

OOSD: Practice Problems 8

1. Write a program that counts the number of characters and lines that occur in a text file whose name comes from user input.
2. Write a program that counts the number of words and sentences that occur in a text file whose name comes from user input. Assume sentences end with a period, a question mark, or an exclamation mark.
3. Write a method *averageLen* that takes a Reader object as its parameter and returns the average length of the words found in the stream represented by the Reader.
4. Write a program using a Scanner object that reads a Java program and reports the number of classes, interfaces, and procedures in the program.
5. Write a program that reads characters from two text files and writes them to a third text file with the characters interleaved. Ask the user for the names of the three files. Solve this problem with and without using the Scanner class.
6. Write a method with the signature

```
static int [] getNums(String fileName)
```

that, assuming *fileName* is the name of a text file containing integers separated by whitespace, reads the text file and returns an array containing the integers found in the file.
7. Show the contents of the file named *date* after these declarations and commands are executed. Show the contents in hexadecimal with a space between the two-digit bytes.

```
String s = "1492";  
DataOutputStream dos = new DataOutputStream(new FileOutputStream("date"));  
dos.writeInt(Integer.parseInt(s));  
dos.writeUTF(s);
```

Note: The ascii value of '0' (zero) is 48 in decimal.
8. Write a Java method, called *mkNumbers*, that takes an array of **double** values as its parameter and creates a binary file, called *numbers*, that contains all of the numbers in the List as 64-bit binary values. No validation of the parameter is required.
9. Write a method, named *sumFile*, that takes a String, naming a file, as its only parameter. The file will contain a collection of double values (it is a binary file). In the method read all the **double** values from the file and return their sum. Catch any exceptions that might occur in the method and return 0 if something goes wrong.
10. Use a Scanner object to read five **int** values from the keyboard.