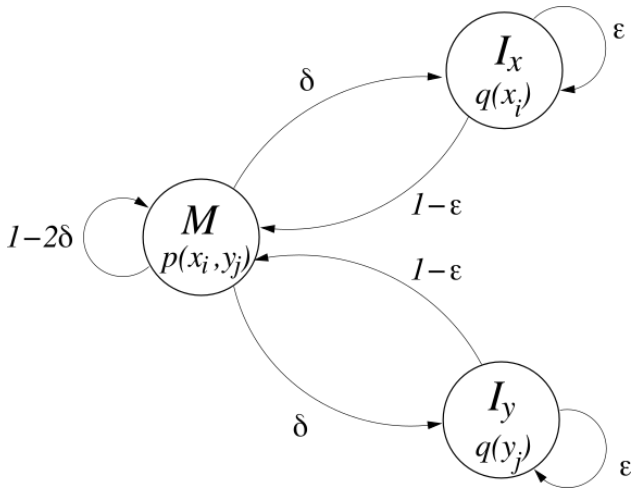
Exercise sheet 4: Pair-HMM

Exercise 1

You are given the basic pair-HMM for sequence alignment between two sequences:



Let $\delta = 0.02$ and $\epsilon = 0.79$. The initial probability distribution of the states is given by $\pi(M) = 0.6$, $\pi(I_x) = 0.2$ and $\pi(I_y) = 0.2$. Furthermore, let all $p(x_i, y_j)$ and $q(x_i)$ (and $q(y_j)$) be given in matrix p and vector q, respectively:
