ wc -w fileWC.txt

13 fileWC.txt

kirill@kirill-Vostro-5402:~/Projects/lab20$ echo "Hello World" | wc

1 2 12

kirill@kirill-Vostro-5402:~/Projects/lab20$ wc \*.txt

2 6 32 file1.txt

2 6 33 file2.txt

4 13 63 fileWC.txt

8 25 128 итого

kirill@kirill-Vostro-5402:~/Projects/lab20$

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

kirill@kirill-Vostro-5402:~/Projects/lab20$ dd if=fileWC.txt of=CopyDir/CopyfileWC.txt

0+1 записей получено

0+1 записей отправлено

63 байта скопировано, 0,000290187 s, 217 kB/s

kirill@kirill-Vostro-5402:~/Projects/lab20$ cd CopyDir/

kirill@kirill-Vostro-5402:~/Projects/lab20/CopyDir$ ls

CopyfileWC.txt

kirill@kirill-Vostro-5402:~/Projects/lab20/CopyDir$ cat < CopyfileWC.txt

Hello world

this test file

i will show you

power of wc command

kirill@kirill-Vostro-5402:~/Projects/lab20/CopyDir$

\_\_\_\_\_\_\_\_\_\_\_\_diff\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

kirill@kirill-Vostro-5402:~/Projects/lab20$ mkdir dir1

kirill@kirill-Vostro-5402:~/Projects/lab20$ mkdir dir2

kirill@kirill-Vostro-5402:~/Projects/lab20$ ls

dir1 dir2 file1.txt file2.txt Protocol script.awk script.sh testfile

kirill@kirill-Vostro-5402:~/Projects/lab20$ cd dir1

kirill@kirill-Vostro-5402:~/Projects/lab20/dir1$ cat > test1.txt

First dir

kirill@kirill-Vostro-5402:~/Projects/lab20/dir1$ cd ..

kirill@kirill-Vostro-5402:~/Projects/lab20$ cd dir2

kirill@kirill-Vostro-5402:~/Projects/lab20/dir2$ cat > test2.txt

Second dir

kirill@kirill-Vostro-5402:~/Projects/lab20/dir2$ touch changelog1

kirill@kirill-Vostro-5402:~/Projects/lab20/dir2$ cd ..

kirill@kirill-Vostro-5402:~/Projects/lab20$ cd dir1

kirill@kirill-Vostro-5402:~/Projects/lab20/dir1$ touch changelog13

kirill@kirill-Vostro-5402:~/Projects/lab20/dir1$ cd ..

kirill@kirill-Vostro-5402:~/Projects/lab20$ cat > exclude

changelog\*

kirill@kirill-Vostro-5402:~/Projects/lab20$ diff -r -X exclude dir1 dir2

Только в dir1: test1.txt

Только в dir2: test2.txt

kirill@kirill-Vostro-5402:~/Projects/lab20$ diff -r dir1 dir2

Только в dir2: changelog1

Только в dir1: changelog13

Только в dir1: test1.txt

Только в dir2: test2.txt

kirill@kirill-Vostro-5402:~/Projects/lab20$

\_\_\_\_\_\_\_\_\_\_grep\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

kirill@kirill-Vostro-5402:~/Projects/lab20/CopyDir$ cat > grepTest.txt

Kirill

Linux is the best os

Welcome to the faq8

linux moment

KIRILL author

kirill@kirill-Vostro-5402:~/Projects/lab20/CopyDir$ grep linux grepTest.txt

linux moment

kirill@kirill-Vostro-5402:~/Projects/lab20/CopyDir$ grep .inux grepTest.txt

Linux is the best os

linux moment

kirill@kirill-Vostro-5402:~/Projects/lab20/CopyDir$ grep -c .inux grepTest.txt

2

kirill@kirill-Vostro-5402:~/Projects/lab20/CopyDir$ grep -v .inux grepTest.txt

Kirill

Welcome to the faq8

KIRILL author

kirill@kirill-Vostro-5402:~/Projects/lab20/CopyDir$ dd if=grepTest.txt of=CopyGrepTest.txt

