

Exercise 1

```
import java.util.Scanner;
import java.io.PrintWriter;
import java.io.File;
import java.io.FileNotFoundException;
/**
    Saket Bakshi. 3/22/19. Period 6. This is used for question 1 of Chapter 11.
    Opens a file, rewrites it, closes it, reopens it, and prints it on screen.
 */

public class FileTester
{
    public static void main(String[] args) throws FileNotFoundException
    {

        PrintWriter out = new PrintWriter("hello.txt"); //PrintWriter object to write to a file
        out.println("Hello, World!"); //writing to the file
        out.close();

        File inFile = new File("hello.txt"); //rereading the file
        Scanner scanned = new Scanner(inFile);
        System.out.println(scanned.nextLine()); //printing the file line to console
        scanned.close();
    }
}
```

```
PS C:\Users\saket\Git\CSWork\JAVA\ChapterAssignments\C11EXBakshiSaket> java FileTester
Hello, World!
PS C:\Users\saket\Git\CSWork\JAVA\ChapterAssignments\C11EXBakshiSaket>
```

Exercise 2

```
import java.util.Scanner;
import java.io.File;
import java.io.FileNotFoundException;
/**
    Saket Bakshi. 3/22/19. Period 6. This is used for question 2 of Chapter 11.
    Reads lines in a text file and prints them out, reformatted.
*/

public class FileModifier
{
    public static void main(String[] args) throws FileNotFoundException
    {
        File inFile = new File("input.txt");
        Scanner scanned = new Scanner(inFile);

        Scanner original = new Scanner(inFile);
        System.out.println("Original input file:");
        while(original.hasNextLine())
        {
            System.out.println(original.nextLine());
        }

        int lineNumber = 0;

        System.out.println("\nActual results:");

        scanned.reset();
        while(scanned.hasNextLine())
        {
            lineNumber++;
            System.out.println("/" + lineNumber + "/" + scanned.nextLine());
        }

        scanned.close();
    }
}
```

```
PS C:\Users\saket\Git\CSWork\JAVA\ChapterAssignments\C11EXBakshiSaket> java FileModifier
Original input file:
Mary had a little lamb
Whose fleece was white as snow.
And everywhere that Mary went,
The lamb was sure to go!

Actual results:
/* 1 */ Mary had a little lamb
/* 2 */ Whose fleece was white as snow.
/* 3 */ And everywhere that Mary went,
/* 4 */ The lamb was sure to go!
PS C:\Users\saket\Git\CSWork\JAVA\ChapterAssignments\C11EXBakshiSaket>
```

Exercise 5

```
import java.util.Scanner;
import java.io.File;
import java.io.FileNotFoundException;
```

```
/**
```

Saket Bakshi. 3/22/19. Period 6. This is used for question 5 of Chapter 11.

Asks a user for a file name and prints the number of characters, words, and lines in that file.

```
*/
```

```
public class FileInformer
```

```
{
```

```
    public static void main(String[] args) throws FileNotFoundException
```

```
    {
```

```
        Scanner keyboard = new Scanner(System.in);
```

```
        System.out.println("What's the file name?");
```

```
        String fileName = keyboard.nextLine();
```

```
        File inFile = new File(fileName);
```

```
        Scanner scanForChar = new Scanner(inFile);
```

```
        Scanner scanForWords = new Scanner(inFile);
```

```
        Scanner scanForLines = new Scanner(inFile);
```

```
        Scanner printTest = new Scanner(inFile);
```

```
        while(printTest.hasNextLine())
```

```
        {
```

```
            System.out.println(printTest.nextLine());
```

```
        }
```

```
        int numChars = 0;
```

```
        scanForChar.useDelimiter("");
```

```
        while(scanForChar.hasNext())
```

```
        {
```

```
            scanForChar.next();
```

```
            numChars++;
```

```
        }
```

```
        System.out.println("Number of characters: " + numChars);
```

```
        int numWords = 0;
```

```
        while(scanForWords.hasNext())
```

```
        {
```

```

        scanForWords.next();
        numWords++;
    }
    System.out.println("Number of words: " + numWords);

    int numLines = 0;
    while(scanForLines.hasNextLine())
    {
        scanForLines.nextLine();
        numLines++;
    }
    System.out.println("Number of lines: " + numLines);
}
}

