Одесский национальный политехнический университет
Институт компьютерных систем
Кафедра информационных систем

Лабораторная работа № 3
По дисциплине: «Операционные системы»
Тема: «Обработка текстовых данных средствами оболочки Unix-подобных ОС интерфейса командной строки»

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Цель работы: приобретение навыков работы с оболочкой Unix-подобных ОС интерфейса командной строки и утилитами текстовых данных.

План работы.

1 Теоретические сведения

1.1 Расширенный функционал команд оболочки ОС интерфейса командной строки и утилит командной строки

1.2 Редактирование каталогов и файлов файловой системы

1.3 Перенаправление потоков данных

1.4 Конвейеризация команд

1.5 Команды оболочки и утилиты командной строки по обработке текста

1.6 Конфигурация работы оболочки

2 Задание к исполнению

3 Требования к оформлению протокола выполнения лабораторной работы

Решение:

Задание 2.1

Задание 2.2

```
[[koldunova_anastasiya@vpsj3IeQ ~]$ mkdir koldunovaN_lab_3
[[koldunova_anastasiya@vpsj3IeQ ~]$ ls
Operating-System.-Laboratory-Work-  koldunovaN_lab_3
[[koldunova_anastasiya@vpsj3IeQ ~]$ cd koldunovaN_lab_3
[[koldunova_anastasiya@vpsj3IeQ koldunovaN_lab_3]$ touch nastya_1
[[koldunova_anastasiya@vpsj3IeQ koldunovaN_lab_3]$ nano nastya_1
 [koldunova_anastasiya@vpsj3IeQ koldunovaN_lab_3]$ ▊
```

```
  GNU nano 2.3.1              File: mastya_1                        Modified

Ai-205 14.03.2021▊




















^G Get Help   ^O WriteOut   ^R Read File  ^Y Prev Page  ^K Cut Text   ^C Cur Pos
^X Exit       ^J Justify    ^W Where Is   ^V Next Page  ^U UnCut Text ^T To Spell
```

```
[koldunova_anastasiya@vpsj3IeQ ~]$ cd koldunovaN_lab_3
[[koldunova_anastasiya@vpsj3IeQ koldunovaN_lab_3]$ touch nastya_1
[[koldunova_anastasiya@vpsj3IeQ koldunovaN_lab_3]$ nano nastya_1
[[koldunova_anastasiya@vpsj3IeQ koldunovaN_lab_3]$ nano mastya_1
[[koldunova_anastasiya@vpsj3IeQ koldunovaN_lab_3]$ nano mastya_1
[[koldunova_anastasiya@vpsj3IeQ koldunovaN_lab_3]$ alias zameduvaty='rm'
[[koldunova_anastasiya@vpsj3IeQ koldunovaN_lab_3]$ zameduvaty mastya_1
[[koldunova_anastasiya@vpsj3IeQ koldunovaN_lab_3]$ ls
[nastya_1
 [koldunova_anastasiya@vpsj3IeQ koldunovaN_lab_3]$ alias pochystyty='cat'
[[koldunova_anastasiya@vpsj3IeQ koldunovaN_lab_3]$ pochystyty nastya_1
[AI-205 14.03.2021
 [koldunova_anastasiya@vpsj3IeQ koldunovaN_lab_3]$ touch nastya_2
[[koldunova_anastasiya@vpsj3IeQ koldunovaN_lab_3]$ nano nastya_2
[[koldunova_anastasiya@vpsj3IeQ koldunovaN_lab_3]$ pochystyty nastya_2
[Koldunova Anastasia
 [koldunova_anastasiya@vpsj3IeQ koldunovaN_lab_3]$ pochystyty nastya_1 nastya_2 >koldunova_nastya
[[koldunova_anastasiya@vpsj3IeQ koldunovaN_lab_3]$ poshystyty koldunova_nastya
 -bash: poshystyty: command not found
[[koldunova_anastasiya@vpsj3IeQ koldunovaN_lab_3]$ pochystyty koldunova_nastya
 AI-205 14.03.2021
[Koldunova Anastasia
 [koldunova_anastasiya@vpsj3IeQ koldunovaN_lab_3]$ zameduvaty koldunova_nastya
 [koldunova_anastasiya@vpsj3IeQ koldunovaN_lab_3]$ ls
[nastya_1  nastya_2
[[koldunova_anastasiya@vpsj3IeQ koldunovaN_lab_3]$ unalias zameduvaty
 [koldunova_anastasiya@vpsj3IeQ koldunovaN_lab_3]$ unalias pochystyty
[[koldunova_anastasiya@vpsj3IeQ koldunovaN_lab_3]$ pwd
 /home/koldunova_anastasiya/koldunovaN_lab_3
```

