

Piotr Świątek

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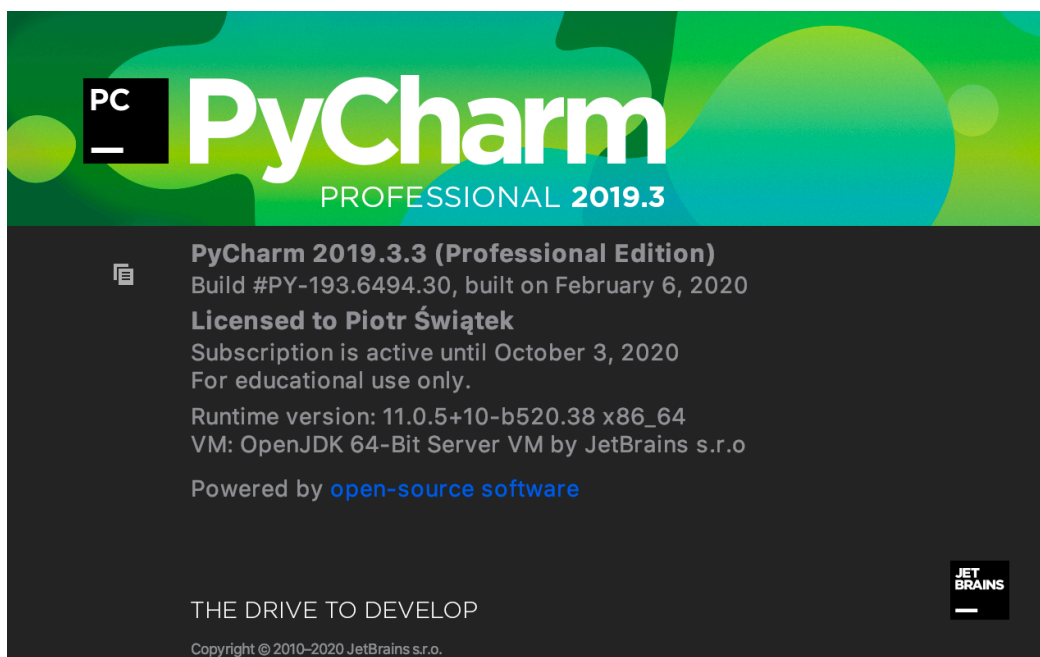
Grupa 4B

Algorytmy sortowania

Benchmark hardware:

