Picture Album User Guide
v4.0

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Picture Album is a program that will produce a simple HTML report from a set of directories containing images. It is intended for use by anyone who wishes to publish an album of photos to the Internet by creating an HTML file that links to the subdirectories with the photos, and displays a thumbnail image of the photos.

1. System and User Requirements

Picture Album is a Perl program run from the command line. A Perl interpreter is part of any Unix or Linux environment, including MacOS X.

There are several Perl interpreters available for Windows, including Strawberry Perl (http://strawberryperl.com/) and ActivePerl (http://www.activestate.com/activeperl). Be sure that the *perl* command is placed in your command line path.[1]

The user should be comfortable using the command line and with the directory structure of the forensic workstation.
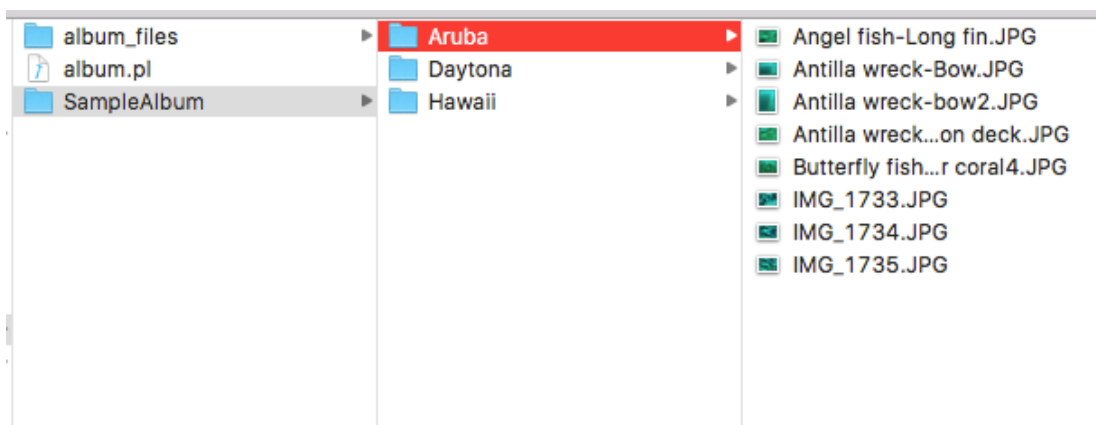
The program also requires that a library called *ImageMagick* be installed in order to create thumbnail images from the larger images. ImageMagick is open source and freely available for Linux, MacOS X, and Windows from *http://www.imagemagick.org/script/index.php*.

2. Program Use

All photographs should be placed into appropriate subdirectories within an *AlbumRoot* directory. These subdirectories should only contain image files that can be displayed by a Web browser.

The general directory structure is shown below. The program (*album.pl*), all program ancillary files (in a directory called *album_files*), and the AlbumRoot directory (here called *SampleAlbum*) should be placed into your working. The photographs can be placed into appropriately named subdirectories of the AlbumRoot (e.g., *Aruba*, *Daytona*, and *Hawaii*).

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[1] As an example, to add the Strawberry Perl interpreter to your existing path, type `PATH=%PATH%;c:\strawberry\perl\bin` at the command line.

The program can be run by entering:

```
perl album.pl
```

The program prompts for two items of information. First, the user is asked for the name of the AlbumRoot directory. This is the directory where the subdirectories with the images will be found. For example, in the sample directory structure shown above, the AlbumRoot directory is *SampleAlbum*.

The AlbumRoot directory can also be supplied on the command line using the -r switch (the following example assumes that *report.pl* is in the parent directory to the AlbumRoot):

```
perl album.pl -r SampleAlbum
```

> **NOTE:** *If the AlbumRoot directory is not specified, it is assumed to be the current directory. If supplied, this **must** be the first parameter specified.*

> **NOTE:** *If the AlbumRoot directory path has multiple directories, it is necessary to use* forward *slashes (i.e., "/") as you would on a Mac/Linux/Unix system rather than* backward *slashes (i.e., "\") as you would on a Windows system. As an example, the string* `c:/gck/pics/photos` *is a valid AlbumRoot directory path whereas the string* `c:\gck\pics\photos` *will cause the program to fail.*

The second item is information about the photo album itself. The program will first ask for an album title. Next, the program allows the user to enter up to five lines of descriptive text about the album, which will appear on the first page of the album. Once this information is gathered, it is written to a file in AlbumRoot named *album_info.txt*.

Alternatively, the user can create a file containing this information and place it is in the AlbumRoot directory. The file should have six lines with the following information:

Album title

Album description line 1
Album description line 2
Album description line 3
Album description line 4
Album description line 5

The name of this file can also be supplied to the program, using the -a switch:

```
perl report.pl -r SampleAlbum -a album123.txt
```

NOTE: *If the AlbumRoot directory is specified using the -r switch, it should be the first switch used. In this way, the album information (-a) file can be properly found.*

There is one additional switch that can be used with the program. The -v (verbose) switch turns on additional reporting while the program runs, listing all of the directories and image files as they are processed. This switch is merely added to the command line as follows:

```
perl report.pl -r SampleAlbum -a album123.txt -v
```

The program's output is a file named *album.html* that can be found in the AlbumRoot directory. This file can be opened with any browser.

