

# **NATIONAL INSTITUTE OF TECHNOLOGY SRINAGAR**

## **DEPARTMENT OF ITE**

**Implementation of Line encoder and Scrambler**

### **SUBMITTED BY**

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**BRANCH: INFORMATION TECHNOLOGY[IT]**

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**SEMESTER: V**

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Assumptions:

The format used is Manchester and differential Manchester is G.E Thomas format

Objectives:

Generates completely random data sequence and a random sequence with some fixed subsequences like eight or four consecutive zeros

Line coding schemes implemented: NRZ-L, NRZ-I, Manchester, Differential Manchester, AMI

Scrambling schemes: B8ZS, HDB3 Language used: Python

Libraries used:

Matplotlib, Numpy, Random, Timedata

References: Geekforgeeks, javapoint, different youtube channels, Stackoverflow