Задание 2.3
2.3.1)

```
MacBook-Pro-Nasta:~ koldunova$ scp KoldunovaAnastasiaLab2.doc koldunova_anastasiya@91.219.60.189:/home/koldunova_anastasiya/koldunovaN_lab_3
koldunova_anastasiya@91.219.60.189's password:
/etc/profile.d/lang.sh: line 19: warning: setlocale: LC_CTYPE: cannot change locale (UTF-8): No such file or directory
KoldunovaAnastasiaLab2.doc                                    100% 2889KB   8.5MB/s   00:00
MacBook-Pro-Nasta:~ koldunova$ ssh koldunova_anastasiya@91.219.60.189
koldunova_anastasiya@91.219.60.189's password:
Last login: Sun Mar 14 08:13:05 2021 from 78.26.173.254
-bash: warning: setlocale: LC_CTYPE: cannot change locale (UTF-8): No such file or directory
[koldunova_anastasiya@vpsj3IeQ ~]$ ls
Operating-System.-Laboratory-Work-  koldunovaN_lab_3
[koldunova_anastasiya@vpsj3IeQ ~]$ cd koldunovaN_lab_3
[koldunova_anastasiya@vpsj3IeQ koldunovaN_lab_3]$ ls
KoldunovaAnastasiaLab2.doc  nastya_1  nastya_2
[koldunova_anastasiya@vpsj3IeQ koldunovaN_lab_3]$ soffice --headless --convert-to txt KoldunovaAnastasiaLab2.doc
Fontconfig warning: ignoring UTF-8: not a valid region tag
Fontconfig warning: ignoring UTF-8: not a valid region tag
convert /home/koldunova_anastasiya/koldunovaN_lab_3/KoldunovaAnastasiaLab2.doc -> /home/koldunova_anastasiya/koldunovaN_lab_3/KoldunovaAnastasiaLab2.txt
 using filter : Text
[koldunova_anastasiya@vpsj3IeQ koldunovaN_lab_3]$ ls
KoldunovaAnastasiaLab2.doc  KoldunovaAnastasiaLab2.txt  nastya_1  nastya_2
[koldunova_anastasiya@vpsj3IeQ koldunovaN_lab_3]$ rm KoldunovaAnastasiaLab2.txt
[koldunova_anastasiya@vpsj3IeQ koldunovaN_lab_3]$ ls
KoldunovaAnastasiaLab2.doc  nastya_1  nastya_2
[koldunova_anastasiya@vpsj3IeQ koldunovaN_lab_3]$ soffice --headless --convert-to pdf KoldunovaAnastasiaLab2.doc
Fontconfig warning: ignoring UTF-8: not a valid region tag
convert /home/koldunova_anastasiya/koldunovaN_lab_3/KoldunovaAnastasiaLab2.doc -> /home/koldunova_anastasiya/koldunovaN_lab_3/KoldunovaAnastasiaLab2.pdf
 using filter : writer_pdf_Export
[koldunova_anastasiya@vpsj3IeQ koldunovaN_lab_3]$ ls
KoldunovaAnastasiaLab2.doc  KoldunovaAnastasiaLab2.pdf  nastya_1  nastya_2
[koldunova_anastasiya@vpsj3IeQ koldunovaN_lab_3]$
```

