

# Lab 1

**Goal: Introduce students to methods that create new images, resize images & scale image contents.**

## **Part A: Display Image**

*Load image 'field.jpg' and show the original image.*

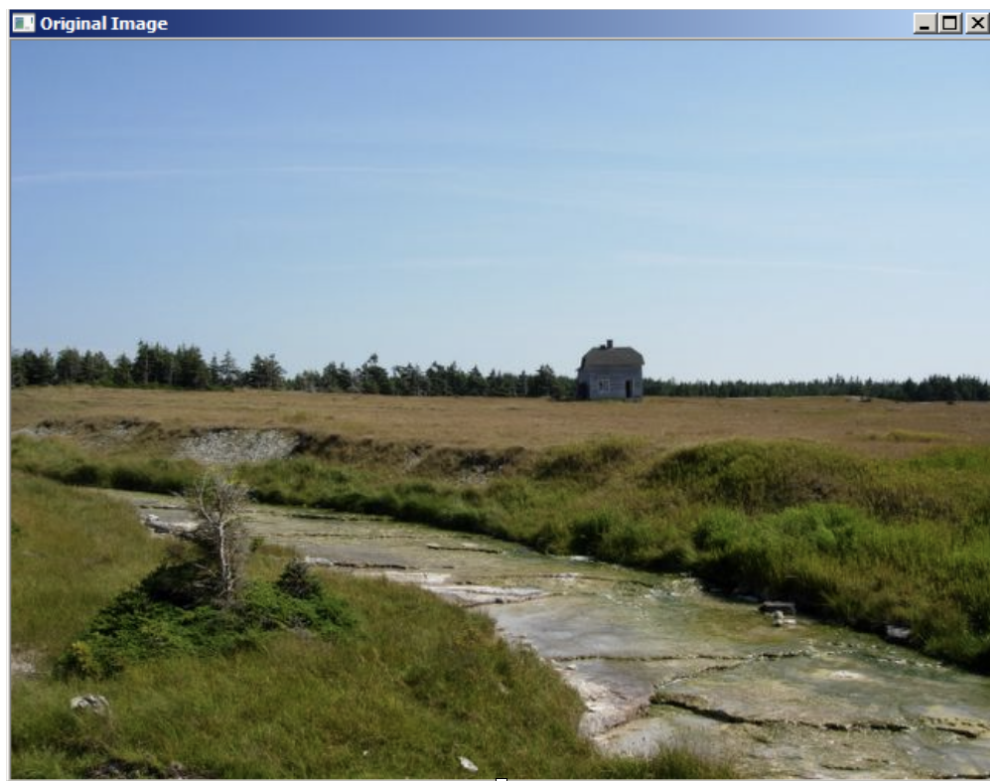


Figure 1. Original image.

## **Part B: Down-sample Image**

*Selecting one single value to represent several values in a part of the image.*

- **Mini-Goal: Down-sample the loaded image (variable id='imgOriginal') by a factor of 4.**
- *Hint: Try shrinking the original image by a factor of four and then expanding the resulting image back to the original dimensions*
- An example

