This qn-09 repository is a joint matlab assignment of data communication
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Assignment question is to write a matlab code for
: Given a stream of data bits (this is the input), you are required to produce a Manchester scheme Signal.Further convert it into Multilevel 2B1Q.Record your observations and obtain the differences between the two schemes in terms of bit rate,baud rate,bandwidth, value of r.Also,you are required to vary the above mentioned parameters and record the results (for eg. increase the bit rate and observe how the waveform changes).Plot graphs to substantiate your recorded observations.

This repository contains 3 files.
1. main_encoding_file.m
   This file contains main code for question stated above
2. machester.m
   This file contains code for manchester function used in main_encoding_file.m
3. two_B_one_Q.m
   This file contains code for 2B1Q function used in main_encoding_file.m

NOTE :Now to run this files in matlab make sure that all these 3 files are in same folder and same directory

1.Now run the main_encoding_file.m file

2.Now the command window will appear as shown below in image:

3.Enter the input as array example.[1 0 1 1] shown below in image.
NOTE: don’t input as string because our code only accepts input as array of bits.

4.Now press enter .

5.Next you will be asked to enter choice i.e to go for bitrate or bandwidth or baudrate

6.Next enter the corresponding value as shown for a particular choice

7. The graph will be generated in new window as shown.It contains 4 subgraphs in 1 graph. First subgraph will be manchester encoding using default bitrate as 1, default baudrate as 2 & default bandwidth as 1. Second subgraph will be modified manchester encoding using bitrate or baudrate or bandwidth you entered. Third subgraph will be 2B1Q encoding using default bitrate as 1, default baudrate as 0.5 & default bandwidth as 0.25. Fourth subgraph will be 2B1Q encoding using bitrate or baudrate or bandwidth you entered.