Q5 Report

Q 5a:

OUTPUT-

Using given formula:

P(0) = 0.500198

P(1) = 0.499802

Using rand()%2 approach:

P(0) = 0.500639

P(1) = 0.499361

Thus, we see that P(0) and P(1) are nearly equal to 0.5 (ideal case) in both approaches of calculating the probability. (i.e using the given formula & using rand()%2 approach)

Q 5b:

OUTPUT-

Using given formula:

P(0|0) = 0.499968

P(0|1) = 0.500032

Using rand()%2 approach:

P(0|0) = 0.500644

P(0|1) = 0.499356

Here too, P(xi=0 | x(I-1)=0) and P(xi=0 | x(I-1)=1) are both nearly equal to 0.5 (ideal case) in both formulations.

Q 5c:

Encryption/Decryption is working for any size of a file like png, pdf, txt, mp3, etc. Multi-line files can also be encrypted/decrypted, and the check.sh checker passes all test cases.

However, execution time is too high for files of 1GB or more.