**Name**

**Advanced Programming in Java**

**Lab Exercise 10/11/2023**

**Input from a Disk File**

Refer to Lesson 24 in Blue Pelican Java

// FileTester.java

import java.io.\*; // necessary for File and IOException

import java.util.\*; // necessary for Scanner

public class FileTester

{

public static void main(String args[]) throws IOException

{

Scanner sf = new Scanner(new File("C:\\temp\_Larry\\MyData.in"));

int maxIndx = -1; //-1 so when we increment below, first indx is 0

String text[] = new String[100]; //**to be safe, declare plenty**

while(sf.hasNext( ))

{

maxIndx++;

text[maxIndx] = sf.nextLine( ) ;

}

//**maxIndx is now the highest index of text[], -1 if no text lines**

sf.close( ); //**We opened a file above so close it when finished**.

for(int j = 0; j <= maxIndx; j++)

{

System.out.println( text[j] );

}

} // end of main

} // end of FileTester

Unless otherwise indicated, the following questions refer to the final *FileTester* class shown above.

1. Create a *Scanner* object called *scr* suitable for reading in the file *DaffyDuck.txt*. This file resides in the *C:\Disney\Cartoons* folder.

2. Consider the code fragments:

maxIndx++;

text[maxIndx] = sf.nextLine( );

Which of the following could replace this code?

a. text[++maxIndx] = sf.nextLine( );

b. text[maxIndx++] = sf.nextLine( );

c. text[maxIndx] = sf.nextLine( );

d. None of these

3. Write an expression that tells the number of elements in the *text[ ]* array (after exiting the loop) that contain meaningful data.

4. Why do we initialize *maxIndx* with a value of –1?

5. What are the conditions for exiting the *while* loop?

6. The *Scanner* class requires what import?

7. Rewrite the *while* loop so that it prints each line of input from the file just after it’s stored in the *text[ ]* array.

8. What would be the value of *maxIndx* (at the completion of the *while* loop) if the

*MyData.in* file was completely empty?

9. What does *sf.close( )* accomplish?

10. With the statement *String text[ ] = new String[100];* why do we dimension *text[ ]*

so large?

11. What might account for the following?

You used Notepad to create a file and thought you named it *Dat.xx*. Later when

you look in the folder (in which it resides) with Windows Explorer, you notice

that the file name is actually *Dat.xx.txt*.

12. Write the signature of the *nextLine* method.

**Project… Reading Files**

Write a class called *FileNerd* that will input the lines of text from a file named *NerdData.txt*. After the file input loop, create a loop in which you printout only those lines that begin with the word “The”.

**The contents of NerdData.txt are: Output will look like this:**

Every man tries as hard as he can. The best way is this way.

The best way is this way. The schedule is very good.

The schedule is very good. The best movie was cancelled.

Cosmo Kramer is strange.

The best movie was cancelled.

**Project… Delivery Service**

A delivery service does not accept packages heavier than 27 kilograms or larger than 0.1 cubic meters (100,000 cubic centimeters). Create a PackageCheck application that prompts the user for the weight of a package and it’s dimensions (length, width, and height), and then displays an appropriate message if the package does not meet the requirements. Messages should include:

Too heavy

Too large

Too heavy and too large

OK

**Project… Egg Company**

A wholesale egg company bases their prices on the number of eggs purchased:

0 up to but not including 4 dozen $3.50 per dozen

4 up to but not including 6 dozen $3.00 per dozen

6 up to but not including 11 dozen $2.50 per dozen

11 or more dozen $2.00 per dozen

Extra eggs are priced at 1/12 the per dozen price

Create an Eggs application that prompts the user for the number of eggs, and then calculates the bill. The application should look similar to:

Enter the number of eggs purchased: 18

The bill is : $5.25