⑧ **selection Sort** :

Consider a list :

| 21 | 38 | 29 | 17 | 4 | 25 | 11 | 32 | 9 |

and we want to sort it using selection sort

so what we will do is :

① Find Minimum number from list and place at First position. (Basically we will do a swap b/w first element and minimum element.)

| 21 | 38 | 29 | 17 | 4 | 25 | 11 | 32 | 9 |

swap it ↓

| 4 | 38 | 29 | 17 | 21 | 25 | 11 | 32 | 9 |

sorted ‹— unsorted side

②⃝ Now you have to find minimum number from unsorted side and place it in 2nd element's place.

| 21 | 38 | 29 | 17 | 21 | 25 | 11 | 32 | 9 |

swap ↓

| 4 | 9 | 29 | 17 | 21 | 25 | 11 | 32 | 38 |

sorted ‹— unsorted

→ keep on doing this ,

| 4 | 9 | 29 | 17 | 21 | 25 | 11 | 32 | 38 |

swap

| 4 | 9 | 11 | 17 | 21 | 25 | 29 | 32 | 38 |

Now all the elements are sorted.

Big O complexity = $O(n^2)$

↳ we will use
2 for loops