$n = 5$



$a = n-2$

$b = 2$

$^5C_2 = 10$

$\binom{n}{2} = \frac{n(n-1)}{2}$

$n$

**Sorting**

Bubble → সবচেয়ে খারাপ   $O(n^2)$

Insertion → কিছুটা খারাপ   $O(n)$ → Best case

$O(n(1+1))$

$O(n.5)$

| 5 | 4 | 3 | 2 | 1 |   $k=4$
| 1 | 2 | 3 | 4 | 5 |

$\frac{n \times (n-1) \times \cdots \times 1}{n}$

$nC_2^2$   $(n)(n-1)(n-2)T$
$(n-2)T$   $2(n-2)T$

$k = n-1$

$n \cdot (n-1+1)$
$= n^2$

$\underline{n=2}$   $\underline{n=3}$   $\underline{n=4}$

$bb$

| a b b |      a a b b
| b a b |      a b a b
| b b a |      a b b a

$Cnt(b) = 2$

$n=5$
$K=8$



$n=4$
$k=$

baaab
baaba
babaa
baaaa

**Introsort**   $O(n\log n)$
1) Quick
2) Heap
3) Insertion

$a_0 \; a_1 \; a_2 \; a_3 \; a_4 \; a_5$

$-7 \; -5 \; 0 \; 2 \; 3 \; 10$

$n$
$n-1$
$n-2$
$n-3$
$\vdots$
$1$

$\frac{n(n+1)}{2}$  $n$

$n=5$
$k=5$

0 1 2 3 4
a a a a a
b           b

| n=5 | |
|---|---|
| k=1 | $\phi$ |
| k=2 | 2 |
| k=3 | 1 |
| 4 | 3 |
| 5 | 2 |
| 6 | |
| 7 | 4 |
| 8 | 3 |
| 9 | |
| 10 | 1 |

1. CV
2.

$n=5$
$k=7$
for(i=n-2; i≥0; i--)
i=0   $n-i-1=4$

a a a a a

0 1 2 3 4

baaab

$7 \le (5-3-1)$

$7 \le 1$

6

$6 \le (5-2-1)$

$\boxed{6 \le 2}$

$4 \le (5-1-1)$

$\boxed{4 \le 3}$

$\_ \le (5-0-1)$

$1 \le 4$

$n - 5th$

$k = 5$

$\frac{k}{i \; m_i}$

a a a a a
0 1 2 3 4

ababa

$5-2 = 3$

$k = 5/2$

$m_i = n-i-1$

$\boxed{k \le m_i}$

Sajib
Sajib (DU-Swampfire)
~~Rafi~~ (NJRafi) *EEE* $nL$
~~Sakib~~

**Glassdoor**

1. CV + Ref.
2. Interview Call.
3. Phone Interview (1)
4. Onsite (4/5)
5. Pre-Screening
6. Internal Ref.
7. HC
→ 8. Team matching
9. Offer

$m_i \to m_2 \to m_i$

$k \; -= \frac{n(n+1)}{2}$

$k -= 1$
$k -= 2$
$k -= 3$

$$k\text{-} = \sideset{}{^{n}}{} (1+2+3)$$

$$k\text{-} = 6 = \frac{3(3+1)}{2}$$

$$x \leadsto x+1$$
$$x \to x^2$$

$$k=100 \qquad k\text{-} = 1$$
$$1+2$$
$$1+2+3$$

$$x \to \frac{x(x+1)}{2}.$$