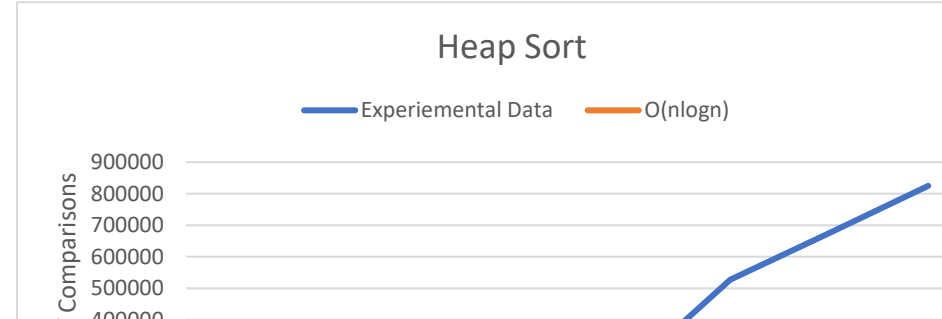
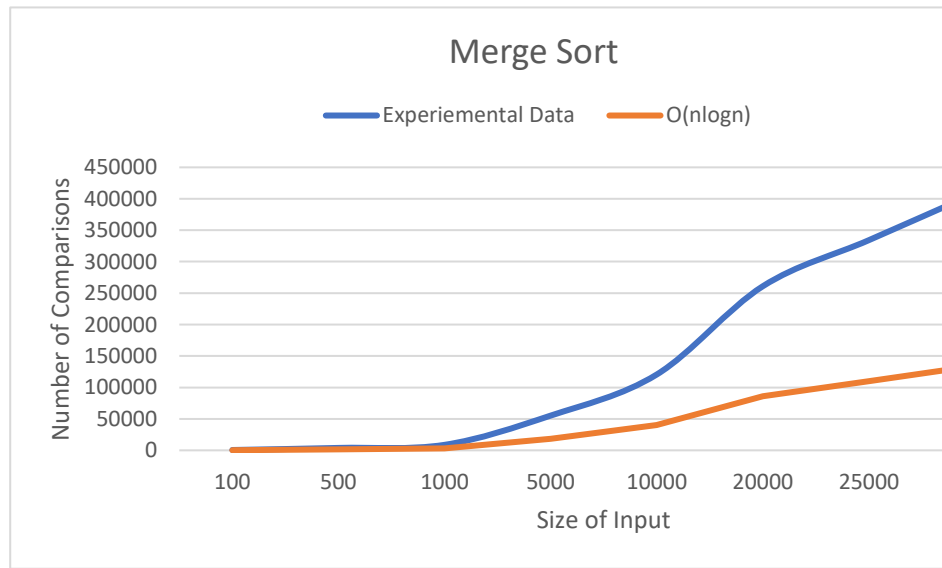
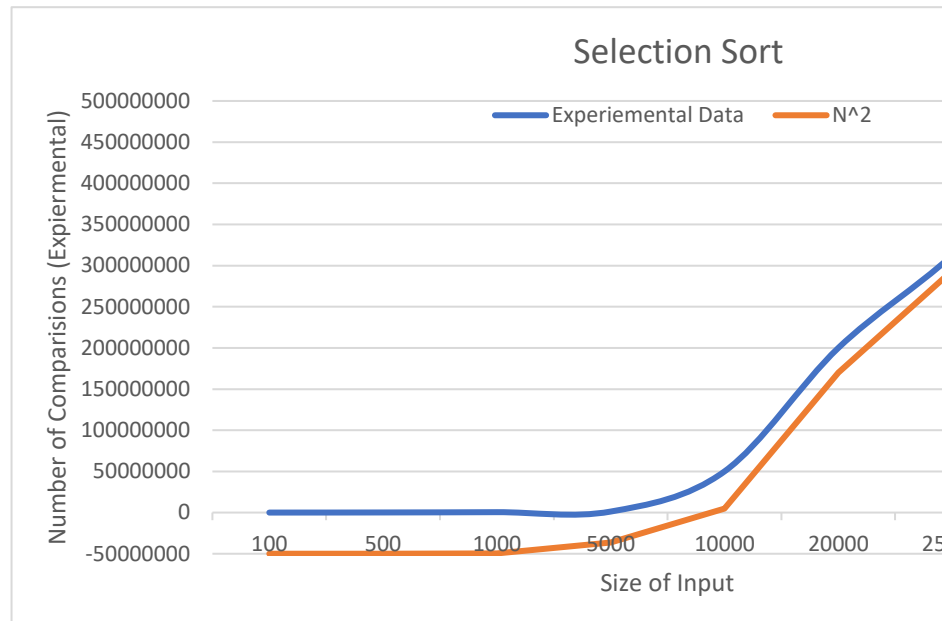
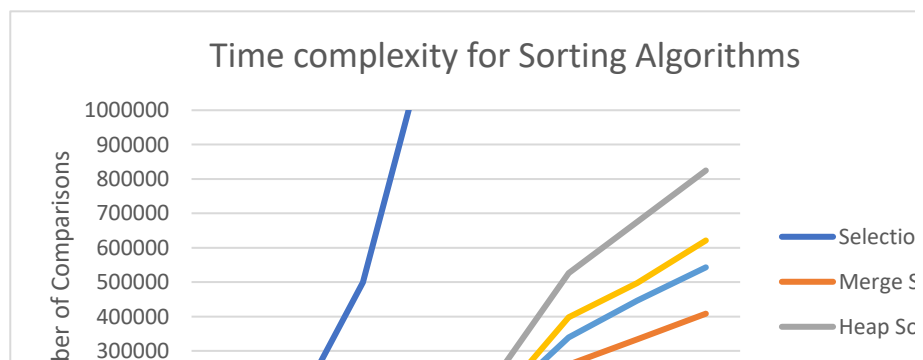
