Date: **Time Complexity** Day: M T W

if $n = \text{len}(\text{list1}) + \text{len}(\text{list2})$

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for k in range (0, n/2 +1):
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Considering the above loop we use the following summation formula :

$$\sum_{i=m}^{n} c = c(n+1-m)$$

in our case $n = n/2$

and

$m = 0$

Thus

$$\sum_{i=0}^{n/2} c = c(n/2 + 1 - 0)$$

$$= c\left(\frac{n+2}{2}\right)$$

Hence time complexity will be

$O(n)$