Computer Programming

Assignment-4

SECTION-3

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Question_5(a):

We observe in this problem that:
PROBABILITY using XORG for '0'
= PROBABILITY using XORG for '1'
= PROBABILITY using rand() for '0'
= PROBABILITY using rand() for '1'

= **½ (Approx..)**

= 0.5

That is ‘1’ and ‘0’ are EQUALLY LIKELY.
Example output:
PROBABILITY using XORG for '0': 0.499766470
PROBABILITY using XORG for '1': 0.500233530
PROBABILITY using rand() for '0': 0.500658584
PROBABILITY using rand() for '1': 0.499468432

Question_5(b):

We observe that:
USING XORG and USING rand()

P(xi = 0/xi-1 = 0) = P(xi = 0/xi-1 = 1) = **½ (Approx..)**

= 0.5

Example output:
USING **XORG**:
P(xi = 0/xi-1 = 0): 0.498881754
P(xi = 0/xi-1 = 1): 0.500002997
USING **rand()**:
P(xi = 0/xi-1 = 0): 0.500733733
P(xi = 0/xi-1 = 1): 0.501097397