Отчет по лабораторной работе №2

Выполнил

Булей Е.В.

студент группы АС-50

Проверил А. А.

Крощенко

ст. преп. кафедры ИИТ

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Цель работы: приобрести базовые навыки работы с файловой системой в Java
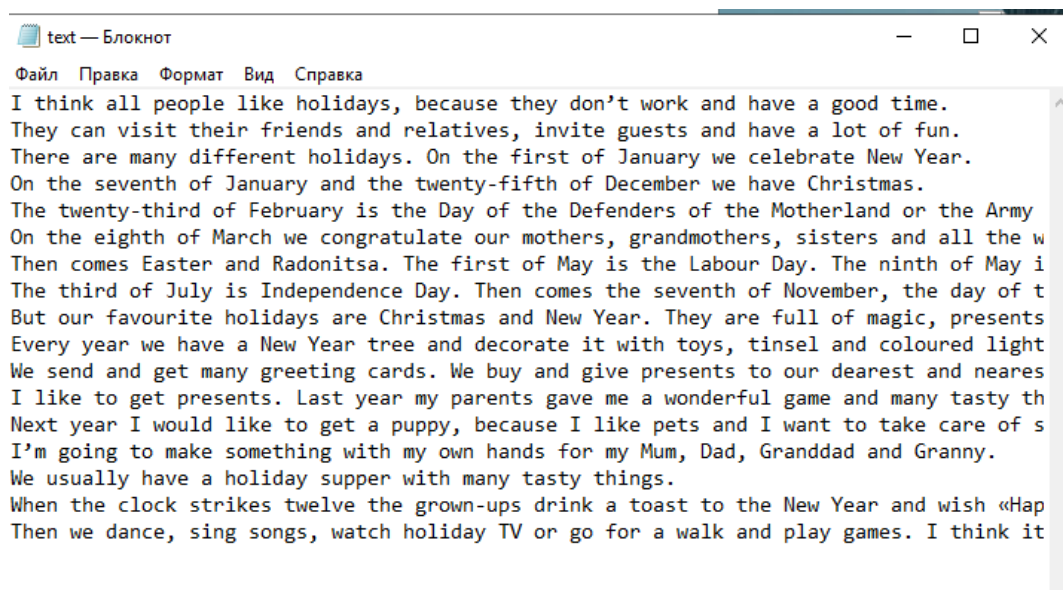
ВАРИАНТ 2

Задание 1

2) Напишите программу, которая читает текст построчно, а затем разбивает каждую строку на лексемы и выводит их в обратном порядке.

Код программы:

```java
import java.io.*;

public class Task1 {
    public static void main(String[] args){
        try {
            File file = new File("text.txt");
            FileReader fr = new FileReader(file);
            BufferedReader reader = new BufferedReader(fr);
            String line = reader.readLine();
            while(line!=null){
                line = line.replaceAll("[^a-zA-Z]|\\s"," ");
                String[] words = line.split(" ");
                for(int i = words.length-1;i>-1;i--)
                    System.out.print(words[i]+" ");
                System.out.println();
                line = reader.readLine();
            }
        } catch (FileNotFoundException e) {
            e.printStackTrace();
        } catch (IOException e) {
            e.printStackTrace();
        }
    }
}
```

Входные параметры:

text — Блокнот

Файл   Правка   Формат   Вид   Справка

I think all people like holidays, because they don't work and have a good time.
They can visit their friends and relatives, invite guests and have a lot of fun.
There are many different holidays. On the first of January we celebrate New Year.
On the seventh of January and the twenty-fifth of December we have Christmas.
The twenty-third of February is the Day of the Defenders of the Motherland or the Army
On the eighth of March we congratulate our mothers, grandmothers, sisters and all the w
Then comes Easter and Radonitsa. The first of May is the Labour Day. The ninth of May i
The third of July is Independence Day. Then comes the seventh of November, the day of t
But our favourite holidays are Christmas and New Year. They are full of magic, presents
Every year we have a New Year tree and decorate it with toys, tinsel and coloured light
We send and get many greeting cards. We buy and give presents to our dearest and neares
I like to get presents. Last year my parents gave me a wonderful game and many tasty th
Next year I would like to get a puppy, because I like pets and I want to take care of s
I'm going to make something with my own hands for my Mum, Dad, Granddad and Granny.
We usually have a holiday supper with many tasty things.
When the clock strikes twelve the grown-ups drink a toast to the New Year and wish «Hap
Then we dance, sing songs, watch holiday TV or go for a walk and play games. I think it

Вывод:

```
"C:\Program Files\Java\jdk-13.0.2\bin\java.exe" "-javaagent:D:\IntelliJ IDEA Community Edition 2020.2.1\lib\idea_rt.jar=6
time good a have and work t don they because  holidays like people all think I
fun of lot a have and guests invite  relatives and friends their visit can They
Year New celebrate we January of first the On  holidays different many are There
Christmas have we December of fifth twenty the and January of seventh the On
Day Army the or Motherland the of Defenders the of Day the is February of third twenty The
holiday their with women the all and sisters  grandmothers  mothers our congratulate we March of eighth the On
Day Victory is May of ninth The  Day Labour the is May of first The  Radonitsa and Easter comes Then
on so and Revolution October the of day the  November of seventh the comes Then  Day Independence is July of third The
hopes and presents  magic of full are They  Year New and Christmas are holidays favourite our But
lights coloured and tinsel  toys with it decorate and tree Year New a have we year Every
nearest and dearest our to presents give and buy We  cards greeting many get and send We
present a as things tasty many and game wonderful a me gave parents my year Last  presents get to like I
charming so are Puppies  somebody of care take to want I and pets like I because  puppy a get to like would I year Next
Granny and Granddad  Dad  Mum my for hands own my with something make to going m I
things tasty many with supper holiday a have usually We
other each to  Year New Happy  wish and Year New the to toast a drink ups grown the twelve strikes clock the When
holiday best the is it think I  games play and walk a for go or TV holiday watch  songs sing  dance we Then

Process finished with exit code 0
```

Задание 2

2) Утилита tail выводит несколько (по умолчанию 10) последних строк из файла. Формат использования: tail [-n] file

Ключ -n <количество строк> (или просто <количество строк>) позволяет изменить количе-
ство выводимых строк.

