

# 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:** Dr. Nagi Basha

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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

6

9

17

33

42

49

51

53

57

66

74

77

78

87

89

93

98

99

100

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Pass-2

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111

117

124

128

129

145

145

158

163

165

166

169

172

173

174

177

199

204

205

207

208

212

213

224

230

234

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247

258

258

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281

282

283

291

291

292

294

294

309

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Pass-3

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314

318

323

323

327

330

334

335

352

354

355

356

360

362

362

364

368

372

373

377

382

393

400

401

403

411

417

424

435

440

443

463

465

468

476

486

487

487

493

496

496

509

Process finished with exit code 0

* Final sorted list (merged-sorted.txt)

4  
6  
9  
17  
33  
42  
49  
51  
53  
57  
66  
74  
77  
78  
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89  
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