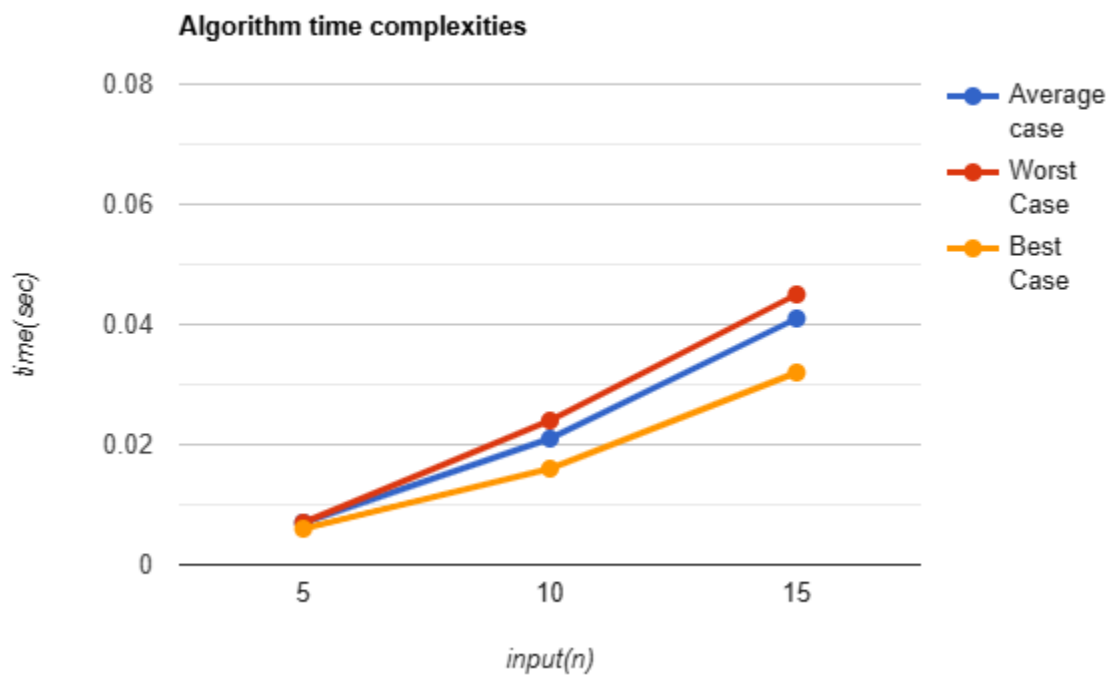


1. On GitHub.
2. Inside nonrandom_quicksort.py file. Plot:

```
nts\allHandsOn\algorithmsAllHandsOn\handsOn6> python nonrandom_quicksort.py
[31, 40, 30, 26, 80] [45, 77, 44, 71, 97, 80, 86, 96, 30, 37] [77, 30, 1, 31, 91, 8,
15, 11, 3, 20, 17, 27, 29, 67, 78]
quick Sort Time (average case): 0.007204499968793243
quick Sort Time (average case): 0.021463299985043705
quick Sort Time (average case): 0.0409170999773778
Average QuickSort Time (average case): 0.02319496664373825
[1, 2, 3, 4, 5] [20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30] [45, 46, 47, 48, 49, 50,
51, 52, 53, 54, 55, 56, 57, 58, 59, 60]
quick Sort Time (worstcase case): 0.00739909999538213
quick Sort Time (worstcase case): 0.024617400020360947
quick Sort Time (worstcase case): 0.045272600022144616
Average QuickSort Time (worstcase case): 0.025763033345962565
[1, 5, 2, 4, 3] [2, 7, 1, 9, 4, 8, 3, 10, 6, 5] [4, 12, 2, 10, 7, 14, 1, 15, 5, 13, 3
, 11, 6, 9, 8]
quick Sort Time (bestcase case): 0.006171699962578714
quick Sort Time (bestcase case): 0.01613940001698211
quick Sort Time (bestcase case): 0.03228809998836368
Average QuickSort Time (bestcase case): 0.018199733322641503
```



Algorithms were Implemented with the help of the course book given pseudocode for quicksort related functions.