Specification Document For Project

November 11, 2018

- **LANGUAGE USED**

  C++(Program DEV-CPP)

- **LIBRARIES USED**

  'iostream' for basic input output
  'string' for string datatype
  'bits/stdc++.h' supporting library for function used in program
  'conio.h' for getch()
  'ctime' for getting real time parameter for rand function(seeding purpose)

- **COMPILER SPECIFICATION**

  Compiler used is 32-bit TDM GCC 4.9.2 release

- **Objective** To visualize the working of how a 7 bit hamming code detects and corrects the errors in a datastream through a channel.

- **Program Logic** The program receives the input from the user and raises it, if it needs,to an tokenisable string whose individual bits can be grouped and tokened into 7 bit hamming pattern. On the sender side the program calculates the pairing bits(p1,p2,p4) and makes the frame follow even parity. on the receiver side the program calculates parity bits and finds the erroneous bit if detected.

- **Instructions to use**

  1. The program asks first to enter the bitstream
  2. The program asks the user for the probability of error (b/w 0 and 1) implying the size of packets to be affected while traversing through the transmission medium
  3. On successful input the program fetches individual tokens, finds error and rectifies them, displaying them on the screen.
  4. The corrected codeword is displayed