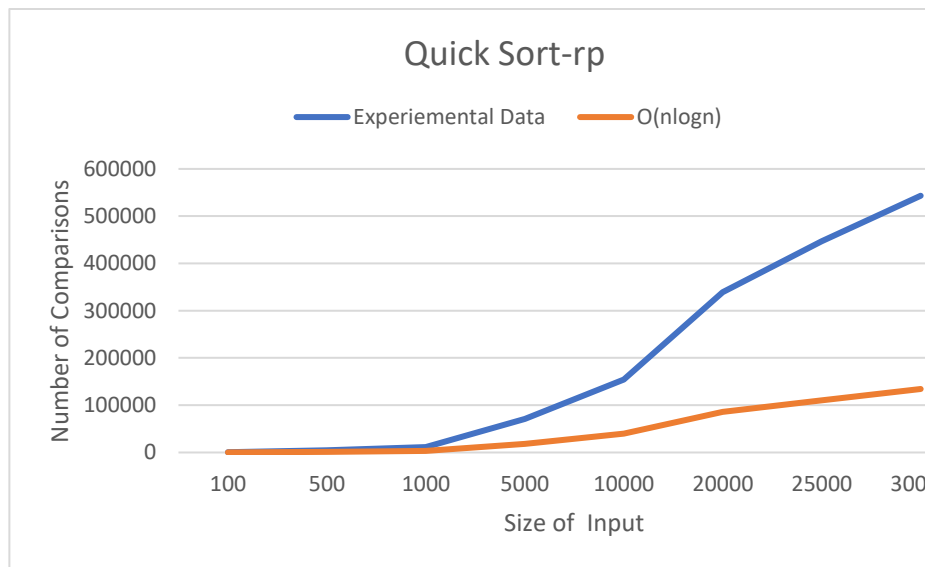
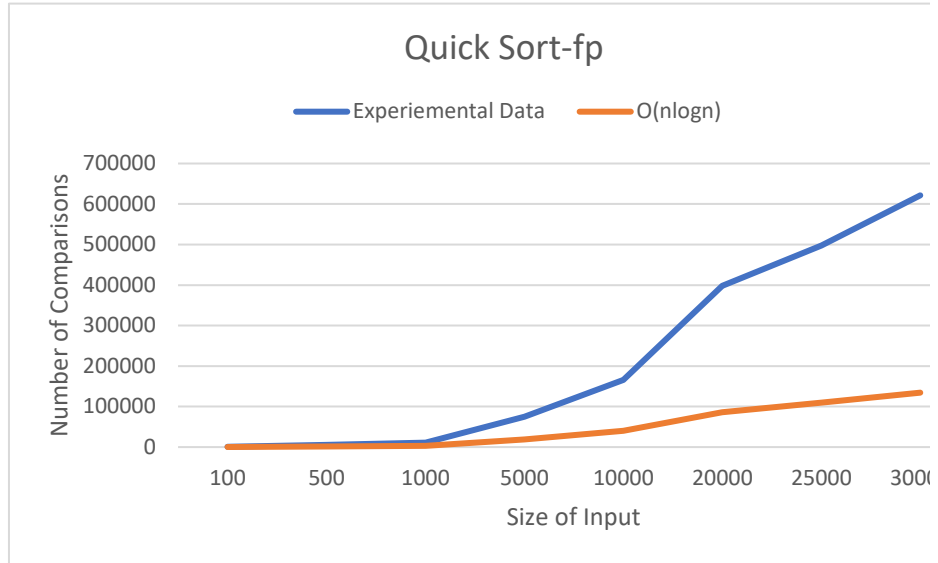
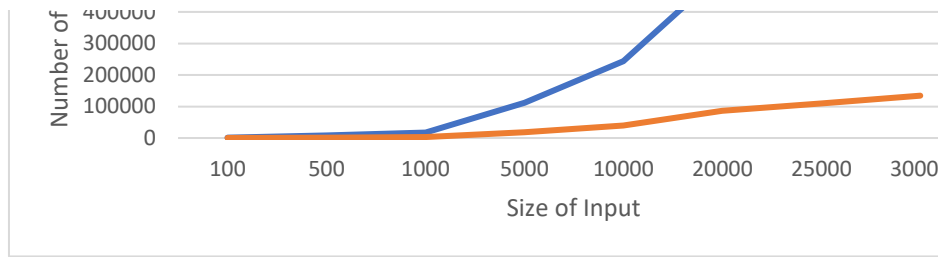
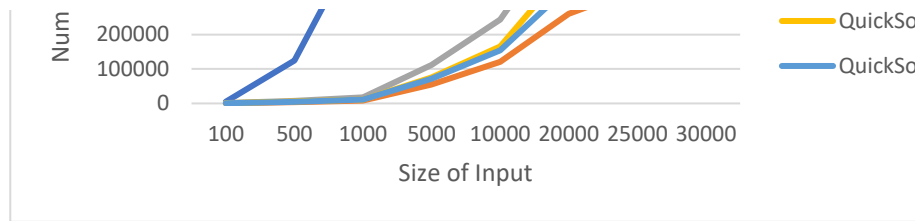


