

Java Application: ShowDateTime

Written by: Keith Fenske, <http://kwfenske.github.io/>

First version: Tuesday, 23 March 2010

Document revised: Thursday, 18 March 2021

Copyright © 2010 by Keith Fenske. Apache License or GNU General Public License.

Description

ShowDateTime is a Java 1.4 graphical (GUI) application to display the current date and/or time in a format and location of the user's choice. Options are given on the command line, and can not be changed while the program is running. The program runs until you close its window, press the Escape key, or click the mouse on its display and choose Exit from the pop-up menu.

The code that updates the date and time has less than twenty lines, because most real work is done by the Java JLabel and SimpleDateFormat classes. Many more lines parse the options. You almost have to be a Java programmer to understand these options or how to format the date and time. Here is a command-line summary, raw and unedited:

- ? = -help = show summary of command-line syntax
- b0 = hide window borders and controls; use full screen if -x1 given
- b1 = -b = show borders and controls on application window (default)
- d# = date and/or time format; see Java SimpleDateFormat description
- f# = text font name; example: -fVerdana
- p(##,##,##) = panel color or background in RGB; white is -p(255,255,255)
- s# = text font size from 10 to 999 points; example: -s24
- t(##,##,##) = text color or foreground in RGB; black is -t(0,0,0)
- w(##,##,##,##) = normal window position: left, top, width, height;
example: -w(50,50,700,500)
- x0 = normal or regular window, don't maximize (default)
- x1 = -x = maximize application window; full screen if -b0 given

Options containing spaces or punctuation may need to be quoted according to your system's command syntax. Information about the Java 5.0 SimpleDateFormat class can be obtained from the following on-line reference:

<http://java.sun.com/j2se/1.5.0/docs/api/java/text/SimpleDateFormat.html>

At least, that's where the page was in 2010. A more recent Java 8 page can be found at:

<http://docs.oracle.com/javase/8/docs/api/java/text/SimpleDateFormat.html>

Or search for “Java SimpleDateFormat class” with your favorite internet search engine. The default date and time format is equivalent to the following quoted command on Windows:

```
java ShowDateTime1 "-d'<html>'EEE d MMM yyyy'<br>'h:mm:ss a z'</html>'"
```

Note the <html> and
 tags to produce multiple lines. It would take another two pages here to summarize the syntax, so please go read the web page instead.

Apache License or GNU General Public License

ShowDateTime is free software and has been released under the terms and conditions of the Apache License (version 2.0 or later) and/or the GNU General Public License (GPL, version 2 or later). This program is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY, without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the license(s) for more details. You should have received a copy of the licenses along with this program. If not, see the <http://www.apache.org/licenses/> and <http://www.gnu.org/licenses/> web pages.

Installation

You must have the Java run-time environment (JRE) installed on your computer. ShowDateTime was developed with Java 1.4 and should run on later versions. It may also run on earlier versions, but this has not been tested. You can download the JRE from Oracle (formerly Sun Microsystems):

JRE for end users: <http://www.java.com/download/>

SDK for programmers: <http://www.oracle.com/java/> or the OpenJDK builds

IDE for programmers: <http://www.eclipse.org/> or <http://www.netbeans.org/>

Once Java is installed, you need to put the program files for ShowDateTime into a folder (directory) on your hard drive. The name of the folder and the location are your choice, except it is easier if the name does not include spaces. Assume that files will go into a “C:\Java” folder. Then create the folder and unpack the Java *.class files into this folder (if you received the program as a ZIP file). The files look something like this:

ApacheLicense20.txt (12 KB, legal notice)

GnuPublicLicense3.txt (35 KB, legal notice)

RunJavaPrograms.pdf (60 KB, more notes about running Java)

ShowDateTime1.class (8 KB, executable program)

ShowDateTime1.doc (33 KB, this documentation in Microsoft Word format)

ShowDateTime1.gif (6 KB, sample program image)
ShowDateTime1.ico (87 KB, icon for Windows)
ShowDateTime1.jar (6 KB, archive file with same class files inside)
ShowDateTime1.java (20 KB, source code)
ShowDateTime1.manifest (1 KB, main class manifest for archive file)
ShowDateTime1.pdf (72 KB, this documentation in Adobe Acrobat format)
ShowDateTime1User.class (2 KB, helper class for main program)

To run the program on Windows, start a DOS command prompt, which is Start button, Programs, Accessories, Command Prompt on Windows XP/Vista/7. Change to the folder with the program files and run the program with a “java” command:

```
c:  
cd \java  
java ShowDateTime1
```

The program name “ShowDateTime1” must appear exactly as shown; uppercase and lowercase letters are different in Java names. Some systems (Macintosh) will run a main “class” file by clicking on the class file name while viewing a directory in the file browser (Mac Finder). Many systems will run a “jar” file by clicking (or double clicking) on the jar file name (Windows Explorer). The command line is the only guaranteed way of running a Java program. Should you find this program to be popular, you can create a Start menu item or desktop shortcut on Windows XP/Vista/7 with a target of “java.exe ShowDateTime1” starting in the “C:\Java” folder.

One complication may arise when trying to run this program. Java looks for an environment variable called CLASSPATH. If it finds this variable, then that is a list of folders where it looks for *.class files. It won’t look anywhere else, not even in the current directory, unless the path contains “.” as one of the choices. The symptom is an error message that says:

```
Exception in thread "main" java.lang.NoClassDefFoundError: ShowDateTime1
```

To find out if your system has a CLASSPATH variable defined, type the following command in a DOS window:

```
set CLASSPATH
```

To temporarily change the CLASSPATH variable to the current directory, use the following command line:

```
java -cp . ShowDateTime1
```

To permanently change the CLASSPATH, you must find where it is being set. This is in Control Panel, System, Advanced, Environment Variables on Windows XP/Vista/7.

Removal or Uninstall

To remove this program from your computer, delete the installation files listed above. If the folder that contained the files is now empty, you may also delete the folder ... if you created the folder, of course, not the system. If you created desktop shortcuts or Start menu items, then delete those too. There are no hidden configuration or preference files, and no information is stored in the Windows system registry. You don't need an "uninstall" program.

file: ShowDateTime1.doc 2021-10-27