One additional switch is -h, which will display the help file:

```
perl report.pl -h
```

Two notes about the program's operation are in order. First, the program file, *album.pl*, requires a number of ancillary files, all of which can be found in the *album_files* directory. Thus, to correctly run, the program file and subdirectory need to be copied to the same directory. The files in *album_files* include:

- *album.ini* -- See the text below
- *GKA_software_license.rtf* -- Open source software license for this program
- *index.html* -- A file automatically added to all photo subdirectories to prevent directory browsing once the photo album is posted on the Web
- *non-photo.png* -- A file used as a thumbnail placeholder if a file in the photo album is, in fact, not an image file
- *UserGuide_v3.0.docx* -- This user guide

The second note is that the program defaults to displaying eight thumbnail images per row, where each thumbnail has a width of 100 pixels and a height of 100 pixels. These values can be changed in one of two ways.

The first way is to overwrite *album.ini* file in the *album_files* directory with the following information:

>   images_per_row,height,width

The second way is to edit the program itself by modifying the following lines:

```
$picsPerRow = 8;
$height = 100;
$width = 100;
```

3. Sample Data Files

This is photo album information found in AlbumRoot*album_info.txt*:

```
Dive Photos 2014
These are dive photos by Gary Kessler
taken in 2014.

(c) Gary Kessler, 2014
```

This is a sample *album.ini* file:

```
8,100,100
```

4. Step-By-Step Guide

In this detailed example, pictures have been copied into three subdirectory under the *SampleAlbum* directory. This example presumes that *album.pl* and the *album_files* subdirectory are in *SampleAlbum*'s parent directory, *Picture Album*.
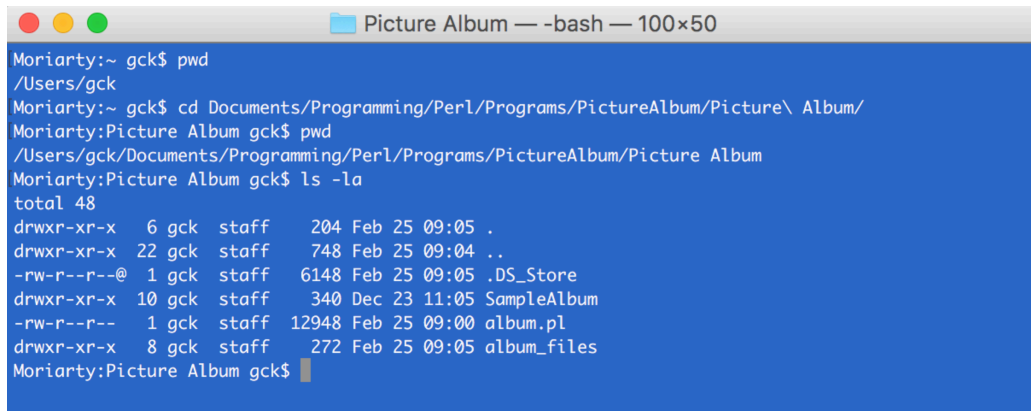
Although the example here is for a Mac system, the program works equally well under Windows.

1. **Prepare the program**

Copy *album.pl* and the *album_files* subdirectory to the parent directory of AlbumRoot.

