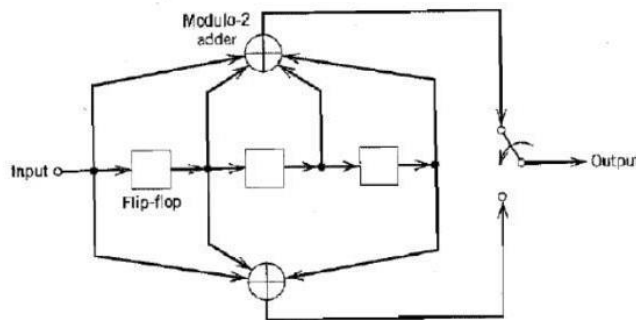




Communication and Information Engineering Program
Information Theory and Coding (CIE 425)
Fall 2022

Assignment 5

The figure below shows the Convolutional encoder for a rate $r = 1/2$, constraint length $K = 4$ convolutional code. Starting with the all-zero state, and the received sequence is 111101011010... Using the **Viterbi algorithm**, compute the decoded sequence.



Verify your answer by implementing your Viterbi algorithm decoder function on MATLAB/Python/C/C++.

Deliverables:

- 1- A README file or PDF that explains all the steps of your implementation in details. (You can write enough comments on your code instead).
- 2- All your code files **MUST** be submitted.

NOTES:

- Make sure your code is clear using meaningful variables' names and enough comments.