# Exercise 10-4: Programmatically Create Filenames Based on the Current Timestamp

Goal

- Explore example code that programmatically creates filenames based on the current date and time.

Examine Code to Generate a Timestamped Filename in Relative Path

1. Open the following project: `C:\Exercises\LabVIEW Core 1\ Timestamped Filepath\Timestamped Filenames.lvproj`.
2. From the **Project Explorer** window, open the Generate Timestamped Filepath VI.
3. Examine the block diagram.
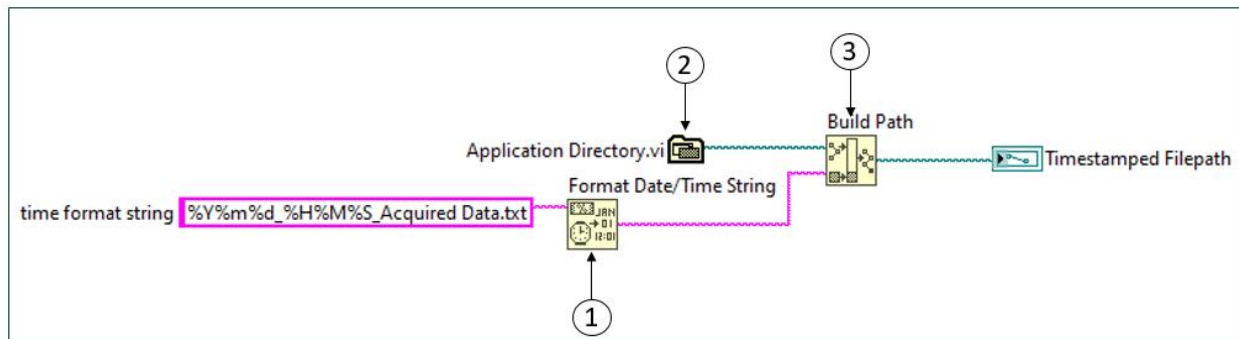
1. **Format Date/Time String function** – Converts a timestamp of the current time or numeric value into a string that displays the corresponding time. Using the time format string in this block diagram, this function will return a string similar to the following:

   `<year><month><day>_<hour><minute><second>_Acquired Data.txt`

   Example: `201901014_101530_Acquired Data.txt`
2. **Application Directory VI** – Returns the path to the directory containing the current project (`.lvproj`).
3. **Build Path function** – Creates a new path by appending a filename or relative path to an existing path. In this VI, the output of this function will be a timestamped filename in the directory containing the current project. (For example, `C:\Exercises\LabVIEW Core 1\Timestamped Filepath\ 20170601_101530_Acquired Data.txt`)

Note: Refer to the *LabVIEW Help* for how to use the **time format string** input

4. Test the code.
   - Run the VI multiple times.
   - On the front panel, notice that the generated filename changes to match the current date and time.
   - Notice that the filepath directory is the same as the directory containing the current project file (.lvproj).

Examine Timestamped Filename Code in a Data Logging VI

1. From the **Project Explorer** window, open the [Timestamped File] High-Level Write to Text File VI.
2. Examine the block diagram. Notice how the timestamped filename code passes the timestamped filepath to the **filepath input** of the file Write Delimited Spreadsheet VI.
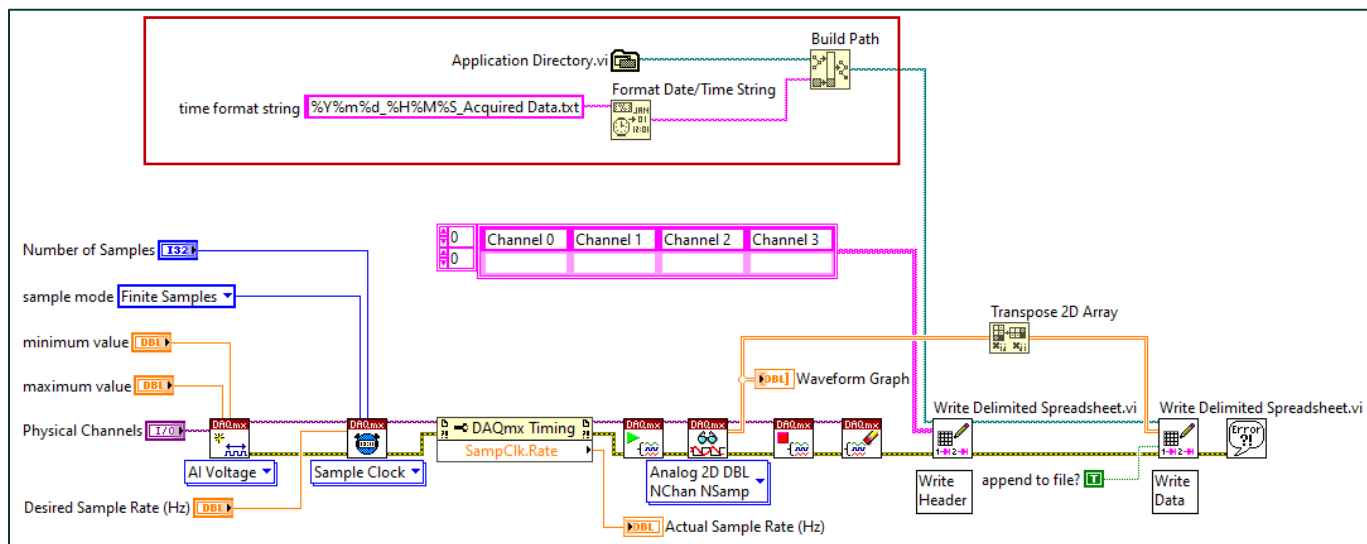
3. Test th VI.
   - Run the VI.
   - Navigate to the log file in the C:\Exercises\LabVIEW Core 1\Timestamped Filepath directory.
     Notice that the filename indicates the date/time when the VI created that file.
   - Run the VI a couple more times.
   - Examine the additional log files that the VI generated in the C:\Exercises\LabVIEW Core 1\Timestamped Filepath directory. Notice that their filenames also indicate the date/time when the VI created those files.

Your Turn

Modify the VI so that the VI creates a timestamped filename that looks similar to the following format and saves the file in the `C:\Exercises\LabVIEW Core 1\ Timestamped File` directory.

`<year><month><day>_<hour><minute><second>_<your own custom filename>`

Example: `20190511_090030_Batch ABC.txt`

On the Job

Would any of your applications benefit from creating a new timestamped filename every time you run your VI?

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End of Exercise 10-4