0+1 записей получено

0+1 записей отправлено

75 байт скопировано, 0,000316476 s, 237 kB/s

kirill@kirill-Vostro-5402:~/Projects/lab20/CopyDir$ grep -l the \*repTest.txt

CopyGrepTest.txt

grepTest.txt

kirill@kirill-Vostro-5402:~/Projects/lab20/CopyDir$ grep -r the ~/Projects/lab20

/home/kirill/Projects/lab20/CopyDir/CopyGrepTest.txt:Linux is the best os

/home/kirill/Projects/lab20/CopyDir/CopyGrepTest.txt:Welcome to the faq8

/home/kirill/Projects/lab20/CopyDir/grepTest.txt:Linux is the best os

/home/kirill/Projects/lab20/CopyDir/grepTest.txt:Welcome to the faq8

kirill@kirill-Vostro-5402:~/Projects/lab20/CopyDir$ grep -h -r the ~/Projects/lab20

Linux is the best os

Welcome to the faq8

Linux is the best os

Welcome to the faq8

kirill@kirill-Vostro-5402:~/Projects/lab20/CopyDir$ grep -n faq8 grepTest.txt

3:Welcome to the faq8

kirill@kirill-Vostro-5402:~/Projects/lab20/CopyDir$

\_\_\_\_\_\_join\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

kirill@kirill-Vostro-5402:~/Projects/lab20/CopyDir$ cat > JoinTest.txt

aaa

bbbbb

ccc

hhhhhhhhhh

kirill@kirill-Vostro-5402:~/Projects/lab20/CopyDir$ cat > JoinTest2.txt

bbbbbbb

ddd

ffffff

hhhhhhhhhh

kirill@kirill-Vostro-5402:~/Projects/lab20/CopyDir$ join JoinTest.txt JoinTest2.txt

hhhhhhhhhh

kirill@kirill-Vostro-5402:~/Projects/lab20/CopyDir$ join -a 1 JoinTest.txt JoinTest2.txt

aaa

bbbbb

ccc

hhhhhhhhhh

kirill@kirill-Vostro-5402:~/Projects/lab20/CopyDir$ join -a 2 JoinTest.txt JoinTest2.txt

bbbbbbb

ddd

ffffff

hhhhhhhhhh

kirill@kirill-Vostro-5402:~/Projects/lab20/CopyDir$ join -v 2 JoinTest.txt JoinTest2.txt

bbbbbbb

ddd

ffffff

kirill@kirill-Vostro-5402:~/Projects/lab20/CopyDir$ join -1 JoinTest.txt JoinTest2.txt

