Encoding Report

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Programming Language: Python

Libraries Utilized:

1. Matplotlib
2. Numpy
3. OS Library

In this assignment, we developed separate files for various encoding schemes and employed file operations to call the appropriate files based on user input within the main program. The encoding schemes implemented include NRZ-L, NRZ-I, Manchester, Differential Manchester, and AMI (Alternate Mark Inversion). Additionally, we incorporated scrambling techniques such as B8ZS and HDB3. We also implemented modulation techniques like PCM and DM for analog user inputs.

Upon starting the module, users are prompted to select either analog or digital data as input. Based on their choice, they are asked to provide the input data, and the corresponding encoding scheme or modulation technique is applied. The resulting plot is then displayed to the user. Furthermore, for each user input, the longest palindrome within the data stream is provided.

Resources Used:

1. ChatGPT
2. GitHub