Bring your VIs to your LabVIEW User Group

Presented by Nick Golas
Telephonics Corp.
& Charlie Spitaleri
ALE System Integration

IEEE I&M Society LI Section &
Long Island LabVIEW Users Group (LILUG)
Thursday 3/13/2008
Add Date & Time to Filename

- Creates a path & a filename incorporating the Date & Time from the PC to date and timestamp the filename.

VI Documentation

Filename: Add Date & Time to Filename LV7.1.vi
Add Date & Time to Filename
Front Panel
Add Date & Time to Filename
Block Diagram
Check & Remove Illegal Characters from Filename

- Checks and removes any illegal characters that are not allowable as part of a filename by the Operating System. The default value [{~0-9a-zA-Z.-_}] for the Safe Characters to Keep string control allows a range between digits 0-9, all lowercase and uppercase letters, the period (.), dash (-) and the underscore (_) characters to be part of the filename.

VI Documentation

Filename: Check & Remove Illegal Characters from Filename LV7.1.vi
Check & Remove Illegal Characters from Filename Front Panel

'\' Codes Display enabled

Can be used to verify any string for illegal characters
Check & Remove Illegal Characters from Filename Block Diagram

**replace all?** if TRUE, then the VI replaces all substring occurrences

---

**Search and Replace Pattern.vi**

Searches string for substrings that match regular expression and replaces those substrings with replace string
Special Characters for Match Pattern

Use these special characters in the regular expression input of the Match Pattern function.

<table>
<thead>
<tr>
<th>Special Character</th>
<th>Interpreted by the Match Pattern Function As</th>
</tr>
</thead>
<tbody>
<tr>
<td>.</td>
<td>Matches any character. For example, l.g matches lag, leg, log, and lug.</td>
</tr>
<tr>
<td>?</td>
<td>Matches zero or one instances of the expression preceding ?. For example, be?t matches bt and bet but not best.</td>
</tr>
<tr>
<td>\</td>
<td>Cancels the interpretation of any special character in this list. For example, ? matches a question mark and . matches a period. You can also use the following constructions for the space and non-displayable characters: \b backspace \f form feed \n newline \s space \r carriage return \t tab \xx any character, where xx is the hex code using 0 through 9 and upper case A through F</td>
</tr>
</tbody>
</table>

**Note:** For LabVIEW v7.1. Newer versions of LabVIEW provide additional capabilities.
## Special Characters for Match Pattern (Continued)

<table>
<thead>
<tr>
<th>Special Character</th>
<th>Interpreted by the Match Pattern Function As</th>
</tr>
</thead>
<tbody>
<tr>
<td>^</td>
<td>If ^ is the first character of <strong>regular expression</strong>, it anchors the match to the offset in <strong>string</strong>. The match fails unless <strong>regular expression</strong> matches that topic of <strong>string</strong> that begins with the character at offset. If ^ is not the first character, it is treated.</td>
</tr>
<tr>
<td>[ ]</td>
<td>Encloses alternates. For example, [abc] matches a, b, or c. The following character has special significance when used within the brackets in the following manner.</td>
</tr>
<tr>
<td></td>
<td>-(dash) Indicates a range when used between digits, or lowercase or uppercase letters; for example, [0-5], [a-g], or [L-Q].</td>
</tr>
<tr>
<td></td>
<td>The following characters have significance only when they are the first character within the brackets.</td>
</tr>
<tr>
<td></td>
<td>~ Matches any character, including non-displayable characters, except for the characters or range of characters in brackets. For example, [~0-9] matches any character other than 0 through 9.</td>
</tr>
<tr>
<td></td>
<td>^ Matches any displayable character, including the space and tab characters, except the characters or range of characters enclosed in the brackets. For example, [^0-9] matches all displayable characters, including the space and tab characters, except 0 to 9.</td>
</tr>
</tbody>
</table>

**Note:** For LabVIEW v7.1. Newer versions of LabVIEW provide additional capabilities
Special Characters for Match Pattern (Continued)

<table>
<thead>
<tr>
<th>Special Character</th>
<th>Interpreted by the Match Pattern Function As</th>
</tr>
</thead>
<tbody>
<tr>
<td>+</td>
<td>Matches the longest number of instances of the expression preceding +; there must be at least one instance to constitute a match. For example, be+t matches bet and beet but not bt.</td>
</tr>
<tr>
<td>*</td>
<td>Matches the longest number of instances of the expression preceding * in <strong>regular expression</strong>, including zero instances. For example, be*t matches bt, bet, and beet.</td>
</tr>
<tr>
<td>$</td>
<td>If $ is the last character of <strong>regular expression</strong>, it anchors the match to the last element of <strong>string</strong>. The match fails unless <strong>regular expression</strong> matches up to and including the last character in the string. If $ is not last, it is treated as a regular char</td>
</tr>
</tbody>
</table>

**Note:** For LabVIEW v7.1. Newer versions of LabVIEW provide additional capabilities
Display Day and Time on the Front Panel Window Title

- Displays the day and time in different formats on the front panel window title
  - **Short:** 1/21/94
  - **Long:** Friday, January 21, 1994
  - **Abbreviated:** Fri, Jan 21, 1994
  - **Time:** HH:MM:SS AM or PM

---

![VI Documentation](https://www.example.com/VI_Documentation.png)

**Filename:**
Display Day and Time on the Front Panel Window Title LV7.1.vi
Display Day and Time on the Front Panel Window Title

Resize Front Panel to appear as this

Display an Error Message or any other info in this space.
Click on the EXIT button to return to the Main Menu!

Date Format

Short

Initial Date & Time Error Occurred
3/8/2008 6:17:31 PM

Final Date & Time when Error Serviced
3/8/2008 6:18:08 PM

Short

Long

Abbreviated

Display an Error Message or any other info in this space.
Click on the EXIT button to return to the Main Menu!
Display Day and Time on the Front Panel Window Title

Block Diagram
VI Memory Manager

- Abort runaway VIs in LabVIEW without having to close LabVIEW and potentially lose any unsaved work

VI Documentation

Filenames: VI Memory Manager LV7.1.vi & Runaway LV7.1.vi

Note: If you are using LabVIEW 8.0 or later use VI Memory Manager LV8.0.vi
VI Memory Manager

“VI Properties” Pitfalls

Having the VI Run when opened might create problems if it cannot be stopped.

Unchecking these Window Appearance settings can get you into trouble when programming LabVIEW.
Highlight runaway VI and click on Halt VI button

Can not use Close button because its disabled

DO NOT PRESS!
VI Memory Manager
Block Diagram
Viewgraphs & Examples

The Viewgraphs and Examples of this presentation will be available in a few days at:

- IEEE Long Island Section website, Instrumentation & Measurement Society page
  www.IEEE.LI

- ALE System Integration website User Group page
  www.aleconsultants.com