```
# read input
f = imread("image.png");
g = imread("boundary.png");
[w,h] = size(g);
f = double(f(:));
g = double(g(:));

# build graph matrices
M = spdiags(g==0, 0, w*h, w*h);
px = sparse(1:w-1, 2:w, 1, w, w);
py = sparse(1:h-1, 2:h, 1, h, h);
G = kron(py,speye(w)) + kron(speye(h),px);
L = G + G' - diag(sum(G + G'));

# state and solve the problem
A =  speye(w*h) - M    - M*L  ;
b = (speye(w*h) - M)*g - M*L*f;
x = A\b;
imwrite(uint8(reshape(x,w,h)), "out.png");
```