Estd: 1947

EXPERIMENT-1

Academic Year: 2021-22   **Semester:** 6th

Course: Digital Image Processing Lab   **Course Code**: 5EN374

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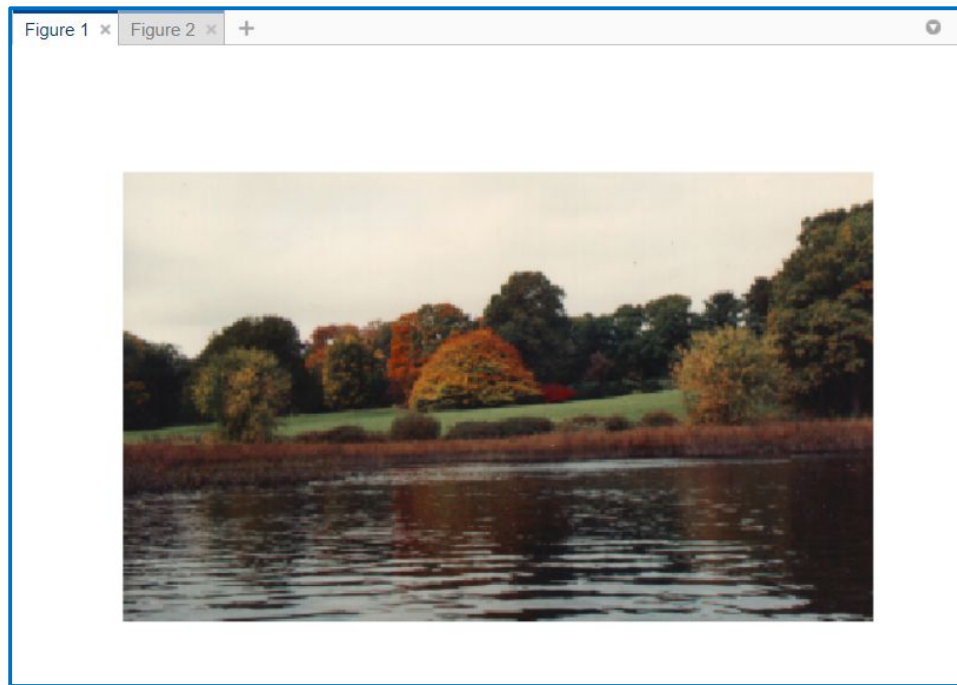**Batch**: EN-1   **Performed on:** 19/01/2022

TITLE OF EXPERIMENT: Reading and displaying image using MATLAB.

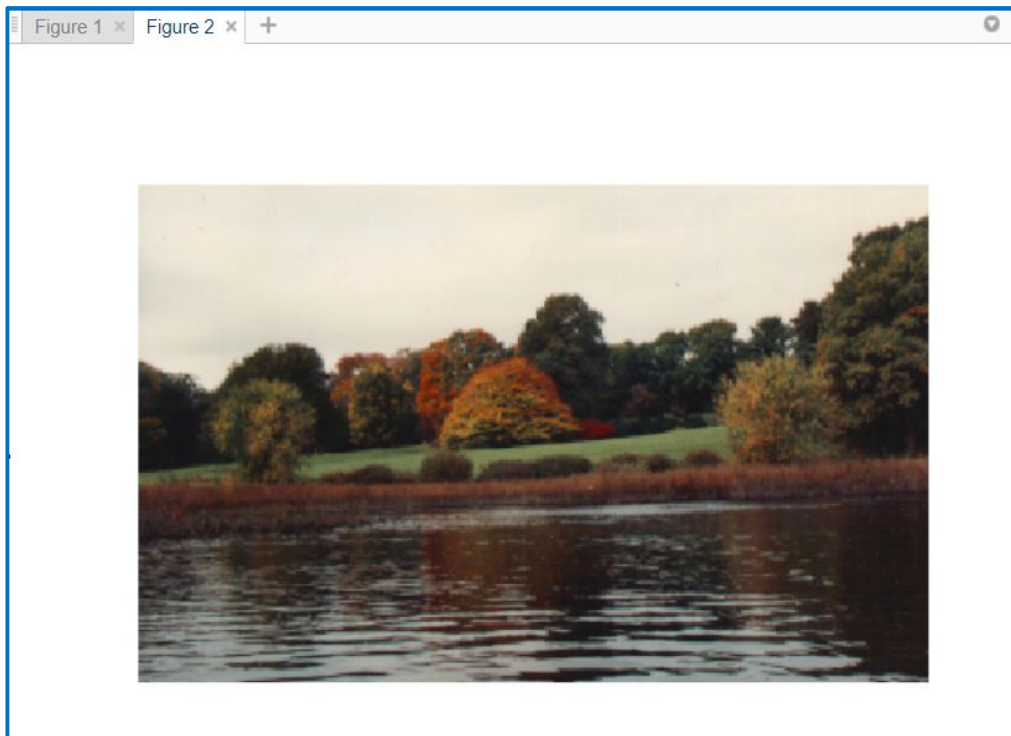**AIM**: To read and display image along with its properties