Start a terminal session on a Linux or Mac OS X system or get to the DOS prompt on a Windows system.
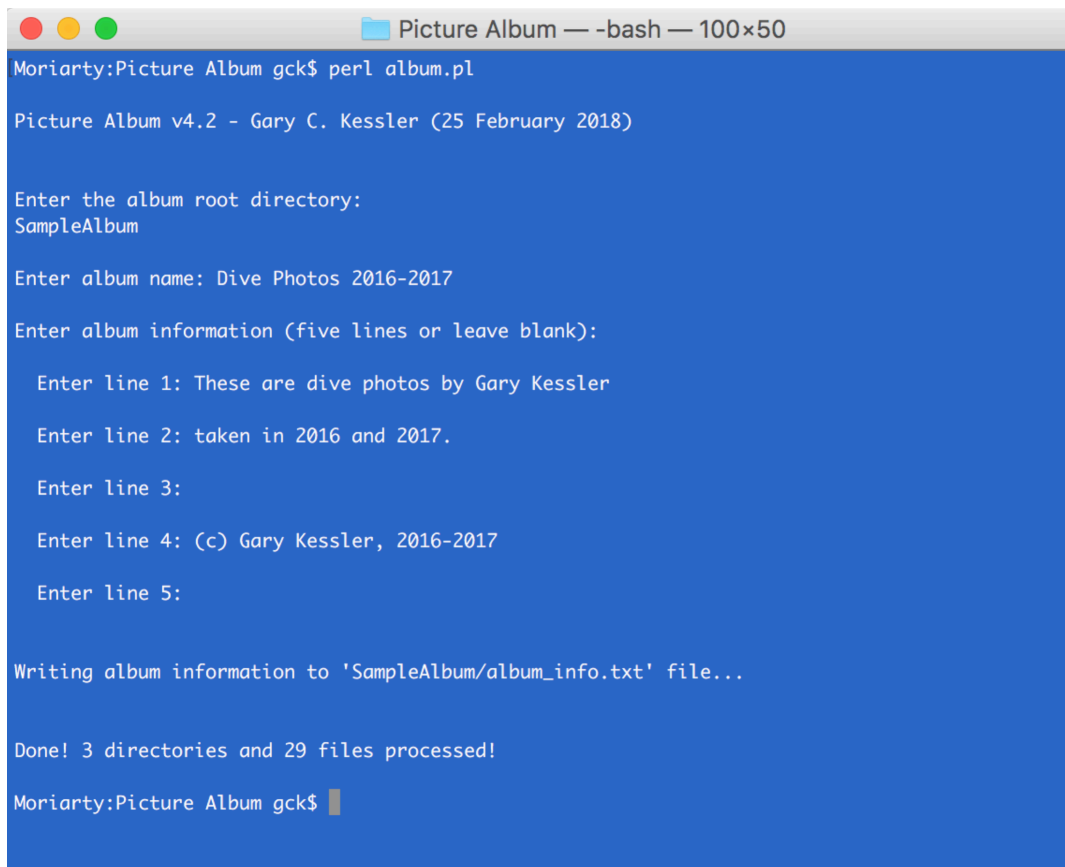
Navigate to the AlbumRoot directory.

```
Moriarty:~ gck$ pwd
/Users/gck
Moriarty:~ gck$ cd Documents/Programming/Perl/Programs/PictureAlbum/Picture\ Album/
Moriarty:Picture Album gck$ pwd
/Users/gck/Documents/Programming/Perl/Programs/PictureAlbum/Picture Album
Moriarty:Picture Album gck$ ls -la
total 48
drwxr-xr-x   6 gck  staff     204 Feb 25 09:05 .
drwxr-xr-x  22 gck  staff     748 Feb 25 09:04 ..
-rw-r--r--@  1 gck  staff    6148 Feb 25 09:05 .DS_Store
drwxr-xr-x  10 gck  staff     340 Dec 23 11:05 SampleAlbum
-rw-r--r--   1 gck  staff   12948 Feb 25 09:00 album.pl
drwxr-xr-x   8 gck  staff     272 Feb 25 09:05 album_files
Moriarty:Picture Album gck$
```

2.   Run the program (initial report)

Run *album.pl* for the initial report without any parameters, unless you have already created an *album_info.txt* file.

```
Moriarty:Picture Album gck$ perl album.pl

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Enter the album root directory:
SampleAlbum

Enter album name: Dive Photos 2016-2017

Enter album information (five lines or leave blank):

  Enter line 1: These are dive photos by Gary Kessler

  Enter line 2: taken in 2016 and 2017.

  Enter line 3:

  Enter line 4: (c) Gary Kessler, 2016-2017

  Enter line 5:


Writing album information to 'SampleAlbum/album_info.txt' file...


Done! 3 directories and 29 files processed!

Moriarty:Picture Album gck$
```

3. Open the HTML file

The report can be found in an HTML file named *album.html* in the root directory.

PHOTO ALBUM: Dive Photos 2016-2017

These are dive photos by Gary Kessler
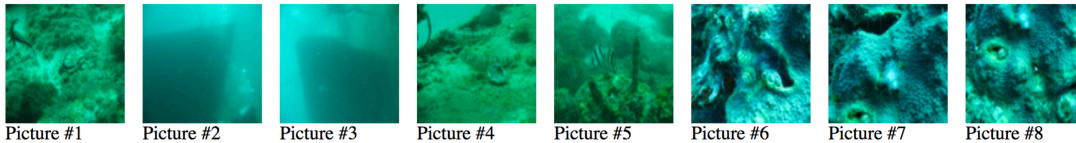taken in 2016 and 2017.

(c) Gary Kessler, 2016-2017

Click on a thumbnail to see the full-size image; go back a page to return to this view.
Use shift-click on a thumbnail to open it in a new tab or window.

List of Photo Sets

- Aruba
- Daytona
- Hawaii

Aruba

Picture #1   Picture #2   Picture #3   Picture #4   Picture #5   Picture #6   Picture #7   Picture #8

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4. Rerunning the program

If any changes are made to files or you need to rerun the program for any reason, you can reuse the *album_info.txt* file merely by naming it in the command line:

```
Moriarty:Picture Album gck$ perl album.pl -r SampleAlbum -a album_info.txt

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Done! 3 directories and 29 files processed!

Moriarty:Picture Album gck$
```

NOTE: Remember that the *-r* parameter needs to be listed first!