```

```

PS C:\Users\saket\Git\CSWork\JAVA\ChapterAssignments\C11EXBakshiSaket> java FileInformer
What's the file name?
input.txt
Mary had a little lamb
Whose fleece was white as snow.
And everywhere that Mary went,
The lamb was sure to go!
Number of characters: 113
Number of words: 22
Number of lines: 4
PS C:\Users\saket\Git\CSWork\JAVA\ChapterAssignments\C11EXBakshiSaket>

```

Project 3

```
import java.util.Scanner;
import java.io.File;
import java.io.FileNotFoundException;
import java.io.IOException;
import java.net.MalformedURLException;
import java.net.URL;
import java.io.PrintWriter;
/**
```

Saket Bakshi. 3/22/19. Period 6. This is used for project 3 of Chapter 11.

Asks a use for a URL, reads all the data, and writes the data to a file. Asks user for name of output file.

```
*/
```

```
public class URLWriter
```

```
{
```

```
    public static void main(String[] args) throws IOException //throws exceptions
    {
```

```
        Scanner keyboard = new Scanner(System.in); //to input keystrokes
        System.out.println("What URL would you like to save to a file?");
        String address = keyboard.nextLine(); //address of website
```

```
        URL pageLocation = new URL(address); //creating URL object
        Scanner in = new Scanner(pageLocation.openStream()); //scanning the URL
```

object

```
        System.out.println("What would you like the output file name to be?"); //choosing
        output file name (I end in .html so that the finished product opens in browser)
```

```
        String outputName = keyboard.nextLine();
        PrintWriter out = new PrintWriter(outputName); //creates object to write to a file
```

```
        while(in.hasNextLine()) //copies URL code to output file
        {
            out.println(in.nextLine());
        }
```