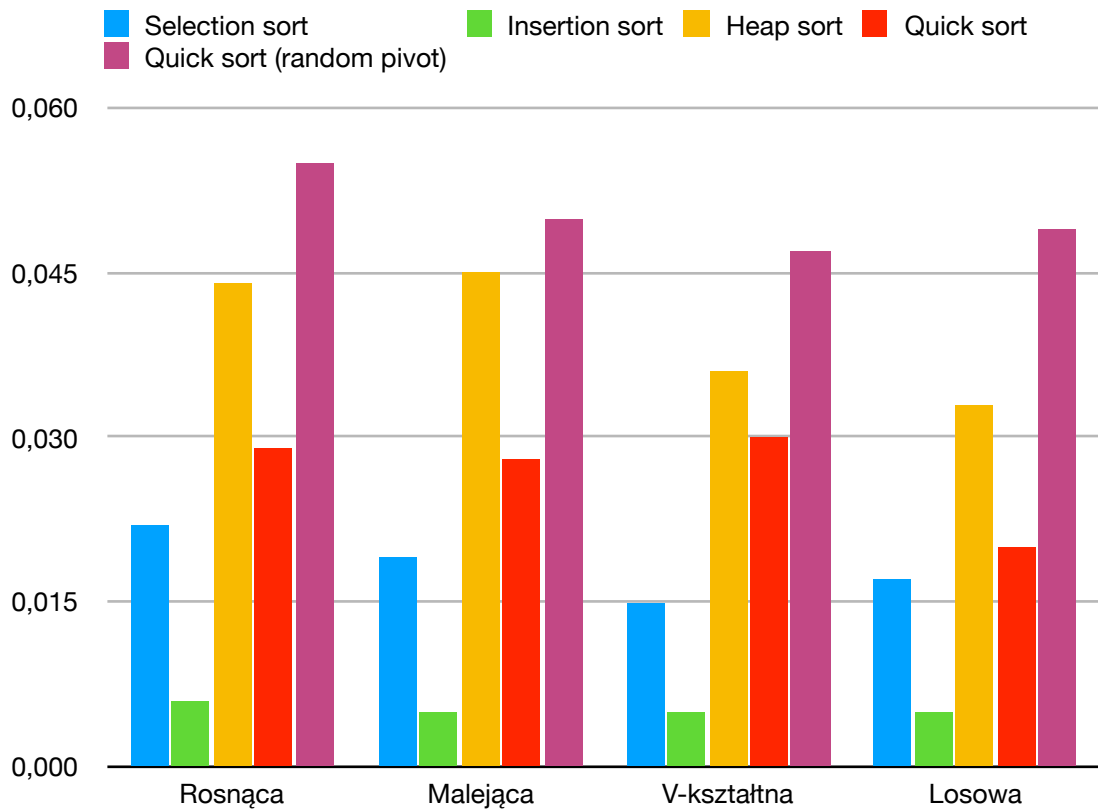


Software:



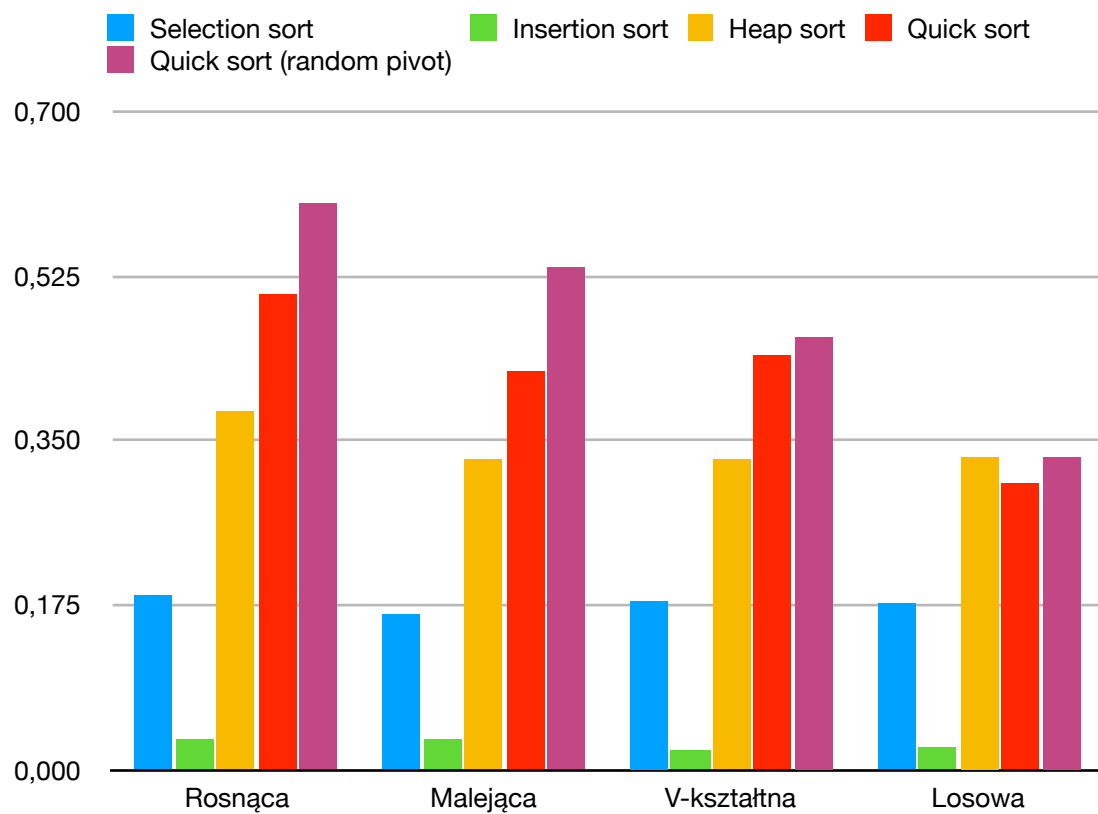
10 elementowa tablica

	Selection sort	Insertion sort	Heap sort	Quick sort	Quick sort (random pivot)
Tablica rosnąca	0.022 ms	0.006 ms	0.044 ms	0.029 ms	0.055 ms
Tablica malejąca	0.019 ms	0.005 ms	0.045 ms	0.028 ms	0.05 ms
Tablica V-kształtna	0.015 ms	0.005 ms	0.036 ms	0.03 ms	0.047 ms
Tablica losowa	0.017 ms	0.005 ms	0.033 ms	0.02 ms	0.049 ms



