Correctness of selection Sort:

- For selection sort to function, the least member from the array's unsorted portion is repeatedly located and moved to the front. It works by choosing the smallest element iteratively and replacing it with the one that is currently in place. Here is a detailed justification for selection sort's correctness.
- Initialization: Even if the subarray to the left of the current position might only have one element at first, it is sorted at the beginning of each iteration.
- Maintenance: In each iteration of selection sort, the element at the current position is swapped out for the smallest element from the array's unsorted portion. The sorting of the elements to the left of the current position is maintained by this step.
- Termination: The array is sorted after n−1 iterations, where n is the array's size, because each iteration moves the smallest unsorted element into its proper place.