Introduction to Simple Error Detection in Data Communication
(Odd/ Even Parity checker)

Introduction:

Develop a client-server application; implement odd parity checking mechanism on the messages. The programs should deliver the following:

Client:

Step 01: The client should read from an input file (input.txt), one line at a time.

Step 02: Split the line in to characters.

Step 03: Convert each character to corresponding ASCII value.

Step 04: Calculate the odd parity bit of each character.

Step 05: Construct each character such as:

Binary representation of **A**: 01000001

Odd parity Bit: 1

Modified representation should be: 10000011

Bonus: Introduce random error in the parity bit.

Step 06: Send the modified representation of each character to the server.

Server:

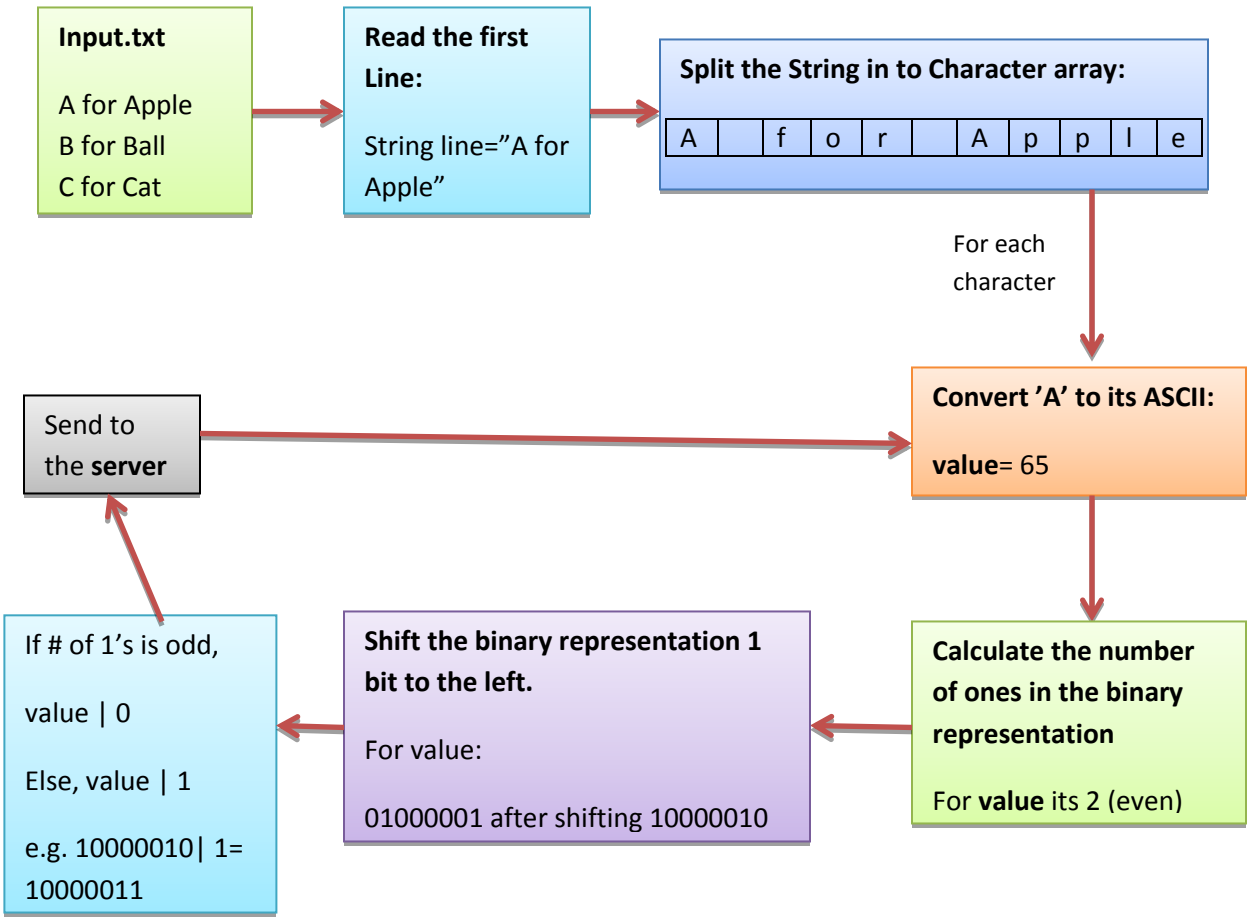
Step 01: Sever will receive the characters from the client.

Step 02: Verify the odd parity bit calculation of each character.

- If correct, write the actual character sent by the client in a file (output.txt)
- Otherwise, display an error message.

Example:

Client Side



Server Side: