

Dry - Run

selection sort:

```
int main () {
```

```
    int arr[] = {64, 34, 25, 12, 22, 11} ;
```

64 | 34 | 25 | 12 | 22 | 11

```
    int n = sizeof(arr) / sizeof(arr[0])
```

24 / 4 → n = 6

// selection sort function:

```
void selectionSort ( int arr[], int n ) {
```

64, 34, 25, 12, 22, 11 6

```
    for ( int i = 0; i < n - 1; i++ ) {
```

```
        int min = i;
```

```
        for ( j = i + 1; j < n; j++ ) {
```

```
            if ( arr[j] < arr[min] ) {
```

```
                min = j;
```

```
            }
```

```
        }
```

$$1) \text{ (min } j = i) \{$$

$$\text{swap (arr [i] , arr [min]) ;}$$

$$\}$$

$i = 0$

min

64	34	25	12	22	11
----	----	----	----	----	----

$j = i + 1 \rightarrow 34 < 64$

min = 34

min

64	34	25	12	22	11
----	----	----	----	----	----

$j = i + 1 \rightarrow 25 < 34$

min = 25

in this way we find the minimum element from the array. and then swap from $i = 0$ index.

11	34	25	12	22	64
----	----	----	----	----	----

$i = 1$

11	12	25	34	22	64
----	----	----	----	----	----

$i = 2$

11	12	22	34	25	64
----	----	----	----	----	----

$i = 3$

11	12	22	25	34	64
----	----	----	----	----	----

$i = 4$

11	12	22	25	34	64
----	----	----	----	----	----

$i = 5$

11	12	22	25	34	64
----	----	----	----	----	----

At last we get sorted list.