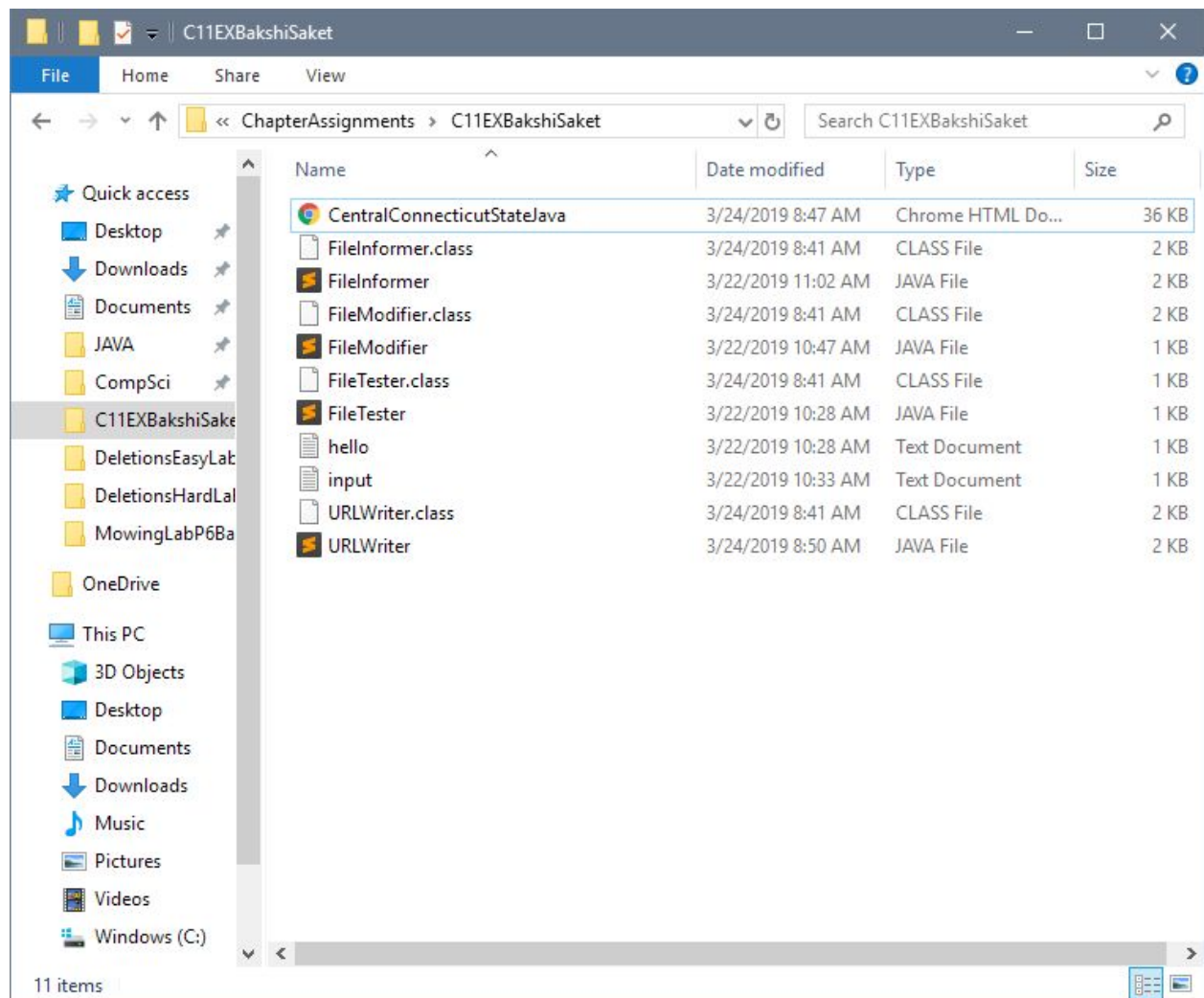
```
        out.close();
        in.close();
        keyboard.close(); //closes objects
```

```
    }
```

```
}
```

```
C:\Users\saket\Git\CSWork\URL\ChapterAssignments\C11\Saket\URLWriter.java - Sublime Text (UNREGISTERED)
File Edit Selection Find View Goto Tools Project Preferences Help
FileTester.java FileModifier.java Input.txt FileTransformer.java URLWriter.java
2 import java.io.File;
3 import java.io.FileNotFoundException;
4 import java.io.IOException;
5 import java.net.MalformedURLException;
6 import java.net.URL;
7 import java.io.PrintWriter;
8 /**
9  Saket Bakshi, 3/22/19, Period 6. This is used for project 3 of Chapter 11.
10  Asks a user for a URL, reads all the data, and writes the data to a file. Asks user for name of output file.
11 */
12
13 public class URLWriter
14 {
15     public static void main(String[] args) throws IOException //throws exceptions
16     {
17         Scanner keyboard = new Scanner(System.in); //to input keystrokes
18         System.out.println("What URL would you like to save to a file?");
19         String address = keyboard.nextLine(); //address of website
20
21         URL pageLocation = new URL(address); //creating URL object
22         Scanner in = new Scanner(pageLocation.openStream()); //scanning the URL object
23
24         System.out.println("What would you like the output file name to be?"); //choosing output file name (I end in .html so that the finished prod
25         String outputName = keyboard.nextLine();
26         PrintWriter out = new PrintWriter(outputName); //creates object to write to a file
27
28         while(in.hasNextLine()) //copies URL code to output file
29         {
30             out.println(in.nextLine());
31         }
32
33         out.close();
34         in.close();
35         keyboard.close(); //closes objects
36     }
37 }
```

