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Lab4

Written Problem

3)

a) O(n)

b)O(n^2)

4.

a)

The output for sum\_list1 is as follows:

('sum\_list1, low=', 0, ', high=', 7)

('sum\_list1, low=', 1, ', high=', 7)

('sum\_list1, low=', 2, ', high=', 7)

('sum\_list1, low=', 3, ', high=', 7)

('sum\_list1, low=', 4, ', high=', 7)

('sum\_list1, low=', 5, ', high=', 7)

('sum\_list1, low=', 6, ', high=', 7)

('sum\_list1, low=', 7, ', high=', 7)

and the total sum is 36.

The output for sum\_list2 is as follows:

('sum\_list2 low=', 0, ', high=', 7)

('sum\_list2 low=', 0, ', high=', 3)

('sum\_list2 low=', 0, ', high=', 1)

('sum\_list2 low=', 0, ', high=', 0)

('sum\_list2 low=', 1, ', high=', 1)

('sum\_list2 low=', 2, ', high=', 3)

('sum\_list2 low=', 2, ', high=', 2)

('sum\_list2 low=', 3, ', high=', 3)

('sum\_list2 low=', 4, ', high=', 7)

('sum\_list2 low=', 4, ', high=', 5)

('sum\_list2 low=', 4, ', high=', 4)

('sum\_list2 low=', 5, ', high=', 5)

('sum\_list2 low=', 6, ', high=', 7)

('sum\_list2 low=', 6, ', high=', 6)

('sum\_list2 low=', 7, ', high=', 7)

and the total sum is 36.

b)

Sum\_list1

1

1

2

......

n-1

n

1

1

1

1

Theta(n^2)

Sum\_list2:

Theta(logn)

1

1

1

1

1

1

1

n/22

n/22

n