

SimpleCSV Package

Version 1.0
January 2016

Gray Watson

This manual is licensed by Gray Watson under the Creative Commons Attribution-Share Alike 3.0 License.

Permission is granted to make and distribute verbatim copies of this manual provided this license notice and this permission notice are preserved on all copies.

Table of Contents

SimpleCSV	1
1 Start Using Quickly	2
2 Using SimpleCSV	3
2.1 Downloading Jar	3
2.2 Using With Maven	3
2.3 CsvField Annotation	3
3 Example Code	5
4 Open Source License	6
Index of Concepts	7

SimpleCSV

Version 1.0 – January 2016

This package provides some Java classes to help with the reading and writing of CSV (Comma Separated Values) files.

To get started quickly using SimpleCSV, see [Chapter 1 \[Quick Start\]](#), [page 2](#). You can also take a look at the examples section of the document which has various working code packages. See [Chapter 3 \[Examples\]](#), [page 5](#). There is also a [HTML version of this documentation](#).

Gray Watson <http://256.com/gray/>

1 Start Using Quickly

To use SimpleCSV you need to do the following steps. For more information, see [Chapter 2 \[Using\]](#), page 3.

1. Download SimpleCSV from the [SimpleCSV release page](#). See [Section 2.1 \[Downloading\]](#), page 3.
2. Add `@CsvField` annotation to each of the fields that you want to write and read to/from CSV files. See [Section 2.3 \[CsvField Annotation\]](#), page 3.

```
public class Account {  
    ...  
    @CsvField  
    private String name;  
}
```

3. Create a `CsvProcessor` utility class for the entity.

```
CsvProcessor<Account> processor =  
    new CsvProcessor<Account>(Account.class);
```

4. Write a collection of `Account` entities to disk in CSV format.

```
processor.writeAll(new File("accounts.csv"),  
    accounts, true /* write header */);
```

5. Read in from a CSV file and get a collection of `Accounts`:

```
List<Account> accounts =  
    processor.readAll(new File("accounts.csv"),  
        true /* first line header */,  
        true /* validate header */,  
        null /* used to record parse errors */);
```

For more extensive instructions, see [Chapter 2 \[Using\]](#), page 3.

2 Using SimpleCSV

2.1 Downloading Jar

To get started with SimpleCSV, you will need to download the jar file. The [SimpleCSV release page](#) is the default repository but the jars are also available from the [central maven repository](#).

The code works with Java 6 or later.

2.2 Using With Maven

To use SimpleCSV with maven, include the following dependency in your ‘pom.xml’ file:

```
<dependency>
<groupId>com.j256.simplecsv</groupId>
<artifactId>simplecsv</artifactId>
<version>1.0</version>
</dependency>
```

2.3 CsvField Annotation

The `@CsvField` annotation is used to mark the fields in your entity that you want to write to and read from CSV files as a column. It also allows you to customize the output format and other details for the particular field instance. The following fields from the annotation can be used:

`columnName`

This allows you to override and set a column name for the field. By default it will use the field name. This column name is used when you are generating and validating the header line.

`mustNotBeBlank`

Set to true if a value in the column is required. This means that it cannot be empty when it is being read in and a parse error or exception will be generated.

`trimInput`

Set to true if you want the column read from the line to be trimmed (using `String.trim()`) before it is converted to Java. This may not be applicable to all field types.

`format`

Sets the format for this column. Not all types use the format specifier. Take a look at the particular converter class javadocs for more particulars. The default format tends to be the `toString()` of the type, and (for example) the `java.text.DecimalFormat` class is used to override for numbers.

converterFlags

Optional flags for the converter which adjust the output. The flags that are used depend on the converter. See the converter Javadocs for more information. These need to be constants that are added together. For example,

```
@CsvField(converterFlags = XxxConverter.FLAG1 + XxxConverter.FLAG2)
private Xxx dollarAmount;
```

converterClass

Sets the converter to use to convert this column if you don't want to use the default appropriate internal class. This will construct and instance of the class for this particular field. If you want to use a singleton then you should register the type using `CsvProcessor.registerConverter(...)`. This converter class must have a public no-arg constructor.

defaultValue

Set this to a default string for the column. If the column is empty when read, the value will be used instead. Default is the empty string.

mustBeSupplied

Set to false if a column is optional and can be skipped in the input altogether. If this is false then the column doesn't have to be in the header or the lines at all. Default is true.

WARNING: If you are using optional ordering, the same `CsvProcessor` cannot be used with multiple files at the same time since the column lists can be dynamic depending on the input file being read.

Here's some examples of how to use the `@CsvField` annotation.

Override the column name:

```
@CsvField(columnName = "Account Number")
private long number;
```

Change the column input/output format. This will display the amount as \$1,231.00 or (\$2,000,000.28).

```
@CsvField(columnName = "Amount", format = "$###,##0.00;($###,##0.00)")
private double amount;
```

Specifying a custom converter class for an object that you have defined.

```
@CsvField(columnName = "Gender", converterClass = GenderConverter.class)
private Gender gender;
```

3 Example Code

Here is some example code to help you get going with SimpleCSV. I often find that code is the best documentation of how to get something working. Please feel free to suggest additional example packages for inclusion here. Source code submissions are welcome as long as you don't get piqued if we don't chose your's.

Simple, basic

This is a simple application which publishes a single object. See the [source code on github](#).

4 Open Source License

This document is part of the SimpleCSV project.

Permission to use, copy, modify, and/or distribute this software for any purpose with or without fee is hereby granted, provided that this permission notice appear in all copies.

THE SOFTWARE IS PROVIDED "AS IS" AND THE AUTHOR DISCLAIMS ALL WARRANTIES WITH REGARD TO THIS SOFTWARE INCLUDING ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS. IN NO EVENT SHALL THE AUTHOR BE LIABLE FOR ANY SPECIAL, DIRECT, INDIRECT, OR CONSEQUENTIAL DAMAGES OR ANY DAMAGES WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER IN AN ACTION OF CONTRACT, NEGLIGENCE OR OTHER TORTIOUS ACTION, ARISING OUT OF OR IN CONNECTION WITH THE USE OR PERFORMANCE OF THIS SOFTWARE.

The author may be contacted via <http://256.com/sources/simplecsv/>

Index of Concepts

@

@CsvField 3

A

author 1

B

blank columns 3

C

code examples 5

column format 3

column name 3

converter flags 3

converter, custom 4

CsvField annotation 3

custom converter 4

custom header name 3

D

default value 4

downloading the jars 3

E

examples of code 5

F

format of column 3

G

getting started 2

H

header name 3

how to download the jars 3

how to get started 2

how to use 3

I

introduction 1

L

license 6

M

Maven, use with 3

must be supplied 4

must not be blank 3

O

open source license 6

optional columns 4

P

pom.xml dependency 3

Q

quick start 2

R

required columns 3

S

simple csv 1

simple example 5

T

trim columns 3

U

using SimpleCSV 3

W

where to get new jars 3