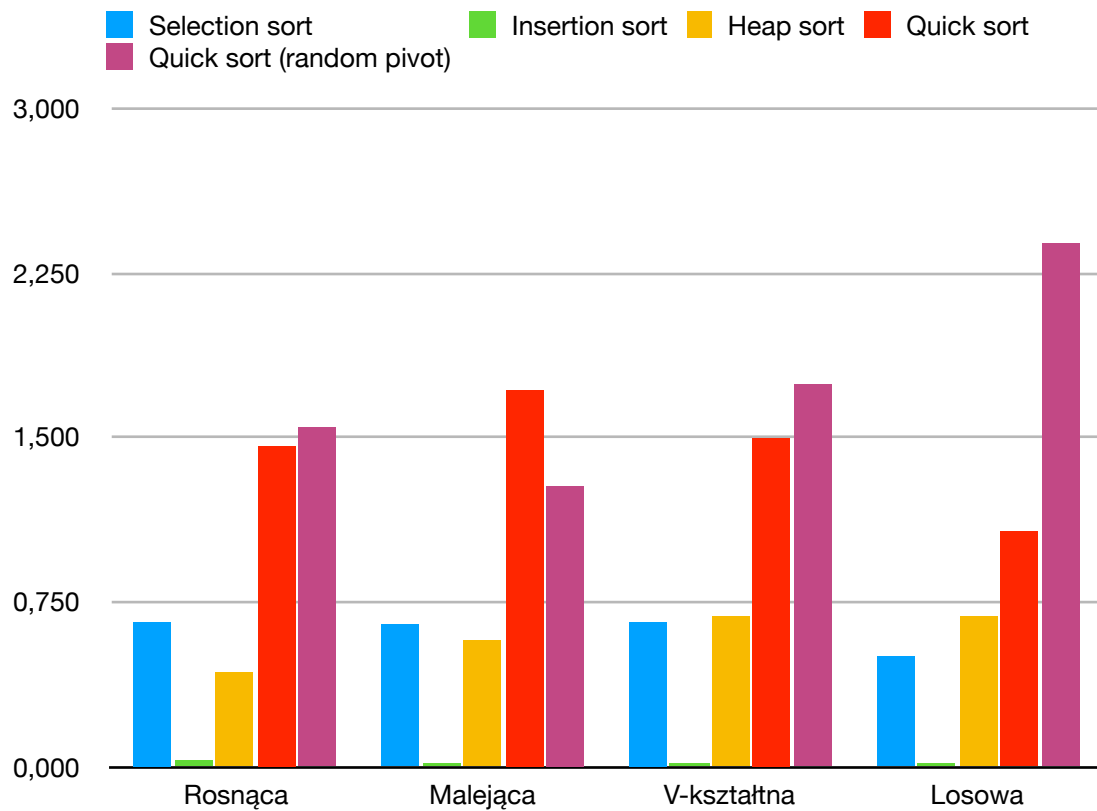
50 elementowa tablica

	Selection sort	Insertion sort	Heap sort	Quick sort	Quick sort (random pivot)
Tablica rosnąca	0.185 ms	0.031 ms	0.379 ms	0.505 ms	0.603 ms
Tablica malejąca	0.165 ms	0.033 ms	0.329 ms	0.423 ms	0.534 ms
Tablica V-kształtna	0.179 ms	0.019 ms	0.329 ms	0.441 ms	0.459 ms
Tablica losowa	0.176 ms	0.022 ms	0.333 ms	0.303 ms	0.333 ms



