Massey University

159.251 Software Design and Construction

Tutorial 6 - LOG4J

Prerequisites (what you are expected to know <u>before</u> you come to the tutorial)

1. everything that was a prerequisite in any of the previous tutorials
2. be able to download and import a Java Eclipse project into a workspace (from the examples used in the lecture notes, and from stream - the project template for this tutorial)
3. import a library into Eclipse and adding them to the build path of your project (see also https://www.wikihow.com/Add-JARs-to-Project-Build-Paths-in-Eclipse-(Java) or http://www.informit.com/articles/article.aspx?p=367962)

Objectives

1. be able to use log4j
2. understand the separation of concerns in log4j

MAKE SURE THAT YOU WORK ON THIS TUTORIAL AT HOME AND BEFORE YOU COME TO THE TUTORIAL ON MONDAY OR TUESDAY

Description

Download the project **tutorial-template** from Stream or Bitbucket and import it into Eclipse. This project contains a simple script (nz.ac.massey.cs.sdc.tutorial2.MergeTransactions) that attempts to read purchase transactions from several files, combines them, makes some simple calculations (transaction count, combined value, max value) and prints the results to the console. Note that some of the files referenced are missing, or have some built-in errors. This is on purpose in order to trigger some exceptions.

In MergeTransactions, console logging is extensively used. In this tutorial, you have to do the following:

1. replace console logging by log4j logging
2. the log levels should be set according to the comments (see table in **Hints** below)
3. use two loggers: one for file access (FILE), one for printing transaction data (TRANSACTIONS)
4. the FILE logger should log to a log file **logs.txt** and to the console
5. the TRANSACTIONS logger should only log to the console

6. the format used should be a simple layout
7. try to run the application with different log levels (INFO, DEBUG, WARN and ERROR).

Hints

The log4j library (log4j-1.2.17.jar) will be made available on stream.

Comments found in MergeTransactions, and how this maps to log levels.

comment	intended log level
// print some **info** for the user	INFO
// this is for **debugging** only	DEBUG
// print **warning**	WARN
// print **error** message and details	ERROR

Challenge for good students

Use the pattern layout to generate a log file using the comma-separated values (csv) format. This means that you can open log files with excel or other spreadsheet software.