



## **GINA CODY SCHOOL OF ENGINEERING AND COMPUTER SCIENCE**

COMP 6521 – Advanced Database Technologies and  
Applications

### **Assignment – 1**

### **Two Phase Multi-way Merge Sort**

#### **Team Members**

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#### **Presented to:**

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- Input.txt (Randomly generated – Unsorted list)

465  
294  
212  
224  
362  
509  
89  
323  
283  
309  
53  
487  
6  
291  
496  
327  
169  
199  
98  
247  
291  
356  
57  
87  
247  
9  
172  
128  
4  
66  
393  
204  
382  
74  
234  
334  
281  
318  
476  
360  
207  
281  
42  
403  
145  
323  
205  
417  
33

166  
401  
145  
117  
424  
493  
213  
400  
17  
354  
443  
440  
230  
177  
77  
111  
208  
49  
51  
174  
173  
163  
352  
487  
314  
258  
78  
463  
124  
158  
282  
292  
93  
373  
486  
355  
411  
364  
330  
335  
496  
258  
99  
165  
100  
294  
129  
372  
362  
468  
435

368

377

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Output:

1. Create a random list of integers
2. Display the random list
3. Run 2PMMS

Enter your choice:

3

Enter the RAM size

10

-----Phase 1-----

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Block-1 before sorting

465

294

212

224

362

509

89

323

283

309

Block-1 after sorting (QuickSort)

89

212

224

283

294

309

323

362

465

509

Block-2 before sorting

53

487

6

291

496

327

169

199

98

247

Block-2 after sorting (QuickSort)

6  
53  
98  
169  
199  
247  
291  
327  
487  
496

Block-3 before sorting

291  
356  
57  
87  
247  
9  
172  
128  
4  
66

Block-3 after sorting (QuickSort)

4  
9  
57  
66  
87  
128  
172  
247  
291  
356

Block-4 before sorting

393  
204  
382  
74  
234  
334  
281  
318  
476  
360

Block-4 after sorting (QuickSort)

74  
204  
234  
281  
318

334  
360  
382  
393  
476  
Block-5 before sorting  
207  
281  
42  
403  
145  
323  
205  
417  
33  
166

Block-5 after sorting (QuickSort)

33  
42  
145  
166  
205  
207  
281  
323  
403  
417

Block-6 before sorting

401  
145  
117  
424  
493  
213  
400  
17  
354  
443

Block-6 after sorting (QuickSort)

17  
117  
145  
213  
354  
400  
401  
424  
443  
493

Block-7 before sorting

440  
230  
177  
77  
111  
208  
49  
51  
174  
173

Block-7 after sorting (QuickSort)

49  
51  
77  
111  
173  
174  
177  
208  
230  
440

Block-8 before sorting

163  
352  
487  
314  
258  
78  
463  
124  
158  
282

Block-8 after sorting (QuickSort)

78  
124  
158  
163  
258  
282  
314  
352  
463  
487

Block-9 before sorting

292  
93  
373  
486  
355  
411

364  
330  
335  
496

Block-9 after sorting (QuickSort)

93  
292  
330  
335  
355  
364  
373  
411  
486  
496

Block-10 before sorting

258  
99  
165  
100  
294  
129  
372  
362  
468  
435

Block-10 after sorting (QuickSort)

99  
100  
129  
165  
258  
294  
362  
372  
435  
468

Block-11 before sorting

368  
377

Block-11 after sorting (QuickSort)

368  
377

-----Phase 2-----

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=====  
Pass-1  
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4  
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89  
93  
98  
99  
100

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Pass-2

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111  
117  
124  
128  
129  
145  
145  
158  
163  
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173  
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258  
258  
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283  
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292  
294  
294  
309

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Pass-3

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314  
318  
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323  
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443  
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465  
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487  
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496  
509

Process finished with exit code 0

- Final sorted list (merged-sorted.txt)

4  
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