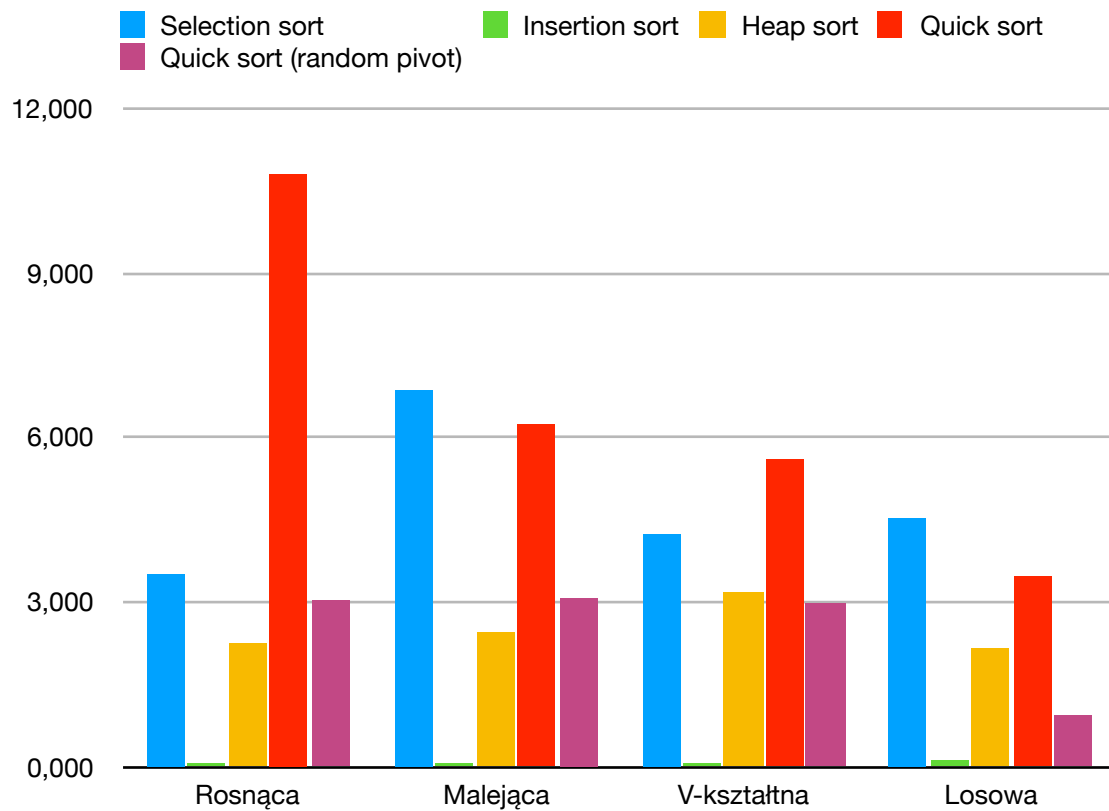
100 elementowa tablica

	Selection sort	Insertion sort	Heap sort	Quick sort	Quick sort (random pivot)
Tablica rosnąca	0.652 ms	0.02 ms	0.428 ms	1.455 ms	1.543 ms
Tablica malejąca	0.646 ms	0.018 ms	0.57 ms	1.716 ms	1.275 ms
Tablica V-kształtna	0.66 ms	0.017 ms	0.695 ms	1.497 ms	1.737 ms
Tablica losowa	0.499 ms	0.018 ms	0.677 ms	1.077 ms	2.388 ms