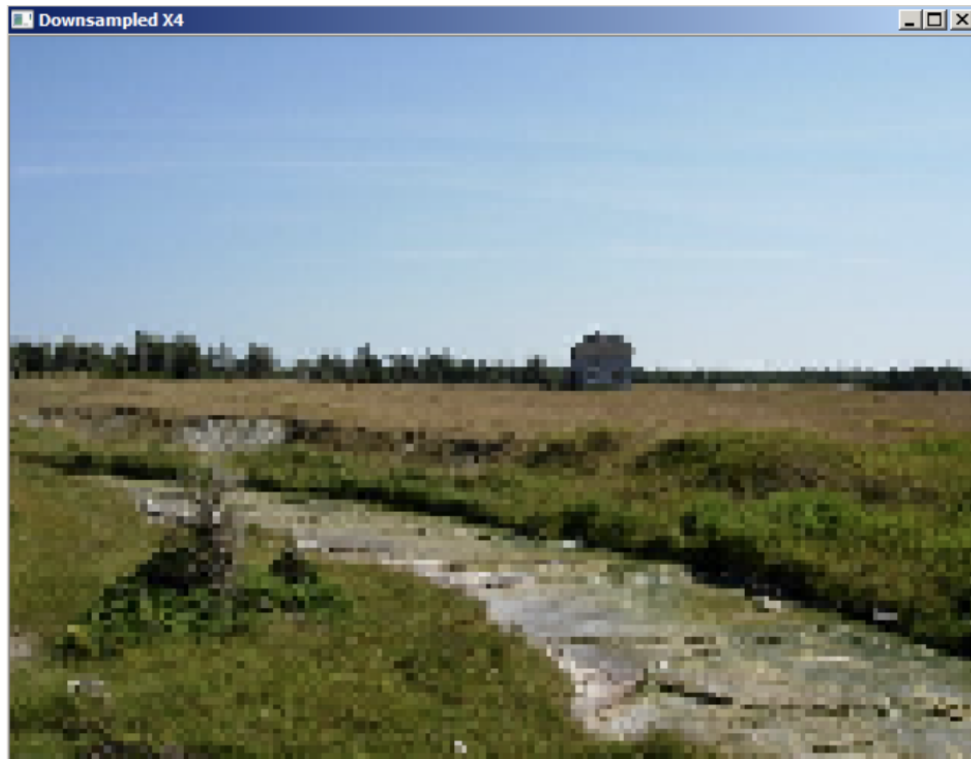


Figure 2. Downsampled image (X4)

## **Part C: Quantize Image**

Quantization: Mapping of a large range of possible sample values into a smaller range of values or codes

- **Mini-Goal: Quantize a loaded image (variable id='imgOriginal') by a factor of 32.**

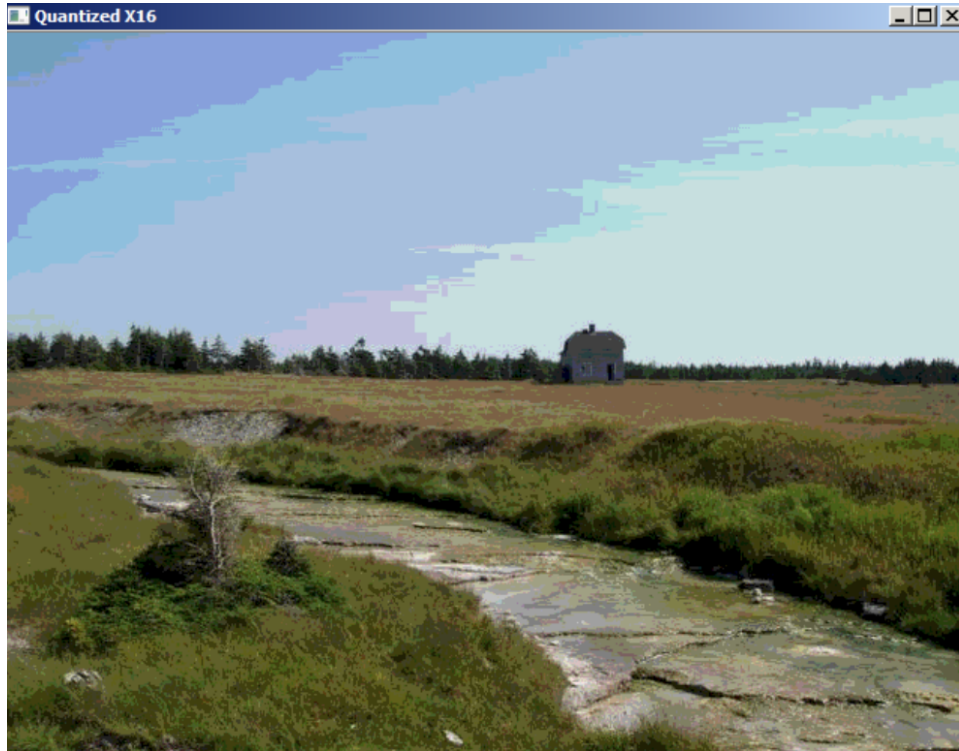


Figure 3. Quantized Image (X16)