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

kirill@kirill-Vostro-5402:~/Projects/lab20/CopyDir$ cat > sort.txt

France

Spanish

Art

Candy

Linux

Block

information technology

kirill@kirill-Vostro-5402:~/Projects/lab20/CopyDir$ sort sort.txt

Art

Block

Candy

France

information technology

Linux

Spanish

kirill@kirill-Vostro-5402:~/Projects/lab20/CopyDir$ sort -r sort.txt

Spanish

Linux

information technology

France

Candy

Block

Art

kirill@kirill-Vostro-5402:~/Projects/lab20/CopyDir$ ls -l | sort -k9

итого 24

-rw-rw-r-- 1 kirill kirill 63 фев 17 21:32 CopyfileWC.txt

-rw-rw-r-- 1 kirill kirill 75 фев 17 23:13 CopyGrepTest.txt

-rw-rw-r-- 1 kirill kirill 75 фев 17 23:09 grepTest.txt

-rw-rw-r-- 1 kirill kirill 30 фев 17 23:24 JoinTest2.txt

-rw-rw-r-- 1 kirill kirill 25 фев 17 23:24 JoinTest.txt

-rw-rw-r-- 1 kirill kirill 60 фев 17 23:32 sort.txt

kirill@kirill-Vostro-5402:~/Projects/lab20/CopyDir$ nano sort.txt

kirill@kirill-Vostro-5402:~/Projects/lab20/CopyDir$ cat < sort.txt

France

Spanish

Art

Art

Candy

Candy

Linux

Block

information technology

kirill@kirill-Vostro-5402:~/Projects/lab20/CopyDir$ sort -u sort.txt

Art

Block

Candy

France

information technology

Linux

Spanish

kirill@kirill-Vostro-5402:~/Projects/lab20/CopyDir$ cat < sort.txt

France

Spanish

Art

Art

Candy

Candy

Linux

Block

information technology

kirill@kirill-Vostro-5402:~/Projects/lab20/CopyDir$ sort -u -o sort.txt sort.txt

kirill@kirill-Vostro-5402:~/Projects/lab20/CopyDir$ cat < sort.txt

Art

Block

Candy

France

information technology

Linux

Spanish

kirill@kirill-Vostro-5402:~/Projects/lab20/CopyDir$

\_\_\_\_\_\_\_\_\_\_\_\_tail\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

kirill@kirill-Vostro-5402:~/Projects/lab20/CopyDir$ cat > tail.txt

1

1

1

1

1

1

1

1

1

1

1

1

1

1

1

kirill@kirill-Vostro-5402:~/Projects/lab20/CopyDir$ tail -n 3 tail.txt

1

1

1

kirill@kirill-Vostro-5402:~/Projects/lab20/CopyDir$ tail -n 5 tail.txt

1

1

1

1

1

kirill@kirill-Vostro-5402:~/Projects/lab20/CopyDir$ tail -f tail.txt

1

1

1

1

1

1

1

1

1

1

1

1

^Z

[1]+ Остановлен tail -f tail.txt

kirill@kirill-Vostro-5402:~/Projects/lab20/CopyDir$ nano tail.txt

kirill@kirill-Vostro-5402:~/Projects/lab20/CopyDir$ cat < tail.txt

1

1

1

1

1

1

1

1

Hello 1

1

1

Hello 2

1

1

Hello 3

kirill@kirill-Vostro-5402:~/Projects/lab20/CopyDir$ tail tail.txt | grep Hello

Hello 1

Hello 2

Hello 3

kirill@kirill-Vostro-5402:~/Projects/lab20/CopyDir$

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_tee\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

kirill@kirill-Vostro-5402:~/Projects/lab20/CopyDir$ ls | tee tee.txt

CopyfileWC.txt

CopyGrepTest.txt

grepTest.txt

JoinTest2.txt

JoinTest.txt

sort.txt

tail.txt

kirill@kirill-Vostro-5402:~/Projects/lab20/CopyDir$ cat < tee.txt

CopyfileWC.txt

CopyGrepTest.txt

grepTest.txt

JoinTest2.txt

JoinTest.txt

sort.txt

tail.txt

kirill@kirill-Vostro-5402:~/Projects/lab20/CopyDir$ pwd | tee -a tee.txt

/home/kirill/Projects/lab20/CopyDir

kirill@kirill-Vostro-5402:~/Projects/lab20/CopyDir$ cat < tee.txt

CopyfileWC.txt

CopyGrepTest.txt

grepTest.txt

JoinTest2.txt

JoinTest.txt

sort.txt

tail.txt

/home/kirill/Projects/lab20/CopyDir

kirill@kirill-Vostro-5402:~/Projects/lab20/CopyDir$

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_tr\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

kirill@kirill-Vostro-5402:~/Projects/lab20/CopyDir$ tr m n

motificatiom

notification

kirill@kirill-Vostro-5402:~/Projects/lab20/CopyDir$ tr -d [:space:]

Unfor getable

Unforgetable

kirill@kirill-Vostro-5402:~/Projects/lab20/CopyDir$ tr -d [:upper:]

