

CIS 351 Sample SL6 Problem Solutions

Thu 6th Jan, 2022

SL6: Design a Sequential Circuit

Design a sequential circuit that will examine a sequence of characters and determine whether all five vowels are present in the string. The circuit will have one 8-bit input that will contain the ASCII representation of a character. On each clock tick, the input will contain the next character in the sequence. The circuit also has a 1-bit output that is initially **false** and becomes **true** once all five vowels have been observed. You may treat sub-circuits “is a”, “is e”, “is i”, “is o”, and “is u” as “black boxes”.

