Image Compression

1. Write functions to perform image encoding using variable length codes (Huffman code) and to recover the original image from the encoded image. Your encoded image should be saved as a string of *bits* using a binary file. Choose your own extension for this file but you will need to decide on a magic number in the header of the binary file along with image height, width, and number of channels.

   Effectively, you will write two programs: an encoder and a decoder. If you prefer, you can bundle them up into one executable such that the decoder kicks in whenever you give it the encoded image; otherwise, it reads the image and encodes it.

   Enumerate your choices in the README file.

What to handin

Handin an electronic copy of all the sources, README, Makefile(s), and results. Create your programs in a directory called *username*.2 where *username* is your login name on hoare. Once you are done with everything, *remove the executables and object files*, and issue the following commands:

```
% cd
% ~sanjiv/bin/handin cs6420 2
```