

classes

## Class Worker

java.lang.Object  
classes.Worker

```
public class Worker
extends java.lang.Object
```

A static class that does all the work through static methods. Contains and manages the data.

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### Field Summary

Fields	
Modifier and Type	Field and Description
static java.util.List<Course>	<b>courses</b> An ArrayList of courses that will hold live data while the application is running.
static java.lang.String	<b>currCourse1</b> Holds the currently selected course in the corresponding GUI dropdown.
static java.lang.String	<b>currCourse2</b> Holds the currently selected course in the corresponding GUI dropdown.
static java.lang.String	<b>currCourse3</b> Holds the currently selected course in the corresponding GUI dropdown.
static java.lang.String	<b>currCourse4</b> Holds the currently selected course in the corresponding GUI dropdown.
static java.lang.String	<b>currCourse5</b> Holds the currently selected course in the corresponding GUI dropdown.
static java.lang.String	<b>currCourse6</b> Holds the currently selected course in the corresponding GUI dropdown.

static java.lang.String	<b>currCourse7</b> Holds the currently selected course in the corresponding GUI dropdown.
static java.lang.String	<b>currCourse8</b> Holds the currently selected course in the corresponding GUI dropdown.
static java.lang.String	<b>currName</b> Holds the currently selected instructor in the GUI dropdown.
static java.util.List< <b>Instructor</b> >	<b>instructors</b> An ArrayList of instructors that will hold live data while the application is running.

Constructor Summary

Constructors
Constructor and Description
<b>Worker</b> ( )

Method Summary

All Methods	Static Methods	Concrete Methods
Modifier and Type	Method and Description	
static boolean	<b>checkCourseListFile</b> ( )	Checks that the user-friendly course data file exists.
static boolean	<b>checkCourseTSV</b> ( )	Checks that the course TSV data file exists.
static boolean	<b>checkInstructorListFile</b> ( )	Checks that the user-friendly instructor data file exists.
static boolean	<b>checkInstructorTSV</b> ( )	Checks that the instructor TSV data file exists.
static java.lang.String	<b>chooseInstructors</b> ( java.util.List< <b>Course</b> > offered)	Generates a selection of instructors for the following semester.
static java.lang.String[]	<b>coursesToArray</b> ( )	Takes the main data list of courses and returns a string array of their course numbers.
static void	<b>downloadAndParseCourses</b> ( )	Parses through the CS course web page and grabs useful course data.
static void	<b>downloadAndParseInstructors</b> ( )	Parses through the UIC CS Faculty web page and grabs useful instructor data.

static boolean	<b>init()</b> Initializes global variables and checks to see if the main data files are in existence.
static void	<b>initPrint()</b> Prints initial statements about the tool and what's happening.
static java.lang.String[]	<b>instructorsToArray()</b> Takes the main data list of instructors and returns a string array of their names.
static void	<b>loadCourses()</b> Loads course data from data file.
static void	<b>loadInstructors()</b> Loads instructor data from data file.
static void	<b>saveInfo()</b> Saves the courses for the currently selected instructor in the GUI dropdown and updates the data file.
static void	<b>setCurrCourse1</b> (java.lang.String currCourse1) Setter for field currCourse1.
static void	<b>setCurrCourse2</b> (java.lang.String currCourse2) Setter for field currCourse2.
static void	<b>setCurrCourse3</b> (java.lang.String currCourse3) Setter for field currCourse3.
static void	<b>setCurrCourse4</b> (java.lang.String currCourse4) Setter for field currCourse4.
static void	<b>setCurrCourse5</b> (java.lang.String currCourse5) Setter for field currCourse5.
static void	<b>setCurrCourse6</b> (java.lang.String currCourse6) Setter for field currCourse6.
static void	<b>setCurrCourse7</b> (java.lang.String currCourse7) Setter for field currCourse7.
static void	<b>setCurrCourse8</b> (java.lang.String currCourse8) Setter for field currCourse8.
static int[]	<b>setCurrName</b> (java.lang.String currName) Setter for field currName.
static void	<b>updateCourses()</b> Redownloads course information from the web page and updates the data file.
static void	<b>updateInstructors()</b> Redownloads instructor information from the web page and updates the data file.
static void	<b>writeCourses()</b> Writes the data from the main course ArrayList field to the data files.

static void

`writeInstructors()`

Writes the data from the main instructor ArrayList field to the data files.