Sorting Algorithm	100	500	1000	5000	10000
Selection Sort	4950	124750	499500	1249750	49995000
Merge Sort	533	3853	8710	55214	120487
Heap Sort	1126	7850	17707	111671	243471
QuickSort-fp	750	5255	11223	75317	165493
QuickSort-rp	624	4628	11101	71238	154494



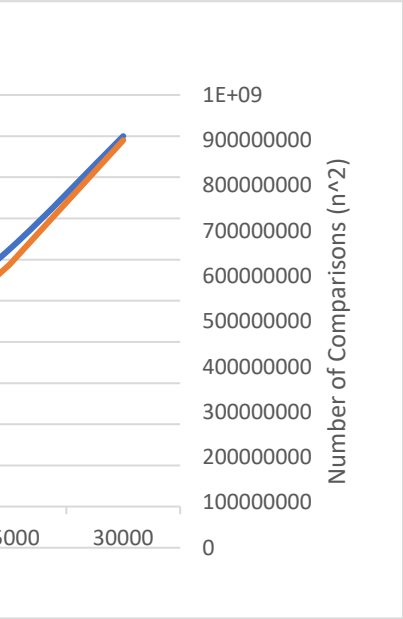




20000
199990000
260873
526834
398152
339217

25000
312487500
334172
675085
497863
446496

30000
449985000
408556
824859
621397
543221





Theoritical Results:

Sorting Alogrithm	100
Selection Sort	10000
Merge Sort	200
Heap Sort	200
Quick Sort-fp	200
Quick Sort-rp	200

