

SORTING METHODS

SELECTION SORT FUNCTION CODE

```
void selectionSort(int arr[], int n)
{
    int i, j, min_idx;

    // One by one move boundary of unsorted subarray
    for (i = 0; i < n-1; i++)
    {
        // Find the minimum element in unsorted array
        min_idx = i;
        for (j = i+1; j < n; j++)
            if (arr[j] < arr[min_idx])
                min_idx = j;

        // Swap the found minimum element with the first element
        swap(&arr[min_idx], &arr[i]);
    }
}
```

SELECTION SORT REAL LIFE EXAMPLES

- ▶ Consider you have 8 shoes pairs with sizes 6 to 13. You find them not in order. Their arrangement from smallest to largest will be an example of selection sort. This is an easy example.
- ▶ Now consider another example. You have 200 glasses of different volume: 100 ml, 110 ml, 120 ml, 130 ml, ..., 2080 ml until 2090 ml. You find them spread on a room floor and want to place them such the 2090 ml glass has the 2080 ml glass inside it, within which is the 2070 ml glass and so on. This sort method is inefficient on large lists because searching for the exact size will take a lot of time but this is the way selection sort works.