2.3.2)

```
[koldunova_anastasiya@vpsj3IeQ koldunovaN_lab_3]$ libreoffice --headless --convert-to html KoldunovaAnastasiaLab2.doc
Fontconfig warning: ignoring UTF-8: not a valid region tag
convert /home/koldunova_anastasiya/koldunovaN_lab_3/KoldunovaAnastasiaLab2.doc -> /home/koldunova_anastasiya/koldunovaN_lab_3/KoldunovaAnastasiaLab2.html using filter : HTML (StarWriter)
[koldunova_anastasiya@vpsj3IeQ koldunovaN_lab_3]$ ls
KoldunovaAnastasiaLab2.doc                        KoldunovaAnastasiaLab2_html_6afcd43308d96bb5.png  KoldunovaAnastasiaLab2_html_bde7c5b2fabeb017.png
KoldunovaAnastasiaLab2.html                       KoldunovaAnastasiaLab2_html_6cd9deccbe92a0f4.png  KoldunovaAnastasiaLab2_html_c2bf8c3c71398c3b.png
KoldunovaAnastasiaLab2.pdf                        KoldunovaAnastasiaLab2_html_6e7f1ddf9e339468.png  KoldunovaAnastasiaLab2_html_e8a8fb43d6e551ee.png
KoldunovaAnastasiaLab2_html_273c5e46e522122.png  KoldunovaAnastasiaLab2_html_8b391fd4ee75232b.png  KoldunovaAnastasiaLab2_html_ec8042556054577.png
KoldunovaAnastasiaLab2_html_44b3a1665a071a6d.png KoldunovaAnastasiaLab2_html_9341954e2a348a59.png  nastya_1
KoldunovaAnastasiaLab2_html_5a22876e73a0fa6b.png KoldunovaAnastasiaLab2_html_b7850428253c47d3.png  nastya_2
[koldunova_anastasiya@vpsj3IeQ koldunovaN_lab_3]$ head -n 10 KoldunovaAnastasiaLab2.html
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN">
<html>
<head>
        <meta http-equiv="content-type" content="text/html; charset=us-ascii"/>
        <title></title>
        <meta name="generator" content="LibreOffice 5.3.6.1 (Linux)"/>
        <meta name="author" content="Microsoft Office User"/>
        <meta name="created" content="2021-03-14T11:56:00"/>
        <meta name="changedby" content="Microsoft Office User"/>
        <meta name="changed" content="2021-03-14T11:56:00"/>
[koldunova_anastasiya@vpsj3IeQ koldunovaN_lab_3]$ cp KoldunovaAnastasiaLab2.html os.lab1.utf.html
[koldunova_anastasiya@vpsj3IeQ koldunovaN_lab_3]$ ls
KoldunovaAnastasiaLab2.doc                        KoldunovaAnastasiaLab2_html_6cd9deccbe92a0f4.png  KoldunovaAnastasiaLab2_html_e8a8fb43d6e551ee.png
KoldunovaAnastasiaLab2.html                       KoldunovaAnastasiaLab2_html_6e7f1ddf9e339468.png  KoldunovaAnastasiaLab2_html_ec8042556054577.png
KoldunovaAnastasiaLab2.pdf                        KoldunovaAnastasiaLab2_html_8b391fd4ee75232b.png  nastya_1
KoldunovaAnastasiaLab2_html_273c5e46e522122.png  KoldunovaAnastasiaLab2_html_9341954e2a348a59.png  nastya_2
KoldunovaAnastasiaLab2_html_44b3a1665a071a6d.png KoldunovaAnastasiaLab2_html_b7850428253c47d3.png  os.lab1.utf.html
KoldunovaAnastasiaLab2_html_5a22876e73a0fa6b.png KoldunovaAnastasiaLab2_html_bde7c5b2fabeb017.png
KoldunovaAnastasiaLab2_html_6afcd43308d96bb5.png KoldunovaAnastasiaLab2_html_c2bf8c3c71398c3b.png
[koldunova_anastasiya@vpsj3IeQ koldunovaN_lab_3]$ cp os.lab1.utf.html os.lab1.cp1251.html
[koldunova_anastasiya@vpsj3IeQ koldunovaN_lab_3]$ ls
KoldunovaAnastasiaLab2.doc                        KoldunovaAnastasiaLab2_html_6cd9deccbe92a0f4.png  KoldunovaAnastasiaLab2_html_e8a8fb43d6e551ee.png
KoldunovaAnastasiaLab2.html                       KoldunovaAnastasiaLab2_html_6e7f1ddf9e339468.png  KoldunovaAnastasiaLab2_html_ec8042556054577.png
KoldunovaAnastasiaLab2.pdf                        KoldunovaAnastasiaLab2_html_8b391fd4ee75232b.png  nastya_1
KoldunovaAnastasiaLab2_html_273c5e46e522122.png  KoldunovaAnastasiaLab2_html_9341954e2a348a59.png  nastya_2