Line 27, Column 1 Tab Size: 4 Java




```
Windows PowerShell
+ CategoryInfo          : ObjectNotFound: (C:\Users\saket\...rAssignments\C1:String) [Set-Location], ItemNotFoundException
+ FullyQualifiedErrorId : PathNotFound,Microsoft.PowerShell.Commands.SetLocationCommand

PS C:\Users\saket> cd .\Git\CSWork\JAVA\ChapterAssignments\C11EXBakshiSaket\
PS C:\Users\saket\Git\CSWork\JAVA\ChapterAssignments\C11EXBakshiSaket> javac *.java
URLWriter.java:19: error: unreported exception MalformedURLException; must be caught or declared to be thrown
    URL pageLocation = new URL(address);
                        ^
URLWriter.java:20: error: unreported exception IOException; must be caught or declared to be thrown
    Scanner in = new Scanner(pageLocation.openStream());
                        ^
URLWriter.java:24: error: unreported exception FileNotFoundException; must be caught or declared to be thrown
    PrintWriter out = new PrintWriter(outputName);
                        ^
3 errors
PS C:\Users\saket\Git\CSWork\JAVA\ChapterAssignments\C11EXBakshiSaket> javac *.java
URLWriter.java:13: error: cannot find symbol
    public static void main(String[] args) throws FileNotFoundException, MalformedURLException, IOException
                                                ^
symbol:   class MalformedURLException
location: class URLWriter
URLWriter.java:13: error: cannot find symbol
    public static void main(String[] args) throws FileNotFoundException, MalformedURLException, IOException
                                                ^
symbol:   class IOException
location: class URLWriter
2 errors
PS C:\Users\saket\Git\CSWork\JAVA\ChapterAssignments\C11EXBakshiSaket> javac *.java
PS C:\Users\saket\Git\CSWork\JAVA\ChapterAssignments\C11EXBakshiSaket> java C11EXBakshiSaket
Error: Could not find or load main class C11EXBakshiSaket
PS C:\Users\saket\Git\CSWork\JAVA\ChapterAssignments\C11EXBakshiSaket> java URLWriter
What URL would you like to save to a file?
help.websites.com/websites/example_of_a_simple_html_page.htm
Exception in thread "main" java.net.MalformedURLException: no protocol: help.websites.com/websites/example_of_a_simple_html_page.htm
    at java.net.URL.<init>(Unknown Source)
    at java.net.URL.<init>(Unknown Source)
    at java.net.URL.<init>(Unknown Source)
    at URLWriter.main(URLWriter.java:21)
PS C:\Users\saket\Git\CSWork\JAVA\ChapterAssignments\C11EXBakshiSaket> java URLWriter
What URL would you like to save to a file?
http://hortsmann.com/index.html
Exception in thread "main" java.net.UnknownHostException: hortsmann.com
    at java.net.AbstractPlainSocketImpl.connect(Unknown Source)
    at java.net.PlainSocketImpl.connect(Unknown Source)
    at java.net.SocksSocketImpl.connect(Unknown Source)
    at java.net.Socket.connect(Unknown Source)
    at java.net.Socket.connect(Unknown Source)
    at sun.net.NetworkClient.doConnect(Unknown Source)
    at sun.net.www.http.HttpClient.openServer(Unknown Source)
    at sun.net.www.http.HttpClient.openServer(Unknown Source)
    at sun.net.www.http.HttpClient.<init>(Unknown Source)
    at sun.net.www.http.HttpClient.New(Unknown Source)
    at sun.net.www.http.HttpClient.New(Unknown Source)
    at sun.net.www.protocol.http.HttpURLConnection.getNewHttpClient(Unknown Source)
    at sun.net.www.protocol.http.HttpURLConnection.plainConnect0(Unknown Source)
    at sun.net.www.protocol.http.HttpURLConnection.plainConnect(Unknown Source)
    at sun.net.www.protocol.http.HttpURLConnection.connect(Unknown Source)
    at sun.net.www.protocol.http.HttpURLConnection.getInputStream0(Unknown Source)
    at sun.net.www.protocol.http.HttpURLConnection.getInputStream(Unknown Source)
    at java.net.URL.openStream(Unknown Source)
    at URLWriter.main(URLWriter.java:22)
PS C:\Users\saket\Git\CSWork\JAVA\ChapterAssignments\C11EXBakshiSaket> java URLWriter
What URL would you like to save to a file?
https://chortle.ccsu.edu/cs151/cs151java.html
What would you like the output file name to be?
CentralConnecticutStateJava.html
PS C:\Users\saket\Git\CSWork\JAVA\ChapterAssignments\C11EXBakshiSaket>
```

