LISA Algorithm Implementation

CMPE 245

HL

1. Write a C/C++ program to implement LISA algorithm, you can implment this program, say, myLisa.cpp, on your Ubuntu Linux platform or whatever platform of you choice.

2. The program myLisa.cpp will have to be able to realize the following functions:

(1) Create a data file named mytestdata.txt of a 2K (1024) bits. The file contains arbitrary data, however with sync field of 32 bytes at any arbitrary location as long as it was not truncated in the 2K file. The sync field is defined by LISA sync code;

(2) myLisa.cpp should then be able to prompt the user to enter what is the percentage the sync field is corrupted, per user input, the program will intentionally alter the sync pattern randomly with the percentage defined by the user input;

3. myLisa.cpp program then will read from the file mytestdata.txt and then prompt the user for confident level, based on the confidence level, the program will parse the input file and identify the starting bit of the payload.

4. Once the payload it identified, print the payload.

(END)