## Methods inherited from class java.lang.Object

`clone`, `equals`, `finalize`, `getClass`, `hashCode`, `notify`, `notifyAll`, `toString`, `wait`, `wait`, `wait`

### Field Detail

#### **instructors**

```
public static java.util.List<Instructor> instructors
```

An ArrayList of instructors that will hold live data while the application is running.

#### **courses**

```
public static java.util.List<Course> courses
```

An ArrayList of courses that will hold live data while the application is running.

#### **currName**

```
public static java.lang.String currName
```

Holds the currently selected instructor in the GUI dropdown.

#### **currCourse1**

```
public static java.lang.String currCourse1
```

Holds the currently selected course in the corresponding GUI dropdown.

#### **currCourse2**

```
public static java.lang.String currCourse2
```

Holds the currently selected course in the corresponding GUI dropdown.

#### **currCourse3**

```
public static java.lang.String currCourse3
```

Holds the currently selected course in the corresponding GUI dropdown.

#### **currCourse4**

```
public static java.lang.String currCourse4
```

Holds the currently selected course in the corresponding GUI dropdown.

#### **currCourse5**

```
public static java.lang.String currCourse5
```

Holds the currently selected course in the corresponding GUI dropdown.

#### **currCourse6**

```
public static java.lang.String currCourse6
```

Holds the currently selected course in the corresponding GUI dropdown.

#### **currCourse7**

```
public static java.lang.String currCourse7
```

Holds the currently selected course in the corresponding GUI dropdown.

#### **currCourse8**

```
public static java.lang.String currCourse8
```

Holds the currently selected course in the corresponding GUI dropdown.

### ***Constructor Detail***

#### **Worker**

```
public Worker()
```

### ***Method Detail***

#### **init**

```
public static boolean init()
```

Initializes global variables and checks to see if the main data files are in existence. If not, it creates the files and does a fresh download on the data from the web page.

##### **Returns:**

a boolean (true by default) indicating whether or not there were missing data files

#### **initPrint**

```
public static void initPrint()
```

Prints initial statements about the tool and what's happening. Gets called as soon as the GUI is loaded.

### **chooseInstructors**

```
public static java.lang.String chooseInstructors(java.util.List<Course> offered)
```

Generates a selection of instructors for the following semester.

**Parameters:**

offered - A list of courses for which instructors should be scheduled.

**Returns:**

A string representing the printout of the scheduler.

### **instructorsToArray**

```
public static java.lang.String[] instructorsToArray()
```

Takes the main data list of instructors and returns a string array of their names. For populating JComboBox dropdown menus.

**Returns:**

A string array of instructor names.

### **coursesToArray**

```
public static java.lang.String[] coursesToArray()
```

Takes the main data list of courses and returns a string array of their course numbers. For populating JComboBox dropdown menus.

**Returns:**

A string array of course numbers.

### **saveInfo**

```
public static void saveInfo()
```

Saves the courses for the currently selected instructor in the GUI dropdown and updates the data file.

### **updateInstructors**

```
public static void updateInstructors()
```

Redownloads instructor information from the web page and updates the data file.

### **updateCourses**

```
public static void updateCourses()
```

Redownloads course information from the web page and updates the data file.

### checkInstructorTSV

```
public static boolean checkInstructorTSV()
```

Checks that the instructor TSV data file exists. Also makes sure the data directory exists.

**Returns:**

A boolean indicating whether or not the file existed.

### checkCourseTSV

```
public static boolean checkCourseTSV()
```

Checks that the course TSV data file exists. Also makes sure the data directory exists.

**Returns:**

A boolean indicating whether or not the file existed.