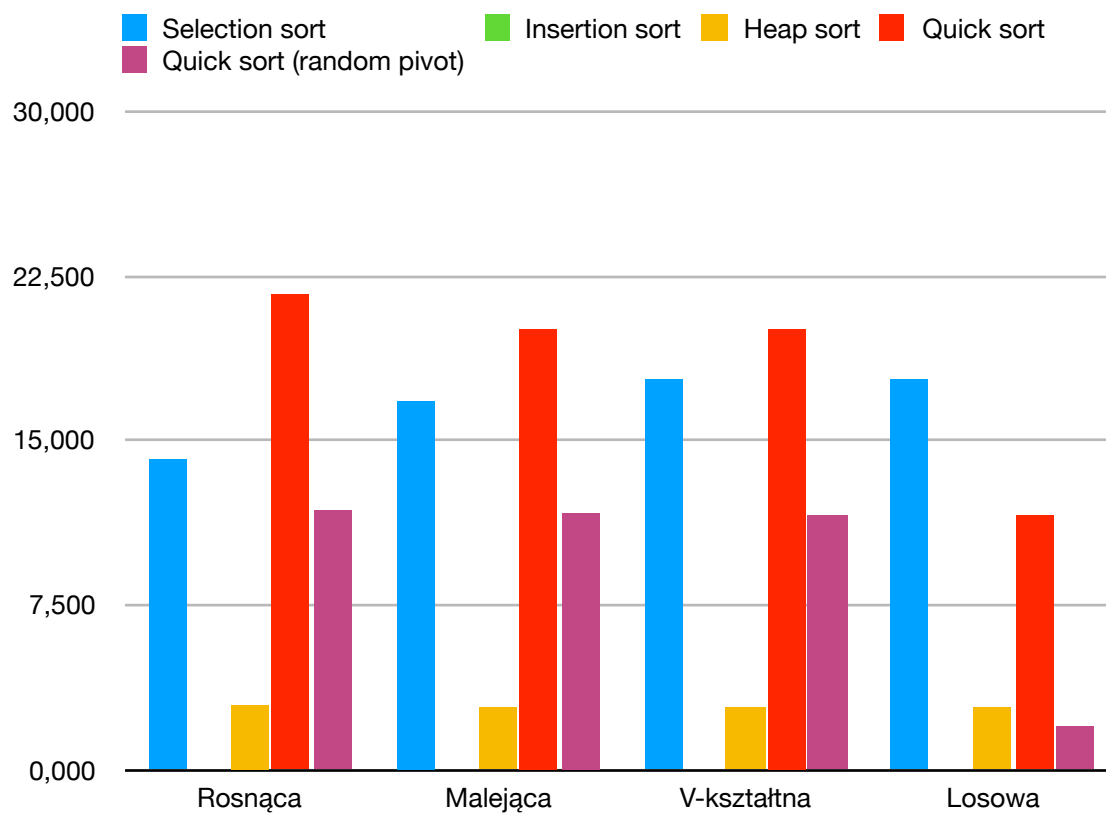
250 elementowa tablica

	Selection sort	Insertion sort	Heap sort	Quick sort	Quick sort (random pivot)
Tablica rosnąca	3.532 ms	0.077 ms	2.244 ms	10.781 ms	3.01 ms
Tablica malejąca	6.875 ms	0.073 ms	2.415 ms	6.222 ms	3.058 ms
Tablica V-kształtna	4.255 ms	0.075 ms	3.18 ms	5.595 ms	2.986 ms
Tablica losowa	4.547 ms	0.083 ms	2.135 ms	3.458 ms	0.924 ms



