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1 package use_case_controller;
2
3 import java.io.BufferedReader;
16
17 /**
18  * Class FileIO responsible for reading/writing files.
19  * @author Daria Vekic (Student ID: 586661)
20  *
21  */
22 public class FileIO {
23
24     /**
25      * Method to check if the required Paths and Files exist in user's storage.
26      * @param dirPath the path of the directory structure required to maintain data
27      * @param filePath the path to the files required to maintain data
28      * @return absPath the path to the files
29      */
30     public Path checkFiles(Path dirPath, Path filePath) {
31         Path absPath = dirPath.resolve(filePath);
32         try {
33             if (Files.notExists(dirPath))
34                 Files.createDirectories(dirPath); //if path doesn't exist create the directory structure
35             //endif
36             if (Files.notExists(absPath))
37                 Files.createFile(absPath); //if the file doesn't exist create the file
38         } //end try
39         catch (IOException x) {
40             System.err.println(x);
41             return null;
42         } //end catch
43         return absPath;
44     } //end method checkFiles
45
46     /**
47      * Method to control routine of creating file paths if they don't exist.
48      * Invoked when program is launched to allow for data persistence.
49      */
50     public void createPaths() {
51         Path p = Paths.get("C:/McRae&DickCaseManagementSystem"); //the directory
52         Path usersfilePath = Paths.get("Users.txt"); //the text file for login data
53         Path users;
54         users = checkFiles(p, usersfilePath);
55     } //end method createPaths
56
57     /**
58      * Method to read in login credentials from text file.
59      * @return map the HashMap containing login credentials.
60      */
61     public HashMap<String, String> readFromFile() {
62         HashMap<String, String> map = new HashMap<String, String>();
63         String line = ""; //stores each line read from file
64         //Path object to hold absolute file path returned from static method get() from Path class
65         //This static call returns an instance of an absolute file path
66         Path path = Paths.get("C:/McRae&DickCaseManagementSystem/Users.txt");
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67     try {
68         //Use Files class to return a BufferedReader object from path value supplied
69         //Character set is defined
70         BufferedReader fileInput = Files.newBufferedReader(path, Charset.forName("ISO-8859-1"));
71         line = fileInput.readLine();
72         while(line != null) {
73             //split the line by the comma
74             String[] data = line.split(", ");
75             //Key is username
76             String username = data[0].trim();
77             String pw = data[1].trim();
78             //put Key and Value into the map
79             if(!username.equals("") && !pw.equals(""))
80                 map.put(username, pw);
81             line = fileInput.readLine();
82         } //end while
83         fileInput.close();
84     } catch (FileNotFoundException e) {
85         System.out.println("File not found.");
86     } //end catch
87     catch (EOFException eofe) {
88         System.out.println("No more lines to read.");
89     } //end catch
90     catch (IOException ioe) {
91         System.out.println("Error reading file.");
92     } //end catch
93     return map;
94 } //end method readFromFile
95
96 /**
97  * Method to write updated login credentials to file.
98  * @param logins the Map to be written to file.
99  */
100 public void writeToFile(HashMap<String, String> logins) {
101     File file = new File("C:/McRae&DickCaseManagementSystem/Users.txt");
102     BufferedWriter bf = null;
103     try {
104         bf = new BufferedWriter(new FileWriter(file));
105         for(Map.Entry<String, String> entry : logins.entrySet()) {
106             bf.write(entry.getKey() + ", " + entry.getValue()); //write the Key and Value to file separated with comma
107             bf.newLine(); //take a new line
108         } //endfor
109         bf.flush();
110     } //end try
111     catch (IOException e) {
112         e.printStackTrace();
113     } //end catch
114     finally {
115         try {
116             bf.close();
117         } //end try
118         catch (Exception e) {
119             System.out.println("Something went wrong.");
120         } //end catch
121     }
```

FileIO.java

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121         } //end finally
122     } //end method writeToFile
123 } //end class FileIO
```