KoldunovaAnastasiaLab2_html_44b3a1665a071a6d.png KoldunovaAnastasiaLab2_html_b7850428253c47d3.png  os.lab1.cp1251.html
KoldunovaAnastasiaLab2_html_5a22876e73a0fa6b.png KoldunovaAnastasiaLab2_html_bde7c5b2fabeb017.png  os.lab1.utf.html
KoldunovaAnastasiaLab2_html_6afcd43308d96bb5.png KoldunovaAnastasiaLab2_html_c2bf8c3c71398c3b.png
[koldunova_anastasiya@vpsj3IeQ koldunovaN_lab_3]$
```

```
[koldunova_anastasiya@vpsj3IeQ koldunovaN_lab_3]$ head -n 20 KoldunovaAnastasiaLab2.html
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN">
<html>
<head>
        <meta http-equiv="content-type" content="text/html; charset=us-ascii"/>
        <title></title>
        <meta name="generator" content="LibreOffice 5.3.6.1 (Linux)"/>
        <meta name="author" content="Microsoft Office User"/>
        <meta name="created" content="2021-03-14T11:56:00"/>
        <meta name="changedby" content="Microsoft Office User"/>
        <meta name="changed" content="2021-03-14T11:56:00"/>
        <style type="text/css">
                @page { margin-right: 0.59in; margin-top: 0.2in; margin-bottom: 0.2in }
                p { margin-bottom: 0.1in; direction: ltr; color: #000000; line-height: 120%; orphans: 2; widows: 2 }
                p.western { font-family: "Calibri", sans-serif; font-size: 12pt; so-language: ru-RU }
                p.cjk { font-family: "Calibri", sans-serif; font-size: 12pt }
                p.ctl { font-family: "Times New Roman", serif; font-size: 12pt; so-language: ar-SA }
        </style>
</head>
<body lang="en-US" text="#000000" dir="ltr">
<p lang="ru-RU" class="western" align="center" style="margin-left: -0.69in; margin-bottom: 0in; line-height: 100%"><a name="OLE_LINK5"></a><a name="OLE_
LINK4"></a><a name="OLE_LINK2"></a><a name="OLE_LINK1"></a>
[koldunova_anastasiya@vpsj3IeQ koldunovaN_lab_3]$ tail -n 20 KoldunovaAnastasiaLab2.html
&#1089;&#1077;&#1088;&#1074;&#1077;&#1088;&#1086;&#1084; &#1080;
&#1087;&#1088;&#1080;&#1086;&#1073;&#1088;&#1077;&#1083;&#1080;
&#1085;&#1072;&#1074;&#1099;&#1082;&#1080; &#1074;&#1079;&#1072;&#1080;&#1084;&#1086;&#1076;&#1077;&#1081;&#1089;&#1090;&#1074;&#1080;&#1080;
&#1086;&#1087;&#1077;&#1088;&#1072;&#1094;&#1080;&#1086;&#1085;&#1085;&#1086;&#1081;
&#1080;&#1089;&#1090;&#1077;&#1084;&#1077;; </font></font><font face="Times New Roman, serif"><font size="4" style="font-size: 14pt"><span lang="e
n-US">os
Linux,</span></font></font><font face="Times New Roman, serif"><font size="4" style="font-size: 14pt">
&#1085;&#1072;&#1080;&#1073;&#1086;&#1083;&#1077;&#1077; &#1089;&#1083;&#1086;&#1078;&#1085;&#1099;&#1084;
&#1079;&#1072;&#1076;&#1072;&#1085;&#1080;&#1077;&#1084;, &#1087;&#1086;
&#1084;&#1086;&#1077;&#1084;&#1091; &#1084;&#1085;&#1077;&#1085;&#1080;&#1102;,
&#1073;&#1099;&#1083;&#1086; &#1079;&#1072;&#1076;&#1072;&#1085;&#1080;&#1077;
2.3 &#1075;&#1076;&#1077; &#1085;&#1091;&#1078;&#1085;&#1086; &#1073;&#1099;&#1083;&#1086;
&#1090;&#1077;&#1082;&#1089;&#1090;&#1086;&#1074;&#1099;&#1081; &#1092;&#1072;&#1081;&#1083;
&#1085;&#1072; &#1083;&#1086;&#1082;&#1072;&#1083;&#1100;&#1085;&#1086;&#1084;
&#1082;&#1086;&#1084;&#1087;&#1100;&#1102;&#1090;&#1077;&#1088;&#1077;
&#1089;&#1082;&#1086;&#1087;&#1080;&#1088;&#1086;&#1074;&#1072;&#1090;&#1100;
&#1085;&#1072; &#1091;&#1076;&#1072;&#1083;&#1077;&#1085;&#1085;&#1099;&#1081;
&#1089;&#1077;&#1088;&#1074;&#1077;&#1088;. </font></font>
```

