

Output of code:

Set 1 observations:

ALGORITHM	N	COMPARISONS	TIME
Quick sort	1000	248502	0.06245112419128418
MY_CHOICE_QSORT	1000	62002	0.015660762786865234
Quick sort	10000	124749	0.03120279312133789
MY_CHOICE_QSORT	10000	124251	0.046866416931152344
Quick sort	50000	124749	0.03128933906555176
MY_CHOICE_QSORT	50000	124251	0.046814918518066406
Quick sort	100000	124749	0.031244277954101562
MY_CHOICE_QSORT	100000	124251	0.03124260902404785
Quick sort	500000	124749	0.04686307907104492
MY_CHOICE_QSORT	500000	124251	0.03124403953552246

Set 2 observations:

ALGORITHM	N	COMPARISONS	TIME
Quick sort	1000	124749	0.046863555908203125
MY_CHOICE_QSORT	1000	124251	0.03129076957702637
Quick sort	10000	124749	0.046816349029541016
MY_CHOICE_QSORT	10000	124251	0.03127264976501465
Quick sort	50000	124749	0.046880483627319336
MY_CHOICE_QSORT	50000	124251	0.03123021125793457
Quick sort	100000	124749	0.04686617851257324
MY_CHOICE_QSORT	100000	124251	0.031204700469970703
Quick sort	500000	124749	0.06248593330383301
MY_CHOICE_QSORT	500000	124251	0.04945945739746094

Results:

The graphs are obtained by taking average time of 20 runs of the code for executing the respective algorithms.