Пример использования:
tail -n 20 app.log

tail 20 app.log
Выводит 20 последних строк из файла app.log.

Для решения задачи подойдет класс java.io.RandomAccessFile, реализующий произвольный до-
ступ к файлу (чтение и запись с любой позиции в файле).

Код программы:

```java
import java.io.*;

import static java.lang.Integer.*;

public class Task2 {

    public static void main(String[] args) {

        if (args.length == 0 || !args[0].equals("tail")) {
```

```java
                System.out.println("unknown command");
                return;
        }

        try {

            if (args[1].equals("-n")) {
                RandomAccessFile randomAccessFile = new
RandomAccessFile(args[3], "r");
                int numberLine = parseInt(args[2]);
                readLine(randomAccessFile, numberLine);
                return;
            }

            if (isDigit(args[1])) {
                RandomAccessFile randomAccessFile = new
RandomAccessFile(args[2], "r");
                int numberLine = parseInt(args[1]);
                readLine(randomAccessFile,numberLine);
                return;
            } else {
                RandomAccessFile randomAccessFile = new
RandomAccessFile(args[1], "r");
                readLineD(randomAccessFile);
                return;
            }

        } catch (FileNotFoundException fileNotFoundException) {
            fileNotFoundException.printStackTrace();
        }
    }


    public static boolean isDigit(String str) {
        try {
            parseInt(str);
            return true;
        } catch (NumberFormatException e) {
            return false;
        }
    }

    public static int lengFile(RandomAccessFile randomAccessFile) throws
IOException {
        int count = 0;
        String line = randomAccessFile.readLine();
        while (line != null) {
            count++;
            line = randomAccessFile.readLine();
        }
        randomAccessFile.seek(0);
        return count;
    }

    public static void readLineD(RandomAccessFile randomAccessFile) {
        try {
            String line = randomAccessFile.readLine();
            int num = -1, leng = lengFile(randomAccessFile);
            while (line != null) {
                if (num > leng - 10) System.out.println(line);
                num++;
                line = randomAccessFile.readLine();
            }
        } catch (IOException e) {
```

```
                e.printStackTrace();
            }
        }

    public static void readLine (RandomAccessFile randomAccessFile, int
count) {
        try {
            String line = randomAccessFile.readLine();
            int num = -1, leng = lengFile(randomAccessFile);
            while (line != null) {
                if (num > leng - count) System.out.println(line);
                num++;
                line = randomAccessFile.readLine();
            }
        } catch (IOException e) {
            e.printStackTrace();
        }

    }
}
```
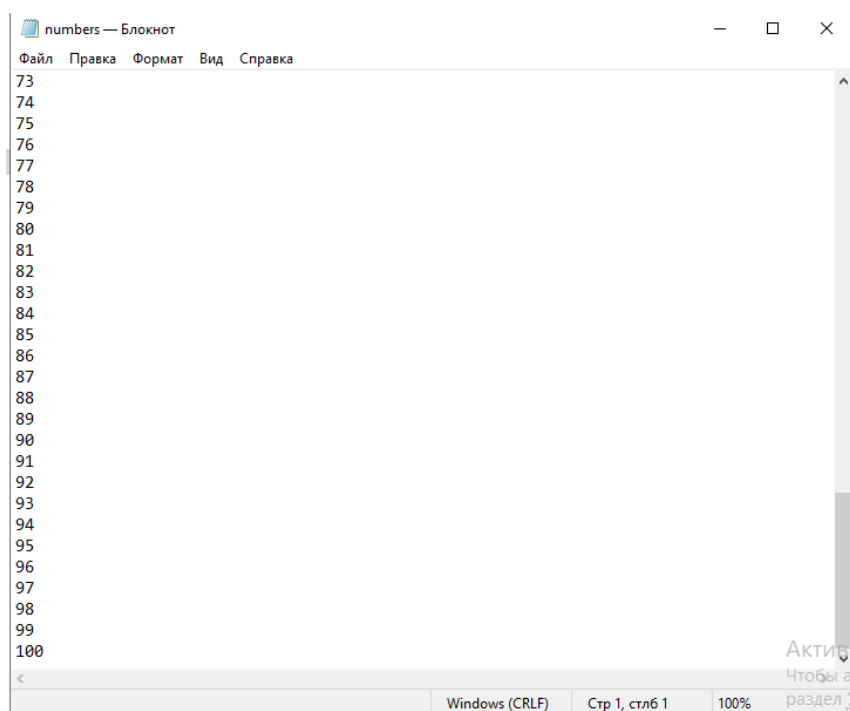
Входные параметры:

Вывод:

```
"C:\Program Files\Java\jdk-13.0.2\bin\java.exe" "-javaagent:D:\IntelliJ IDEA Community Edition 2020.2.1\lib\idea_rt.jar=6493
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100

Process finished with exit code 0
```

Вывод: приобрел базовые навыки работы с файловой системой в Java