Assignment 3 Q 2

1. Warp I with $W(x;p)$to compute $I(W(x;p))$
2. Compute the error image $T(x)$ - $I(W(x;p))$
3. Warp the gradient ∇I with $W(x;p)$
4. Evaluate Jacobian $\frac{\partial w}{\partial p}$ at $(x;p)$
5. Compute the steepest descent images $\nabla I \frac{\partial w}{\partial p}$
6. Compute $H = \sum_x \left[\nabla I \frac{\partial w}{\partial p}\right]^T \left[\nabla I \frac{\partial w}{\partial p}\right]$
7. Compute $\sum_x \left[\nabla I \frac{\partial w}{\partial p}\right]^T [T(x) - I(W(x;p))]$
8. Compute $\nabla p = H^{-1} \sum_x \left[\nabla I \frac{\partial w}{\partial p}\right]^T [T(x) - I(W(x;p))]$
9. Update the parameters $p \leftarrow p + \Delta p$