PROGRAM:

```matlab
clear all;
close all;
clc;
a = imread('autumn.tif');
figure,
imshow(a),
imfinfo('autumn.tif')
a(100,200,2)
a(100,200,1:3)
imwrite(a,'ABC.tif')
b = imread('ABC.tif');
figure,
imshow(b),
imfinfo('ABC.tif')
```

INPUT: (Image)

OUTPUT: (Image)

```
Command Window

ans =

  struct with fields:

                    Filename: '/MATLAB Drive/Digital Image Processing/EXP01/autumn.tif'
                 FileModDate: '15-Feb-2022 10:11:41'
                    FileSize: 213642
                      Format: 'tif'
               FormatVersion: []
                       Width: 345
                      Height: 206
                    BitDepth: 24
                   ColorType: 'truecolor'
             FormatSignature: [1×4 double]
                   ByteOrder: 'little-endian'
              NewSubFileType: 0
                BitsPerSample: [1×3 double]
                 Compression: 'Uncompressed'
    PhotometricInterpretation: 'RGB'
                 StripOffsets: [1×30 double]
             SamplesPerPixel: 3
                 RowsPerStrip: 7
              StripByteCounts: [1×30 double]
                 XResolution: 72
                 YResolution: 72
              ResolutionUnit: 'Inch'
                    Colormap: []
          PlanarConfiguration: 'Chunky'
                   TileWidth: []
```

```
                  TileLength: []
                 TileOffsets: []
              TileByteCounts: []
                 Orientation: 1
                   FillOrder: 1
            GrayResponseUnit: 0.0100
              MaxSampleValue: [1×3 double]
              MinSampleValue: [1×3 double]
                Thresholding: 1
                      Offset: 213218
```

```
ans =

  uint8

   25


   1×1×3 uint8 array

ans(:,:,1) =

   75


ans(:,:,2) =

   25


ans(:,:,3) =

   30
```

```
ans =

  struct with fields:

                   Filename: '/MATLAB Drive/ABC.tif'
                FileModDate: '23-Feb-2022 09:32:11'
                   FileSize: 213570
                     Format: 'tif'
              FormatVersion: []
                      Width: 345
                     Height: 206
                   BitDepth: 24
                  ColorType: 'truecolor'
            FormatSignature: [1×4 double]
                  ByteOrder: 'little-endian'
              NewSubFileType: 0
              BitsPerSample: [1×3 double]
                Compression: 'PackBits'
    PhotometricInterpretation: 'RGB'
                 StripOffsets: [1×30 double]
```

```
       PhotometricInterpretation: 'RGB'
                 StripOffsets: [1×30 double]
              SamplesPerPixel: 3
                 RowsPerStrip: 7
               StripByteCounts: [1×30 double]
                  XResolution: 72
                  YResolution: 72
               ResolutionUnit: 'Inch'
                     Colormap: []
          PlanarConfiguration: 'Chunky'
                    TileWidth: []
                   TileLength: []
                  TileOffsets: []
               TileByteCounts: []
                  Orientation: 1
                    FillOrder: 1
              GrayResponseUnit: 0.0100
               MaxSampleValue: [1×3 double]
               MinSampleValue: [1×3 double]
                 Thresholding: 1
                       Offset: 213134
```