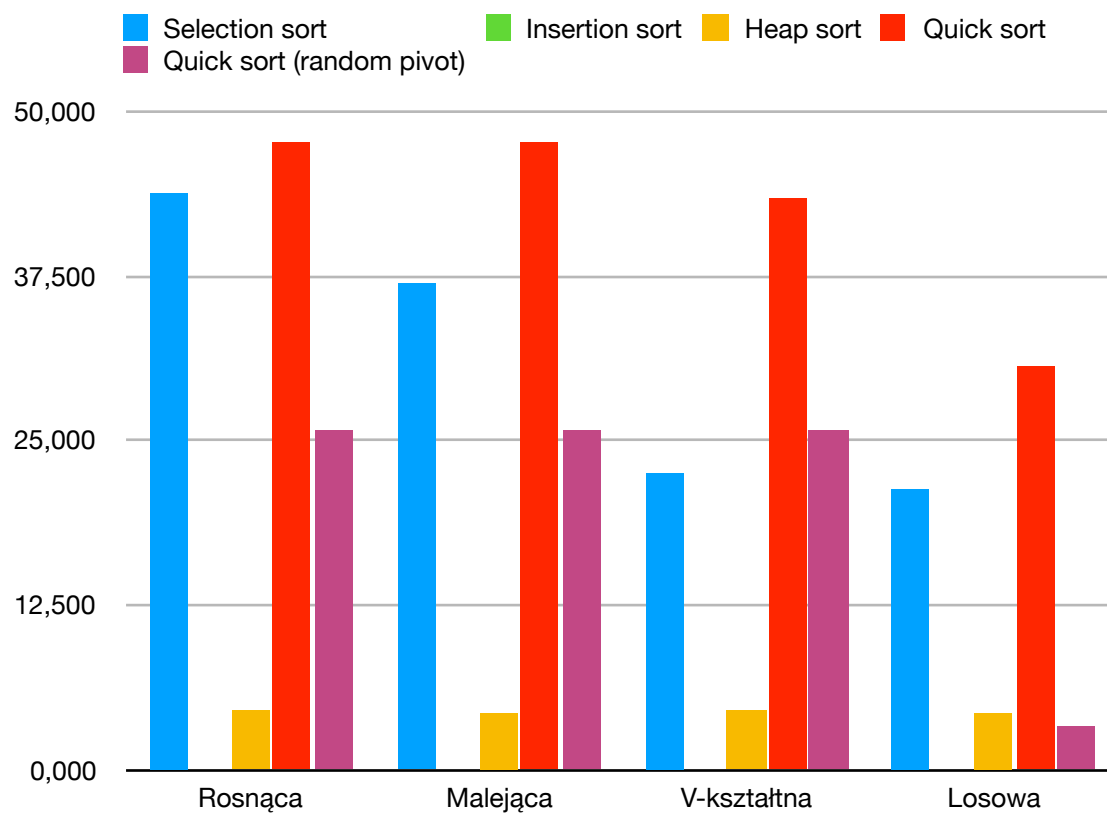
500 elementowa tablica

	Selection sort	Insertion sort	Heap sort	Quick sort	Quick sort (random pivot)
Tablica rosnąca	14.142 ms	0.098 ms	2.984 ms	21.686 ms	11.847 ms
Tablica malejąca	16.835 ms	0.095 ms	2.835 ms	20.024 ms	11.727 ms
Tablica V-kształtna	17.769 ms	0.095 ms	2.854 ms	20.081 ms	11.571 ms
Tablica losowa	17.124 ms	0.096 ms	2.77 ms	12.617 ms	1.94 ms



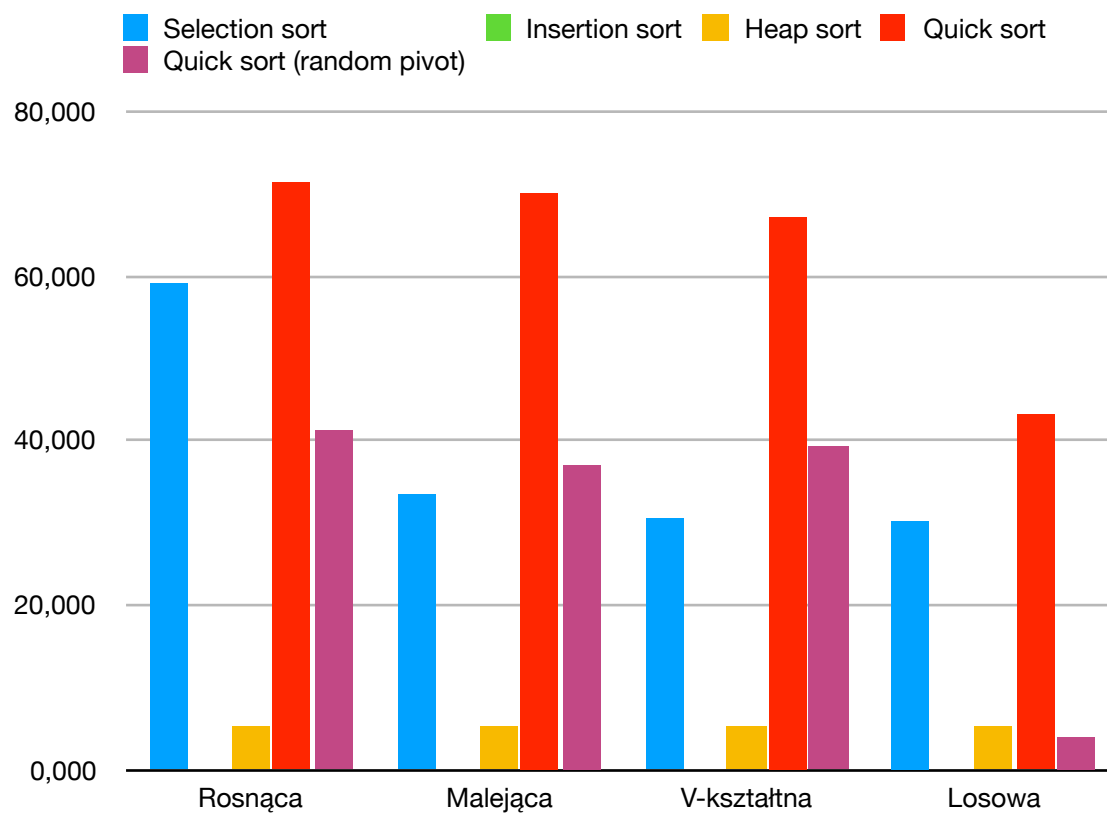
750 elementowa tablica

	Selection sort	Insertion sort	Heap sort	Quick sort	Quick sort (random pivot)
Tablica rosnąca	43.742 ms	0.142 ms	4.511 ms	47.713 ms	25.668 ms
Tablica malejąca	36.793 ms	0.169 ms	4.364 ms	47.559 ms	25.787 ms
Tablica V-kształtna	22.518 ms	0.141 ms	4.497 ms	48.387 ms	25.846 ms
Tablica losowa	21.381 ms	0.143 ms	4.36 ms	30.583 ms	3.217 ms



