

<b>Objectives</b>	<ol style="list-style-type: none"> <li>1. Reading Data from a text file ( CSV)</li> <li>2. String Processing and Comparing using Java</li> <li>3. User-System Interaction using Textual Based Interface.</li> <li>4. Searching for data within a Text-File</li> </ol>
<b>Practical Work</b>	<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p><b>Part 1:</b></p> <ol style="list-style-type: none"> <li>1. Open Eclipse (IDE) :</li> <li>2. Create a new project named : MyRead <i>File → Project → Java Project → Next</i> Project Name : MyRead → Finish</li> <li>3. Create a new File : <i>Right Click on MyRead Project → New → File → Name : MyData.txt → Finish</i></li> <li>4. Type in the following text into the file: <div style="border: 1px solid black; padding: 5px; margin: 5px 0;"> Imed , Bouchrika , Souk Ahras , 03735212  Mark , Nixon , Southampton , 03754845  Marty , Beta , Boston,05874142 </div> </li> <li>5. Create a new class: <i>Right Click on MyRead Project → New → Class → Name : Hello → Finish</i></li> <li>6. Type in the following code</li> </ol> <pre>import java.io.*; import java.util.*; public class Hello { public static void main(String[] args) { try{ File f=new File("MyData.txt"); Scanner s=new Scanner(f); while(s.hasNextLine()){ String line=s.nextLine(); System.out.println(line); } }catch(Exception e){ e.printStackTrace(); } } }</pre> <p><b>Part 2:</b></p> <p><i>String [] values=line.split(",");</i> This would break the String variable <i>line</i> into an array based on the ","</p> <p><i>String beta=line.trim();</i> Removes spaces and newline from the beginning and end of the String variable <i>line</i>.</p> <p><i>if (line.equals("Marty")){ ....}</i> To compare Strings, we use method : <b>equals</b> <i>line.indexOf("Marty");</i> returns the position of the term "Marty" within the string line. If not found, it returns -1</p> <p><i>if (line.equalsIgnoreCase("MarTY")){ ....}</i> To compare Strings regardless of the case-sensitivity.</p> </div> <div style="width: 45%;"> <p><b>Part 3:</b></p> <ol style="list-style-type: none"> <li>1. Type the following Code into the <b>Hello Class</b>:</li> </ol> <pre>import java.io.*; import java.util.*; public class Hello { public static String help_msg="Press: H Help- A Add - S Search - Q Exit :"; public static void main(String[] args) { try{ System.out.println("\n\n*** Welcome to MyPhone Book ***\n\n"); Scanner s=new Scanner(System.in); for(;;){ System.out.print("[Main Menu] "+help_msg+"\n:"); String command=s.nextLine().trim(); if (command.equalsIgnoreCase("H")){ System.out.println(help_msg); }else if (command.equalsIgnoreCase("A")){ System.out.print("Type in contact details in the format: "+ "name,lastname,phone\n:"); }else if (command.equalsIgnoreCase("S")){ System.out.print("Type in the name you are searching for :\n:"); }else if (command.equalsIgnoreCase("Q")){ System.out.println("Good Bye User...."); System.exit(0); }else{ System.out.print("Unknown command ! Try again \n:"); } } }catch(Exception e){ e.printStackTrace(); } } }</pre> <p><b>Part 4:</b></p> <p>Type the following code within the Hello Class for the Searching Part [S]</p> <pre>}else if (command.equalsIgnoreCase("S")){ System.out.print("Type in the name you are searching for :\n:"); String search=s.nextLine().trim(); search=search.toLowerCase(); File f=new File("MyData.txt"); Scanner s2=new Scanner(f); while(s2.hasNextLine()){ String line=s2.nextLine(); if (line.toLowerCase().indexOf(search)&gt;=0){ System.out.println("\nResult: "+line); } } }else if (command.equalsIgnoreCase("Q")){</pre> </div> </div>
<b>Homework</b>	<p>Extend the code for <b>Part 3</b> to:</p> <ol style="list-style-type: none"> <li>1. Add Name, Lastname, Phone into a CSV File when Typing <b>A</b></li> <li>2. Add an Option "<b>N</b>" to return the number of lines within the text file : MyData.txt</li> </ol>
<b>Question</b>	<p>Answer the following Questions:</p> <ol style="list-style-type: none"> <li>1. Explain the use of : System.exit(0);</li> <li>2. Can this program work with a text file containing over a million records ? Why</li> </ol>