



For all kinds of arrays, the selection sort takes more time to sort than the insertion sort. In case of decreasing arrays, which is the worst case, both sort methods are $O(n^2)$, because both of them are consisting of a while loop nested inside a for loop, and each loop is an $O(n)$. The difference between the time is probably due to the different steps (like copying and comparing) the two methods take. In comparison, for increasing arrays, which is the best case, the insertion sort never goes into the while loop, so the time is linear because of the for loop; however the selection sort still goes inside the while loop so its time is quadratic (n^2). For random arrays,

the difference between the time the two methods take is between increasing and decreasing arrays, but insertion performs better.