AsfDfdfdFDFDA

sffdfd

kirill@kirill-Vostro-5402:~/Projects/lab20/CopyDir$ tr -s B f

BBBerggfff

ferggf

kirill@kirill-Vostro-5402:~/Projects/lab20/CopyDir$ tr -s B

BBBfdfBBBBBdfh

BfdfBdfh

kirill@kirill-Vostro-5402:~/Projects/lab20/CopyDir$ ls

CopyfileWC.txt grepTest.txt JoinTest.txt tail.txt

CopyGrepTest.txt JoinTest2.txt sort.txt tee.txt

kirill@kirill-Vostro-5402:~/Projects/lab20/CopyDir$ ls | tr '.' '-'

CopyfileWC-txt

CopyGrepTest-txt

grepTest-txt

JoinTest2-txt

JoinTest-txt

sort-txt

tail-txt

tee-txt

kirill@kirill-Vostro-5402:~/Projects/lab20/CopyDir$

\_\_\_\_\_\_\_\_\_\_\_\_\_uniq\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

kirill@kirill-Vostro-5402:~/Projects/lab20/CopyDir$ echo -e kirill\\nlinux\\nlinux\\nOS | uniq

kirill

linux

OS

kirill@kirill-Vostro-5402:~/Projects/lab20/CopyDir$ echo -e kirill\\nlinux\\nlinux\\nOS | uniq -c

1 kirill

2 linux

1 OS

kirill@kirill-Vostro-5402:~/Projects/lab20/CopyDir$

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_od\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

