10/26/15 02:00:48 /home/15504319/DSA120/DSAAssignment/TaskHandler.java

```
  1 /*****************************************************************************
  2 *    FILE: TaskHandler.java
  3 *    AUTHOR: Connor Beardsmore - 15504319
  4 *    UNIT: DSA120 Assignment S2- 2015
  5 *    PURPOSE: Handles and executes tasks on DC given a Taskfile
  6 *    LAST MOD: 25/10/15
  7 *  REQUIRES: java.util.Iterator, java.io, connorLib
  8 *****************************************************************************/
  9 import java.io.*;
 10 import java.util.Iterator;
 11 import connorLib.*;
 12
 13 public class TaskHandler
 14 {
 15     //CLASS CONSTANTS
 16     private static final String ADD = "A";
 17     private static final String REMOVE = "R";
 18     private static final String SEARCH = "S";
 19 //---------------------------------------------------------------------------
 20     //performTasks
 21     //IMPORT: dc (DistroCentre), taskFile + dcFile (String)
 22     //PURPOSE: Execute tasks given in taskFile, call methods to handle
 23
 24     public static void performTasks( DistroCentre dc, String taskFile,
 25                                      String dcFile) throws IOException
 26     {
 27         DSALinkedList taskList = new DSALinkedList();
 28         //Convert taskFile into Linked List of task Strings
 29         FileIO.readTaskFile(taskFile, taskList);
 30         //In Case any task is search OR remove, set up CartonSearcher
 31         CartonSearcher cs = new CartonSearcher( dc );
 32
 33         //Perform task on every line in the taskList
 34         String newLine;
 35         Iterator iter = taskList.iterator();
 36         while ( iter.hasNext() )
 37         {
 38             newLine = (String)iter.next();
 39             //Send individual task off seperately
 40             delegateTask(dc, cs, newLine, dcFile);
 41         }
 42     }
 43 //---------------------------------------------------------------------------
 44     //delegateTask
 45     //IMPORT: indexArray (Carton), dc (DistroCentre), taskFile + dcFile (String)
 46     //PURPOSE: determine what task type is, call correct method to handle
 47
 48     private static void delegateTask(DistroCentre dc, CartonSearcher cs,
 49                                      String newLine, String dcFile)
 50                                          throws IOException
 51     {
 52         String[] taskID = newLine.split(":", 2);
 53
 54         //Task Dependent on first string split before semicolon
 55         //Writeoutput only occurs for Add and Remove, not for Search
 56         //Writes after every appropriate task, enforces Atomicity of task
 57         if ( taskID[0].equals(ADD) )
 58         {
 59             TaskFunctions.addTask( dc, cs, taskID[1], -1 );
 60             FileIO.writeOutput( dc, dcFile );
 61         }
 62         else if ( taskID[0].equals(REMOVE) )
 63         {
 64             TaskFunctions.removeTask( dc, cs, taskID[1] );
 65             FileIO.writeOutput( dc, dcFile );
 66         }
 67         else if ( taskID[0].equals(SEARCH) )
 68         {
 69             Carton[] matches = TaskFunctions.searchTask( dc, cs, taskID[1] );
 70             TaskFunctions.printArray( matches );
 71         }
 72          else
 73          {
 74              throw new IllegalArgumentException("Task file format invalid");
 75          }
 76     }
 77 //---------------------------------------------------------------------------
 78 }
```