

Homework #6

6.1 Yokoi number counting



Figure 1: The input image Lena.

We implement the algorithm of Yokoi number counting, and test it in a 64 x 64 resized input. The algorithm goes like the slide describing, we brief list the code below:

```

1. function a = h(b, c, d, e)
2.     t = ( d == b ) & ( e == b )
3.     if ( b == c )
4.         if ~t
5.             a = q
6.         else
7.             a = r
8.         end
9.     end
10. end

1. function y = f( a1, a2, a3, a4 )
2.     if ( a1 == a2 == a3 == a4 == r ) y = 5
3.     else y = ( a1 == q ) + ( a2 == q ) + ( a3 == q ) + ( a4 == q )
4.     end

```

Appendix

The program is written by MATLAB. To run the program, copy the input data to the folder "dat/", and run "src/yo.m" without any argument to get the output in "out/".