Department of Computer Science And Engineering
Bangladesh University of Engineering And Technology
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Online Assignment on
Asynchronous Sequential Circuit

Section A1 & B1

CSE 206 (Digital Logic Design Sessional)

Time: 60 mins Date: 25th July, 2021

Design a fundamental mode circuit to function as an electrical lock. The lock has two switch inputs X_1 and X_2. Design the circuit so that the lock open signal Z=1 is produced only after the following conditions have been satisfied.

(i) Begin with $X_1 = X_2 = 0$;
(ii) While $X_2 = 0$, X_1 is turned on and then off twice;
(iii) Then while X_1 remains off, X_2 is turned on to open the lock i.e. Z=1;
(iv) For any deviation in the sequence of above transitions the lock remains closed i.e. Z=0.

Report:

Create a PDF document containing the primitive flow table, reduced flow table, K-maps, etc. Submit the PDF file and the .circ file simulated in Logisim in a single zip file named <Roll_No>.zip.