CMPE 180-92 EXTRA CREDIT questions:

SJSU ID 010826179

Extra Credit Question 1:

**N = 100**

**ALGORITHM MOVES COMPARES MILLISECONDS**

**Selection sort 100 4,950 0**

**Insertion sort 5,048 4,957 0**

**Shellsort suboptimal 516 668 0**

**Shellsort optimal 420 500 0**

**Quicksort suboptimal 400 5,150 0**

**Quicksort malik 484 678 0**

**Mergesort 653 356 0**

It depends on your requirements. Choosing a pivot at random makes it harder to approximate O(n2) performance. 'Median-of-three' (first, last, middle) can used to prevent time outs.

In selection sort the element is compared with every other element and changing the position

So takes more time

In insertion the sub element is taken as a reference

In quick sort pivots are used so it will be O(n2)