Consider the noisy typewriter channel, mapping

$$\mathcal{A}_Z = \{\mathtt{A}, \mathtt{B}, \mathtt{C}, \ldots, \mathtt{Y}, \mathtt{Z}, -\}$$

with $|\mathcal{A}_Z| = 27$, into $\mathcal{A}_Y = \mathcal{A}_Z$, where each letter is mapped with equal probabilities into the preceding, the following or the same letter (p. 41-44 of the notes). Design an efficient code by which to *reliably* send symbols from $A_X = A_Z$ through the channel (i.e., you should be able to send and retrieve a text using the 27 synbols with no error). Write a program implementing the channel and the code, and test it.