2.3.3

```
[[koldunova_anastasiya@vpsj3IeQ koldunovaN_lab_3]$ wc -c os.lab1.utf.html
 23141 os.lab1.utf.html
[[koldunova_anastasiya@vpsj3IeQ koldunovaN_lab_3]$ wc -l os.lab1.utf.html
 463 os.lab1.utf.html
[[koldunova_anastasiya@vpsj3IeQ koldunovaN_lab_3]$ wc -L os.lab1.utf.html
 246 os.lab1.utf.html
[[koldunova_anastasiya@vpsj3IeQ koldunovaN_lab_3]$ wc -m os.lab1.utf.html
 23141 os.lab1.utf.html
[[koldunova_anastasiya@vpsj3IeQ koldunovaN_lab_3]$ wc -w os.lab1.utf.html
 1630 os.lab1.utf.html
[koldunova_anastasiya@vpsj3IeQ koldunovaN_lab_3]$
```

```
[koldunova_anastasiya@vpsj3IeQ koldunovaN_lab_3]$ cat os.lab1.utf.html| tr ' ' '\n'
<!DOCTYPE
HTML
PUBLIC
"-//W3C//DTD
HTML
4.0
Transitional//EN">
<html>
<head>
        <meta
http-equiv="content-type"
content="text/html;
charset=us-ascii"/>
        <title></title>
        <meta
name="generator"
content="LibreOffice
5.3.6.1
(Linux)"/>
        <meta
name="author"
content="Microsoft
Office
User"/>
        <meta
name="created"
content="2021-03-14T11:56:00"/>
        <meta
name="changedby"
content="Microsoft
Office
User"/>
        <meta
name="changed"
content="2021-03-14T11:56:00"/>
        <style
type="text/css">
                @page
{
margin-right:
0.59in;
margin-top:
0.2in;
margin-bottom:
0.2in
}
                p
{
margin-bottom:
0.1in;
direction:
ltr;
```

```
</html>[koldunova_anastasiya@vpsj3IeQ koldunovaN_lab_3]$ sort os.lab1.utf.html| tr ' ' '\n'
```

```
                @page
{
margin-right:
0.59in;
margin-top:
0.2in;
margin-bottom:
0.2in
}

                p
{
margin-bottom:
0.1in;
direction:
ltr;
color:
#000000;
line-height:
120%;
orphans:
2;
widows:
2
}

                p.cjk
{
font-family:
"Calibri",
sans-serif;
font-size:
12pt
}

                p.ctl
{
font-family:
"Times
New
Roman",
serif;
font-size:
12pt;
so-language:
ar-SA
}

                p.western
{
font-family:
"Calibri",
sans-serif;
font-size:
12pt;
so-language:
ru-RU
```

```
        </style>
        <meta
http-equiv="content-type"
content="text/html;
charset=us-ascii"/>
        <meta
name="author"
content="Microsoft
Office
User"/>
        <meta
name="changed"
content="2021-03-14T11:56:00"/>
        <meta
name="changedby"
content="Microsoft
Office
User"/>
        <meta
name="created"
content="2021-03-14T11:56:00"/>
        <meta