successful
run

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https://chortle.ccsu.edu/cs151/cs151java.html

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Introduction to Computer Science using Java

Original SiteBradley Kjell, Central Connecticut State University

This is a course in Java programming for beginners. It covers the fundamentals of programming, roughly the same material that is covered in a beginning programming course in a university or in a high school AP Computer Science course.

For maximum benefit, go through these ../Java5/Notes interactively, thinking about and answering the question at the bottom of each page. There are about 20 pages per chapter. If you spend about 3 minutes per page each chapter will take about 60 minutes, or longer if you copy and run some of the programs. If you are a beginning programmer, plan on spending more than a month with this.

These Notes assume that you have a recent version of Java, available from Oracle, Inc. at <http://www.oracle.com/technetwork/java/index.html> and a text editor such as Notepad. Compiling and running programs is done from the command line interface. You may use more sophisticated environments, as well.

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An alternate site, with faster response time, that contains this material is: [Mirror Site](#)

Best viewed at 1024 x 768 or higher. The audio works best with Windows Media Player.

Part 1: Hardware and Software

Chapter 1	Introduction to Computer Systems	Quiz	Flash Cards
Chapter 2	Analog and Binary Signals	Quiz	Flash Cards
Chapter 3	Computer Memory	Quiz	Flash Cards
Chapter 4	The Processor	Quiz	Flash Cards

Part 2: Running Java Programs

Chapter 5	Introduction to Java	Review
Chapter 6	Small Java Programs	Review
Chapter 7	How to Run the Example Programs	Review

Introduction to Computer Science x Introduction to Computer Science x C11EXBakshiSaket - Google Docs x +

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Part 2: Running Java Programs

Chapter 5	Introduction to Java	Review
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Chapter 7	How to Run the Example Programs	Review

Part 3: Data

HTML File:

```
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN"
"http://www.w3.org/TR/html4/loose.dtd" >
```

```
<head>
```

```
<title>Introduction to Computer Science using Java</title>
```

```
<meta http-equiv="Content-Type" content="text/html; charset=iso-8859-1">
```

```
<meta name="copyright" content="1999, 2000, 2002, 2006, 2011 Bradley Kjell">
```

```
<meta name="author" content="Bradley Kjell kjell at ieee dot org ">
<meta name="keywords" content="Java for beginners, Java instruction, Java tutorial, Java
lessons, advanced placement computer science, AP computer science">
<meta name="description" content="An online course in Java programming for beginners using
programmed instruction.">
<link rel="stylesheet" type="text/css" href="indexStyle.css">
<link rel="shortcut icon" href="favicon.ico" >
</head>
```

```
<body>
```

```
<center>
```

```
<h1>Introduction to Computer Science using Java</h1>
```

```
<h4>Bradley Kjell, Central Connecticut State University</h4>
```

```
</center>
```

```
<table>
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<tr>
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<td valign="top" width="45%">
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<p>
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```
<big><big>T</big></big>his is a course in
Java programming for beginners.
```

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roughly the same material that is covered in a beginning programming course
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```
For maximum benefit,
go though these ../Java5/Notes interactively,
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</p>
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```

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Compiling and running programs is done from
the command line interface.

