$$\mathbf{G}_a = \mathcal{F}\{g_a\},\ \mathbf{G}_b = \mathcal{F}\{g_b\}$$

Calculate the Fourier transform of both images, this corresponds to lines 31 and 32 of the program and is done by the Fast Fourier Transform algorithm

$$R = \frac{\mathbf{G}_a \circ \mathbf{G}_b^*}{\left|\mathbf{G}_a \circ \mathbf{G}_b^*\right|}$$

Multiply the first Fourier transform by the conjugate of the second, and divide by the absolute value of the product, this corresponds to lines 34 and 35

$$r = \mathcal{F}^{-1}\{R\}$$

Finaly, apply the inverse Fourier transform to R, this corresponds to line 36