name="generator"
content="LibreOffice
5.3.6.1
(Linux)"/>
        <style
type="text/css">
        <title></title>
&#1040;.
&#1040;.</font></font></p>
&#1047;&#1072;&#1076;&#1072;&#1085;&#1080;&#1103;
&#1076;&#1083;&#1103;
&#1050;&#1086;&#1085;&#1090;&#1088;&#1086;&#1083;&#1100;&#1085;&#1099;&#1077;
&#1054;.&#1040;.</font></font></p>
&#1058;&#1077;&#1086;&#1088;&#1077;&#1090;&#1080;&#1095;&#1077;&#1089;&#1082;&#1080;&#1077;
&#1058;&#1088;&#1077;&#1073;&#1086;&#1074;&#1072;&#1085;&#1080;&#1103;
&#1072;&#1076;&#1072;&#1085;&#1080;&#1077;
&#1072;&#1076;&#1072;&#1085;&#1080;&#1077;
&#1072;&#1076;&#1072;&#1085;&#1080;&#1077;
&#1072;&#1076;&#1072;&#1085;&#1080;&#1077;
&#1073;&#1099;&#1083;&#1086;
&#1079;&#1072;&#1076;&#1072;&#1085;&#1080;&#1077;
&#1074;&#1079;&#1072;&#1080;&#1084;&#1086;&#1076;&#1077;&#1081;&#1089;&#1090;&#1074;&#1080;&#1103;
&#1074;&#1079;&#1072;&#1080;&#1084;&#1086;&#1076;&#1077;&#1081;&#1089;&#1090;&#1074;&#1080;&#1103;&raquo;</font></font></font></font></font></p>
&#1074;&#1086;&#1087;&#1088;&#1086;&#1089;&#1099;.</font></font></p>
&#1074;&#1099;&#1087;&#1086;&#1083;&#1085;&#1077;&#1085;&#1080;&#1103;
&#1074;&#1099;&#1087;&#1086;&#1083;&#1085;&#1077;&#1085;&#1080;&#1103;</font></font></p>
&#1075;&#1088;&#1091;&#1087;&#1087;&#1099;
&#1040;&#1048;-205</font></font></p>
&#1076;&#1072;&#1085;&#1085;&#1086;&#1081;
&#1083;&#1072;&#1073;&#1086;&#1088;&#1072;&#1090;&#1086;&#1088;&#1085;&#1086;&#1081;
&#1076;&#1080;&#1089;&#1094;&#1080;&#1087;&#1083;&#1080;&#1085;&#1077;:
```

```
[[koldunova_anastasiya@vpsj3IeQ koldunovaN_lab_3]$ sort os.lab1.utf.html| tr ' ' '\n'|uniq

                @page
{
margin-right:
0.59in;
margin-top:
0.2in;
margin-bottom:
0.2in
}
                p
{
margin-bottom:
0.1in;
direction:
ltr;
color:
#000000;
line-height:
120%;
orphans:
2;
widows:
2
}
                p.cjk
{
font-family:
"Calibri",
sans-serif;
font-size:
12pt
}
                p.ctl
{
font-family:
"Times
New
Roman",
serif;
font-size:
12pt;
so-language:
ar-SA
}
                p.western
{
font-family:
"Calibri",
sans-serif;
font-size:
12pt;
```

Вывод: В данной лабораторной мы приобрели навыки работы с оболочкой Unix-подобных ОС интерфейса командной строки и утилитами текстовых данных. Самым сложным задание, по-моему мнению, было задание № 2.3.3