You may use more sophisticated environments, as well.

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<p>

<big><big>F</big></big>or more about these ../Java5/Notes
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<table width="80%">

<tr>

<td colspan="5"><h2>Part 1: Hardware and Software</h2>

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<td> </td>

<td> Chapter 1</td>

<td>Introduction to Computer Systems</td>

<td>Quiz </td>

<td> Flash Cards.</td>

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<td> </td>

<td> Chapter 2</td>

<td>Analog and Binary Signals</td>

<td>Quiz </td>

<td> Flash Cards.</td>

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<td> Chapter 3</td>

<td>Computer Memory</td>

<td>Quiz </td>

<td> Flash Cards.</td>

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Chapter 4 The Processor Quiz Flash Cards.					
part2 05 06 07					
<h2>Part 2: Running Java Programs</h2>					
	Chapter 5 Introduction to Java Review				
	Chapter 6 Small Java Programs Review				
	Chapter 7 How to Run the Example Programs Review				
part3 08 09 09B 10 11					


```

    <td colspan="5"><h2>Part 3: Data</h2></td>
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    <td>Primitive Data</td>
    <td><a href="../Java5/Notes/chap08/chap08quizRev2.html">Quiz</a> </td>
    <td><a href="../Java5/Notes/chap08/progExercises08.html"> Exercises</a> and <a
href="../Java5/Notes/chap08/flashCards08.html"> Flash Cards</a></td>
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    <td>&#160;</td>
    <td><a href="../Java5/Notes/chap09A/ch09_1.html"> Chapter 9A</a></td>
    <td>Variables and the Assignment Statement</td>
    <td><a href="../Java5/Notes/chap09A/chap09quizRev2.html">Quiz</a> </td>
    <td><a href="../Java5/Notes/chap09A/progExercises09.html"> Exercises</a></td>
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    <td>Object Data</td>
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    <td>&#160;</td>
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    <td><a href="../Java5/Notes/chap10/progExercises10.html"> Exercises</a></td>
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    <td>&#160;</td>
    <td><a href="../Java5/Notes/chap11/ch11_1.html"> Chapter 11</a></td>
    <td>Floating Point</td>
    <td><a href="../Java5/Notes/chap11/fillBlankCh11.html">Review</a> </td>
    <td><a href="../Java5/Notes/chap11/progExercises11.html"> Exercises</a></td>

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<td colspan="5"><h2>Part 4: Branches and Loops</h2></td>

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<td> </td>

<td> Chapter 12</td>

<td>The <code>if</code> Statement</td>

<td>Quiz </td>

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<td> </td>

<td> Chapter 13</td>

<td>The Single Branch <code>if</code> Statement</td>

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<td> Chapter 14</td>

<td>Boolean Expressions</td>

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<td> Exercises</td>

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<td> Chapter 15</td>

<td>Loops and the <code>while</code> statement</td>

<td>Review </td>

<td> Exercises</td>

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<td> </td>

<td> Chapter 16</td>

<td>Counting Loops</td>

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        <td><a href="../Java5/Notes/chap16/chap16quizRev2.html">Quiz</a> </td>
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        <td>Nesting Loops and lfs</td>
        <td><a href="../Java5/Notes/chap17/fillBlankCh17.html">Review</a> </td>
        <td><a href="../Java5/Notes/chap17/progExercises17.html"> Exercises</a></td>
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        <td>&#160;</td>
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	Chapter 23	I/O using Scanner and PrintStream Review	Exercises
	Chapter 24	File Input Techniques Review	Exercises
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Chapter 31 Class Design Example (miles per gallon) Review Exercises
Chapter 32 Class Design Example (checking account) Review
Chapter 33 Encapsulation and Visibility Modifiers Quiz Exercises
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Appendix

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