### checkInstructorListFile

```
public static boolean checkInstructorListFile()
```

Checks that the user-friendly instructor data file exists. Also makes sure the data directory exists.

**Returns:**

A boolean indicating whether or not the file existed.

### checkCourseListFile

```
public static boolean checkCourseListFile()
```

Checks that the user-friendly course data file exists. Also makes sure the data directory exists.

**Returns:**

A boolean indicating whether or not the file existed.

### loadInstructors

```
public static void loadInstructors()
```

Loads instructor data from data file.

### loadCourses

```
public static void loadCourses()
```

Loads course data from data file.

### downloadAndParseInstructors

```
public static void downloadAndParseInstructors()
```

throws java.io.IOException

Parses through the UIC CS Faculty web page and grabs useful instructor data. Populates the main data ArrayList of instructors in this class.

**Throws:**

java.io.IOException - In case a connection cannot be made.

### downloadAndParseCourses

```
public static void downloadAndParseCourses()  
    throws java.io.IOException
```

Parses through the CS course web page and grabs useful course data. Populates the main data ArrayList of courses in this class.

**Throws:**

java.io.IOException - In case a connection cannot be made.

### writeInstructors

```
public static void writeInstructors()  
    throws java.io.IOException
```

Writes the data from the main instructor ArrayList field to the data files.

**Throws:**

java.io.IOException - If for some reason the files don't exist.

### writeCourses

```
public static void writeCourses()  
    throws java.io.IOException
```

Writes the data from the main course ArrayList field to the data files.

**Throws:**

java.io.IOException - If for some reason the files don't exist.

### setCurrName

```
public static int[] setCurrName(java.lang.String currName)
```

Setter for field currName. In addition to setting the value, this function also looks up all associated courses for said instructor so the GUI dropdowns can be automatically populated.

**Parameters:**

currName - A string to be set as the current instructor name.

**Returns:**

An int array containing the indices of course numbers that should be selected in each GUI dropdown for courses.



### setCurrCourse1

```
public static void setCurrCourse1(java.lang.String currCourse1)
```

Setter for field currCourse1.

**Parameters:**

currCourse1 - A string to be set as the current course 1.

### setCurrCourse2

```
public static void setCurrCourse2(java.lang.String currCourse2)
```

Setter for field currCourse2.

**Parameters:**

currCourse2 - A string to be set as the current course 2.

### setCurrCourse3

```
public static void setCurrCourse3(java.lang.String currCourse3)
```

Setter for field currCourse3.

**Parameters:**

currCourse3 - A string to be set as the current course 3.

### setCurrCourse4

```
public static void setCurrCourse4(java.lang.String currCourse4)
```

Setter for field currCourse4.

**Parameters:**

currCourse4 - A string to be set as the current course 4.

### setCurrCourse5

```
public static void setCurrCourse5(java.lang.String currCourse5)
```

Setter for field currCourse5.

**Parameters:**

currCourse5 - A string to be set as the current course 5.

### setCurrCourse6

```
public static void setCurrCourse6(java.lang.String currCourse6)
```

Setter for field currCourse6.

**Parameters:**

currCourse6 - A string to be set as the current course 6.

### setCurrCourse7

```
public static void setCurrCourse7(java.lang.String currCourse7)
```

Setter for field currCourse7.

**Parameters:**

currCourse7 - A string to be set as the current course 7.

### setCurrCourse8

```
public static void setCurrCourse8(java.lang.String currCourse8)
```

Setter for field currCourse8.

**Parameters:**

currCourse8 - A string to be set as the current course 8.

[PACKAGE](#) [CLASS](#) [USE](#) [TREE](#) [DEPRECATED](#) [INDEX](#) [HELP](#)

[PREV CLASS](#) [NEXT CLASS](#) [FRAMES](#) [NO FRAMES](#) [ALL CLASSES](#)

[SUMMARY: NESTED](#) | [FIELD](#) | [CONSTR](#) | [METHOD](#) [DETAIL: FIELD](#) | [CONSTR](#) | [METHOD](#)