kirill@kirill-Vostro-5402:~/Projects/lab20/CopyDir$ od tee.txt

0000000 067503 074560 064546 062554 041527 072056 072170 041412

0000020 070157 043571 062562 052160 071545 027164 074164 005164

0000040 071147 070145 062524 072163 072056 072170 045012 064557

0000060 052156 071545 031164 072056 072170 045012 064557 052156

0000100 071545 027164 074164 005164 067563 072162 072056 072170

0000120 072012 064541 027154 074164 005164 064057 066557 027545

0000140 064553 064562 066154 050057 067562 062552 072143 027563

0000160 060554 031142 027460 067503 074560 064504 005162

0000176

kirill@kirill-Vostro-5402:~/Projects/lab20/CopyDir$ od -t a tee.txt

0000000 C o p y f i l e W C . t x t nl C

0000020 o p y G r e p T e s t . t x t nl

0000040 g r e p T e s t . t x t nl J o i

0000060 n T e s t 2 . t x t nl J o i n T

0000100 e s t . t x t nl s o r t . t x t

0000120 nl t a i l . t x t nl / h o m e /

0000140 k i r i l l / P r o j e c t s /

0000160 l a b 2 0 / C o p y D i r nl

0000176

kirill@kirill-Vostro-5402:~/Projects/lab20/CopyDir$ od -t c tee.txt

0000000 C o p y f i l e W C . t x t \n C

0000020 o p y G r e p T e s t . t x t \n

0000040 g r e p T e s t . t x t \n J o i

0000060 n T e s t 2 . t x t \n J o i n T

0000100 e s t . t x t \n s o r t . t x t

0000120 \n t a i l . t x t \n / h o m e /

0000140 k i r i l l / P r o j e c t s /

0000160 l a b 2 0 / C o p y D i r \n

0000176

kirill@kirill-Vostro-5402:~/Projects/lab20/CopyDir$ od -t o2 tee.txt

0000000 067503 074560 064546 062554 041527 072056 072170 041412

0000020 070157 043571 062562 052160 071545 027164 074164 005164

0000040 071147 070145 062524 072163 072056 072170 045012 064557

0000060 052156 071545 031164 072056 072170 045012 064557 052156

0000100 071545 027164 074164 005164 067563 072162 072056 072170

0000120 072012 064541 027154 074164 005164 064057 066557 027545

0000140 064553 064562 066154 050057 067562 062552 072143 027563

0000160 060554 031142 027460 067503 074560 064504 005162

0000176

kirill@kirill-Vostro-5402:~/Projects/lab20/CopyDir$ od -t x2 tee.txt

0000000 6f43 7970 6966 656c 4357 742e 7478 430a

0000020 706f 4779 6572 5470 7365 2e74 7874 0a74

0000040 7267 7065 6554 7473 742e 7478 4a0a 696f

0000060 546e 7365 3274 742e 7478 4a0a 696f 546e

0000100 7365 2e74 7874 0a74 6f73 7472 742e 7478

0000120 740a 6961 2e6c 7874 0a74 682f 6d6f 2f65

0000140 696b 6972 6c6c 502f 6f72 656a 7463 2f73

0000160 616c 3262 2f30 6f43 7970 6944 0a72

0000176

kirill@kirill-Vostro-5402:~/Projects/lab20/CopyDir$ od -t d2 tee.txt

0000000 28483 31088 26982 25964 17239 29742 29816 17162

0000020 28783 18297 25970 21616 29541 11892 30836 2676

0000040 29287 28773 25940 29811 29742 29816 18954 26991

0000060 21614 29541 12916 29742 29816 18954 26991 21614

0000100 29541 11892 30836 2676 28531 29810 29742 29816

0000120 29706 26977 11884 30836 2676 26671 28015 12133

0000140 26987 26994 27756 20527 28530 25962 29795 12147

0000160 24940 12898 12080 28483 31088 26948 2674

0000176

kirill@kirill-Vostro-5402:~/Projects/lab20/CopyDir$

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_sum\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

kirill@kirill-Vostro-5402:~/Projects/lab20/CopyDir$ od tee.txt

kirill@kirill-Vostro-5402:~/Projects/lab20/CopyDir$ sum tee.txt

37160 1

kirill@kirill-Vostro-5402:~/Projects/lab20/CopyDir$ sum -s tee.txt

11730 1 tee.txt

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_cut\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

kirill@kirill-Vostro-5402:~/Projects/lab20/CopyDir$ echo "Little nightmare" | cut -b 1,5,10

Llg

kirill@kirill-Vostro-5402:~/Projects/lab20/CopyDir$ echo "Little nightmare" | cut -b 1-10

Little nig

kirill@kirill-Vostro-5402:~/Projects/lab20/CopyDir$ cat > cut.txt

grrrg

trgv

ytyrg

GTgtg

nt

kirill@kirill-Vostro-5402:~/Projects/lab20/CopyDir$ cut -b 1-2 cut.txt

gr

tr

yt

GT

nt

kirill@kirill-Vostro-5402:~/Projects/lab20/CopyDir$ cut -c 1-2 cut.txt

gr

tr

yt

GT

nt

kirill@kirill-Vostro-5402:~/Projects/lab20/CopyDir$ cut -c 10- cut.txt

kirill@kirill-Vostro-5402:~/Projects/lab20/CopyDir$ cut -c 2- cut.txt

rrrg

rgv

tyrg

Tgtg

t

kirill@kirill-Vostro-5402:~/Projects/lab20/CopyDir$

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_vim\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Hello world

This test file

For test vim

How to quit?

~

-- ВСТАВКА --

Hello world

This is new line

This test file

For test vim

How to quit?

Hello world

This is new line

This test file

For test vim

How to quit?

~

?Hello

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_tar\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

kirill@kirill-Vostro-5402:~/Projects/lab20$ tar -cvf test.tar test.txt

test.txt

kirill@kirill-Vostro-5402:~/Projects/lab20$ tar -tf test.tar

test.txt

kirill@kirill-Vostro-5402:~/Projects/lab20$ mkdir TestDir

kirill@kirill-Vostro-5402:~/Projects/lab20$ tar -C "TestDir/" -xvf test.tar

test.txt

kirill@kirill-Vostro-5402:~/Projects/lab20$ cd TestDir/

kirill@kirill-Vostro-5402:~/Projects/lab20/TestDir$ ls

test.txt

kirill@kirill-Vostro-5402:~/Projects/lab20/TestDir$

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_gzip\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