ort-fp

ort-rp

**Raw data for comparison on 5 attempts**

<b>Selection Sort Data: 100</b>	4950	4950	4950	4950
<b>Selection Sort Data: 500</b>	124750	124750	124750	124750
<b>Selection Sort Data: 1000</b>	499500	499500	499500	499500
<b>Selection Sort Data: 5000</b>	1249750	1249750	1249750	1249750
<b>Selection Sort Data: 10000</b>	49995000	49995000	49995000	49995000
<b>Selection Sort Data: 20000</b>	199990000	199990000	199990000	199990000
<b>Selection Sort Data: 25000</b>	312487500	312487500	312487500	312487500
<b>Selection Sort Data: 30000</b>	449985000	449985000	449985000	449985000
<b>Merge Sort Data: 100</b>	534	531	533	528
<b>Merge Sort Data: 500</b>	3854	3858	3859	3857
<b>Merge Sort Data: 1000</b>	8704	8729	8713	8693
<b>Merge Sort Data: 5000</b>	55226	55182	55171	55220
<b>Merge Sort Data: 10000</b>	120401	120549	120363	120493
<b>Merge Sort Data: 20000</b>	260971	260835	260805	260940
<b>Merge Sort Data: 25000</b>	334006	334186	334235	334285
<b>Merge Sort Data: 30000</b>	408465	408507	408503	408491
<b>Heap Sort Data: 100</b>	1115	1099	1157	1119
<b>Heap Sort Data: 500</b>	7825	7845	7799	7863
<b>Heap Sort Data: 1000</b>	17759	17679	17745	17685
<b>Heap Sort Data: 5000</b>	111553	111563	111651	111693
<b>Heap Sort Data: 10000</b>	243391	243429	243457	243419
<b>Heap Sort Data: 20000</b>	527023	526411	527209	526777
<b>Heap Sort Data: 25000</b>	675255	674787	675255	674991
<b>Heap Sort Data: 30000</b>	824711	824941	824695	824967
<b>Quick Sort (First Pivot) Data: 100</b>	669	746	838	668
<b>Quick Sort (First Pivot) Data: 500</b>	6035	5124	5213	4907
<b>Quick Sort (First Pivot) Data: 1000</b>	10408	12297	11289	11428
<b>Quick Sort (First Pivot) Data: 5000</b>	75115	74272	74878	77221
<b>Quick Sort (First Pivot) Data: 10000</b>	170146	169189	160841	168867
<b>Quick Sort (First Pivot) Data: 20000</b>	396159	406920	394022	409605
<b>Quick Sort (First Pivot) Data: 25000</b>	490006	527969	527492	479713
<b>Quick Sort (First Pivot) Data: 30000</b>	615106	597659	616895	637259
<b>Quick Sort (Random Pivot) Data: 100</b>	671	618	634	602
<b>Quick Sort (Random Pivot) Data: 500</b>	4495	4245	4918	4596
<b>Quick Sort (Random Pivot) Data: 1000</b>	11473	10934	11268	10574
<b>Quick Sort (Random Pivot) Data: 5000</b>	70786	68861	66940	71815
<b>Quick Sort (Random Pivot) Data: 10000</b>	153653	155497	156454	150295
<b>Quick Sort (Random Pivot) Data: 20000</b>	343177	349533	339527	325020
<b>Quick Sort (Random Pivot) Data: 25000</b>	453065	456189	446354	439259

Quick Sort (Random Pivot) Data: 30000

560394

532881

519853

529423

500	1000	5000	10000	20000
250000	1000000	25000000	100000000	400000000
1350	3000	18495	40000	86021
1350	3000	18495	40000	86021
1350	3000	18495	40000	86021
1350	3000	18495	40000	86021





4950	<b>4950</b>
124750	<b>124750</b>
499500	<b>499500</b>
1249750	<b>1249750</b>
49995000	<b>49995000</b>
199990000	<b>199990000</b>
312487500	<b>312487500</b>
449985000	<b>449985000</b>
537	<b>532.6</b>
3837	<b>3853</b>
8709	<b>8709.6</b>
55269	<b>55213.6</b>
120625	<b>120486.2</b>
260810	<b>260872.2</b>
334146	<b>334171.6</b>
408813	<b>408555.8</b>
1137	<b>1125.4</b>
7915	<b>7849.4</b>
17667	<b>17707</b>
111893	<b>111670.6</b>
243657	<b>243470.6</b>
526747	<b>526833.4</b>
675135	<b>675084.6</b>
824981	<b>824859</b>
828	<b>749.8</b>
4994	<b>5254.6</b>
10693	<b>11223</b>
75097	<b>75316.6</b>
158422	<b>165493</b>
384054	<b>398152</b>
464131	<b>497862.2</b>
640065	<b>621396.8</b>
595	<b>624</b>
4882	<b>4627.2</b>
11252	<b>11100.2</b>
77787	<b>71237.8</b>
156568	<b>154493.4</b>
338826	<b>339216.6</b>
437611	<b>446495.6</b>

573550      **543220.2**

25000	30000
625000000	900000000
109949	134314
109949	134314
109949	134314
109949	134314