900 elementowa tablica

	Selection sort	Insertion sort	Heap sort	Quick sort	Quick sort (random pivot)
Tablica rosnąca	59.118 ms	0.171 ms	5.355 ms	71.273 ms	41.309 ms
Tablica malejąca	33.286 ms	0.169 ms	5.341 ms	69.948 ms	37.02 ms
Tablica V-kształtna	30.473 ms	0.168 ms	5.364 ms	67.157 ms	39.158 ms
Tablica losowa	30.085 ms	0.187 ms	5.335 ms	43.252 ms	3.804 ms

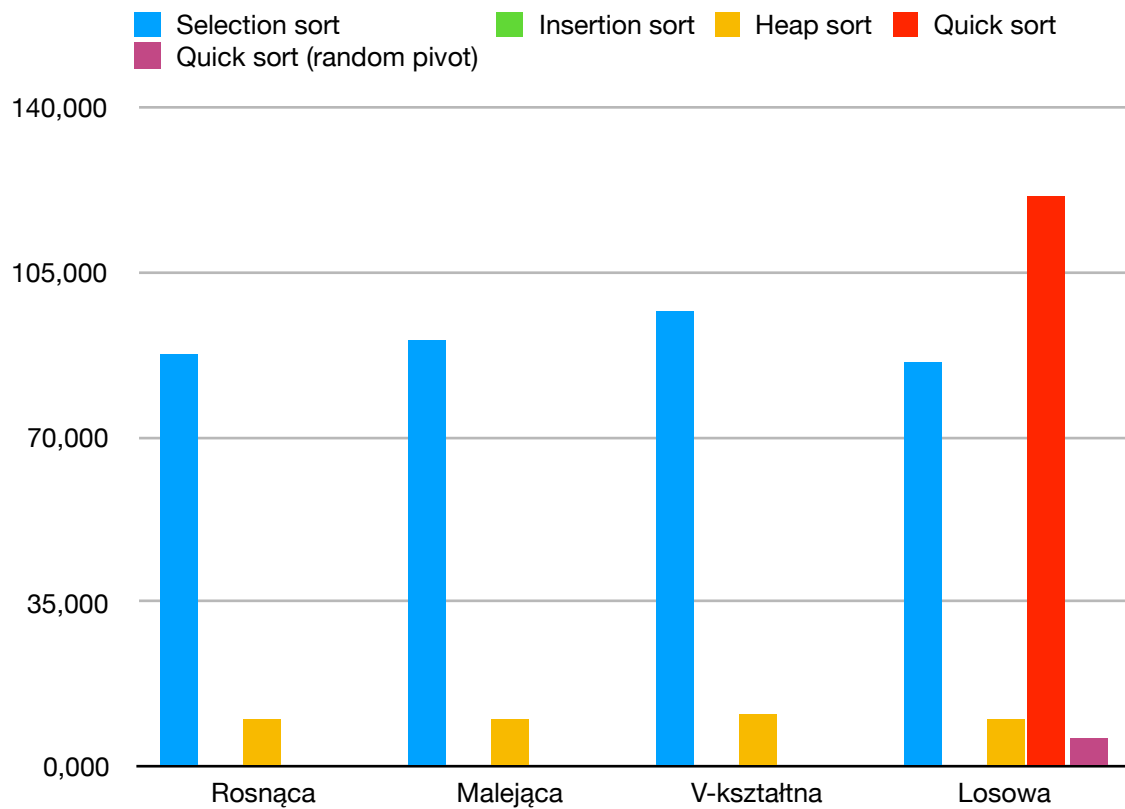


1500 elementowa tablica

	Selection sort	Insertion sort	Heap sort	Quick sort	Quick sort (random pivot)
Tablica rosnąca	87.576 ms	0.289 ms	9.867 ms	N/A*	N/A**
Tablica malejąca	90.425 ms	0.29 ms	9.983 ms	N/A*	N/A**
Tablica V-kształtna	96.525 ms	0.371 ms	10.911 ms	N/A*	N/A**
Tablica losowa	86.063 ms	0.295 ms	9.859 ms	120.85 ms	6,188 ms

