Write Image Data to File in Graphics Format

This example shows how to write image data from the MATLAB workspace to a file in one of the supported graphics file formats using the `imwrite` function.

Open Script

Load image data into the workspace. This example loads the indexed image `X` from a MAT-file, `clown.mat`, along with the associated colormap `map`.

```
load clown
whos
```

```
  Name           Size              Bytes  Class     Attributes

  X            200x320            512000  double
  caption        2x1                   4  char
  map           81x3                1944  double
```

Export the image data as a bitmap file using `imwrite`, specifying the name of the variable and the name of the output file you want to create. If you include an extension in the filename, `imwrite` attempts to infer the desired file format from it. For example, the file extension `.bmp` specifies the Microsoft Windows Bitmap format. You can also specify the format explicitly as an argument to `imwrite`.

```
imwrite(X,map,'clown.bmp')
```

Use format-specific parameters with `imwrite` to control aspects of the export process. For example, with PNG files, you can specify the bit depth. To illustrate, read an image into the workspace in TIFF format and note its bit depth.

```
I = imread('cameraman.tif');
s = imfinfo('cameraman.tif');
s.BitDepth
```

```
ans =

     8
```

Write the image to a graphics file in PNG format, specifying a bit depth of 4.

```
imwrite(I,'cameraman.png','Bitdepth',4)
```

Check the bit depth of the newly created file.

```
newfile = imfinfo('cameraman.png');
newfile.BitDepth
```

```
ans =

     4
```