Problem In a binary string, a block is a maximal substring that is a repetition of the same symbol. Thus, 011100 has three blocks, of lengths 1, 3 and 2 respectively.

Draw a finite state machine that accepts a string all of whose block lengths are at most 2. Thus, 00, 0011 and 1001 will be accepted whereas 011100 will be rejected.
Figure 1: Solution