N/A* - Error in maximum recursion depth exceeded in comparison

N/A** - Error in maximum recursion depth exceeded while calling a Python object

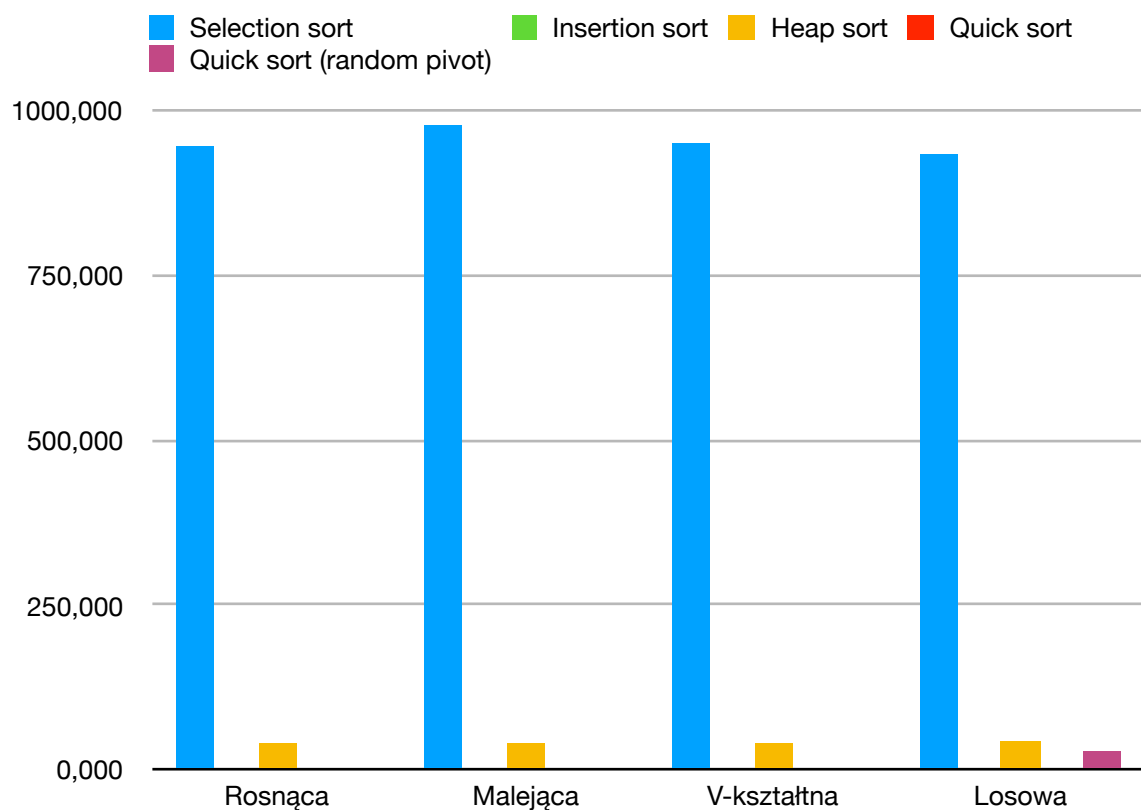


5000 elementowa tablica

	Selection sort	Insertion sort	Heap sort	Quick sort	Quick sort (random pivot)
Tablica rosnąca	945.765 ms	0.994 ms	38.706 ms	N/A*	N/A**
Tablica malejąca	977.607 ms	0.991 ms	38.823 ms	N/A*	N/A**
Tablica V-kształtna	951.539 ms	0.99 ms	40.07 ms	N/A*	N/A**
Tablica losowa	936.406 ms	1.015 ms	41.988 ms	N/A*	24.329 ms

N/A* - Error in maximum recursion depth exceeded in comparison

N/A** - Error in maximum recursion depth exceeded while calling a Python object



10000 elementowa tablica

	Selection sort	Insertion sort	Heap sort	Quick sort	Quick sort (random pivot)
Tablica rosnąca	3758.994 ms	1.973 ms	83.613 ms	N/A*	N/A**
Tablica malejąca	3889.975 ms	1.972 ms	85.12 ms	N/A*	N/A**
Tablica V-kształtna	3790.361 ms	1.968 ms	89.315 ms	N/A*	N/A**
Tablica losowa	3818.09 ms	2.113 ms	87.938 ms	N/A*	48.139 ms

N/A* - Error in maximum recursion depth exceeded in comparison

N/A** - Error in maximum recursion depth exceeded while calling a Python object