kirill@kirill-Vostro-5402:~/Projects/lab20/TestDir$ gzip test.txt

kirill@kirill-Vostro-5402:~/Projects/lab20/TestDir$ ls

test.txt.gz

kirill@kirill-Vostro-5402:~/Projects/lab20/TestDir$ gzip -l test.txt.gz

compressed uncompressed ratio uncompressed\_name

89 70 11.4% test.txt

kirill@kirill-Vostro-5402:~/Projects/lab20/TestDir$ gzip -d test.txt.gz

kirill@kirill-Vostro-5402:~/Projects/lab20/TestDir$ ls

test.txt

kirill@kirill-Vostro-5402:~/Projects/lab20/TestDir$ cd ..

kirill@kirill-Vostro-5402:~/Projects/lab20$ gzip -r TestDir/

kirill@kirill-Vostro-5402:~/Projects/lab20$ ls

NewText.txt Protocol script.awk script.sh Task.txt TestDir test.tar test.txt

kirill@kirill-Vostro-5402:~/Projects/lab20$ cd TestDir/

kirill@kirill-Vostro-5402:~/Projects/lab20/TestDir$ ls

test.txt.gz

kirill@kirill-Vostro-5402:~/Projects/lab20/TestDir$ cd ..

kirill@kirill-Vostro-5402:~/Projects/lab20$ gzip -r -d TestDir/

kirill@kirill-Vostro-5402:~/Projects/lab20$ cd TestDir/

kirill@kirill-Vostro-5402:~/Projects/lab20/TestDir$ ls

test.txt

kirill@kirill-Vostro-5402:~/Projects/lab20/TestDir$

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ed\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

kirill@kirill-Vostro-5402:~/Projects/lab20/TestDir$ ed

P

\*a

Hello world

I use ed editor

Linux moment

.

\*,pn

1 Hello world

2 I use ed editor

3 Linux moment

\*1

Hello world

\*w test.txt

41

\*q

kirill@kirill-Vostro-5402:~/Projects/lab20/TestDir$ cat < test.txt

Hello world

I use ed editor

Linux moment

kirill@kirill-Vostro-5402:~/Projects/lab20/TestDir$

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_bzip2\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

kirill@kirill-Vostro-5402:~/Projects/lab20/TestDir$ bzip2 test.txt

kirill@kirill-Vostro-5402:~/Projects/lab20/TestDir$ ls

test.txt.bz2

kirill@kirill-Vostro-5402:~/Projects/lab20/TestDir$ bzip2 -d test.txt

bzip2: Can't open input file test.txt: No such file or directory.

kirill@kirill-Vostro-5402:~/Projects/lab20/TestDir$ bzip2 -d test.txt.bz2

kirill@kirill-Vostro-5402:~/Projects/lab20/TestDir$ ls

test.txt

kirill@kirill-Vostro-5402:~/Projects/lab20/TestDir$ bzip2 -k test.txt

kirill@kirill-Vostro-5402:~/Projects/lab20/TestDir$ ls

test.txt test.txt.bz2

kirill@kirill-Vostro-5402:~/Projects/lab20/TestDir$ rm test.txt.bz2

kirill@kirill-Vostro-5402:~/Projects/lab20/TestDir$ bzip2 -9 test.txt

kirill@kirill-Vostro-5402:~/Projects/lab20/TestDir$ bzip2 -vt test.txt.bz2

test.txt.bz2: ok

kirill@kirill-Vostro-5402:~/Projects/lab20/TestDir

1. **Выводы**

В данной лабораторной работе я изучил основные утилиты OS UNIX и проверил их на практике. Также я научился использовать утилиты sed/awk. Я считаю полученные знание помогут в дальнейшем при работе с OS UNIX, в составлении простейших программ для обработки, например, файлов вывода.

Подпись студента \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_