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1  /*****
2  * Dalton Nofs
3  * Login ID: nofs5491
4  * CS-102, Summer 2017
5  * Programming Assignment 5
6  * ConsolePrint class: general use program printer
7  *****/
8
9  public class ConsolePrint
10 {
11     /*****
12     * Method: printDatabase()
13     * Purpose: writes out the entire database
14     *
15     * Parameters: Database: printBase: database to be printed
16     * Returns: Void: nothing will be returned
17     *****/
18     public void printDatabase(Database printBase) throws IllegalArgumentException
19     {
20         String buffer = ""; // Buffer string for data to be sent to console
21         int arrayCount = 0; // local arraycount for cycling through the database
22         arrayCount = printBase.getDatabaseSize();
23
24         // Check the status of the database
25         if(arrayCount <= 0)
26         {
27             throw new IllegalArgumentException("Database is empty!");
28         }
29
30         // Loop semesters
31         for(int index=0; index<arrayCount; index++)
32         {
33             buffer += gather(printBase.get(index).getRoot());
34         }
35         UserInterface.sendMessage(buffer, "Database Data");
36         buffer = ""; // clear the buffer
37     }
38
39     /*****
40     * Method: gather() *private*
41     * Purpose: fills buffer with tree
42     *
43     * Parameters: TreeNode: current node
44     * Returns: String: compiled buffer from tree
45     *****/
46     private String gather(TreeNode<Course> current)
47     {
48         String buffer = "";
49         if(current == null) {return buffer;} // if fallen off list
50         // gather the rest of the right till null
51         buffer += gather(current.getRight());
52
53         buffer += current.getDatum().getCourseNumber() + ": " +
54                 current.getDatum().getCourseTitle() + " (" +
55                 current.getDatum().getCreditCount() + "). " +
56                 current.getDatum().getTermTaken() + " " +
57                 current.getDatum().getYearTaken() + " " +
58                 current.getDatum().getCourseGrade() + " ";
59         // Check to see if excluded from GPA calc
60         if(current.getDatum().getExcludeFlag().equals("Y") ||
61            current.getDatum().getExcludeFlag().equals("y"))
62         {
63             buffer += " (excluded).\n";
64         }
65         else{buffer += ".\n";}
66         // gather the rest of the left till null
67         buffer += gather(current.getLeft());
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68         return buffer;
69     }
70
71 }
```