Scanner and PrintWriter Classes

1. In the method shown below, explain what is happening on every numbered line.

1. import java.util.Scanner; //importing the Scanner package

import java.io.\*;

2. public static void IOpractice() throws FileNotFoundException,

IOException //IOpractice class which throws exceptions  
 {  
3. Scanner sc = new Scanner( System.in ); //instantiates a Scanner  
4. System.out.print( "What filename? " ); //asks you to input a filename  
5. String filename = sc.next(); //sets a string to equal what you input  
6. Scanner infile = new Scanner( new File( filename ) ); //opens a scanner to read the file you named  
7. String fileout = “results.txt”; //sets a string equal to a filename you want to create  
8. PrintWriter outfile = new PrintWriter(new FileWriter(fileout)); //sets a PrintWriter to create a text file  
9. while( infile.hasNext() )//while there are still lines in the file  
 {  
10. String s = infile.nextLine(); //s is set equal to the next line in the file  
 outfile.print( s + ", ");

}

11. outfile.close(); //the file the printwriter was creating is closed

}

2. If you remember the Scanner class, write down five methods that you are likely to use. If you don’t remember, go look at its API and choose five methods that you find interesting. Hint: Google “Scanner class Java”.

Scanner.next()

Scanner.hasNext()

Scanner.nextInt()

Scanner.nextLine()

Scanner.findInLine()

3. Here is a sample dialog with a computer. The user is typing at the keyboard.

Enter your name: Marissa Mayer

You entered Marissa Mayer

Enter an integer: -2

Enter a decimal number: 2.71828

The sum is 0.71828

Using Scanner methods for keyboard input, write a complete program that reproduces the dialog above.

import java.util.Scanner;

import java.io.\*;

public class Typing throws IOException

{

public static void main(String[] args)

{

Scanner sc = new Scanner(System.in);

System.out.print(“Enter your name:\t”);

System.out.println(“You entered “ + sc.nextLine());

System.out.print(“Enter an integer:\t”);

System.out.print(“Enter a decimal number:\t”);

System.out.println(“The sum is “ + (sc.nextDouble() + sc.nextDouble()));

}

}

4. Using Scanner methods for file input, write a complete program to read the input file “datafile.txt”:

Marissa Mayer

-2

2.71828

Use the PrintWriter methods to produce an output file “processed.txt”:

Marissa Mayer

0.71828

Scanner sc = new Scanner( new File(“datafile.txt”));

PrintWriter outfile = new PrintWriter(new FileWriter(“processed.txt”));

outfile.println(sc.nextLine());

outfile.println(sc.nextDouble() + sc.nextDouble());