```
1
     Exe A Lab assi 1
 2
 3
 4
 5
     Create database Institute
 6
     > use Institute
 7
     switched to db Institute
 8
 9
10
     Create collection Student.
11
     > db.createCollection("Student")
12
     { "ok" : 1 }
13
14
15
     Insert 10 documents
16
     > db.Student.insert({
17
     ... S_id:"S111", S_name:"James Smith", Branch:"CSE", Age: 20, Panel:"E",
18
     ... Address: {Area: "Kothrud", City: "Pune", Pincode: 412300},
     ... Subjects:[{sub name:"DBMS",score:85},{sub name:"TOC",score:81}],
19
20
     ... Area of Interest: ["DBMS", "Networking"]
21
     ... });
22
     WriteResult({ "nInserted" : 1 })
23
24
     > db.Student.find().pretty()
25
              " id" : ObjectId("60bb5715ae0512016f998c3f"),
26
27
              "S id" : "S111",
              "S name" : "James Smith",
28
29
              "Branch" : "CSE",
              "Age" : 20,
30
              "Panel" : "E",
31
32
              "Address" : {
33
                      "Area": "Kothrud",
                      "City" : "Pune",
34
                      "Pincode" : 412300
35
36
              "Subjects" : [
37
38
                      {
39
                               "sub name" : "DBMS",
40
                               "score" : 85
41
                      },
42
                      {
43
                               "sub name" : "TOC",
44
                               "score" : 81
45
                      }
46
47
              "Area of Interest" : [
                      "DBMS",
48
49
                      "Networking"
50
              ]
51
     }
52
     >
53
     >
54
55
     > db.Student.insertMany([
56
     ... {S_id:"S112",S_name:"Michael Smith",Branch:"CSE",Age:20,Panel:"E",
57
     ... Address: {Area: "ShivTirth", City: "Pune", Pincode: 412301},
58
     ... Subjects:[{sub name:"DBMS",score:81},{sub name:"IS",score:83}],
59
     ... Area of Interest:["DBMS","AI","ML"]},
60
     ... {S_id:"S113",S_name:"Robert Smith",Branch:"ECE",Age:21,Panel:"A",
     ... Address: {Area: "Swargate", City: "Pune", Pincode: 412303},
61
62
     ... Subjects:[{sub_name:"AI",score:79},{sub_name:"TOC",score:80}],
63
     ... Area of Interest:["DBMS","AI","ML","Networking"]},
64
     ... {S id:"S114", S name: "Maria Garcia", Branch: "MECH", Age: 21, Panel: "A",
65
     ... Address: {Area: "Shivajinagar", City: "Pune", Pincode: 412307},
     ... Subjects:[{sub name:"IS", score:90}, {sub name:"AI", score:82}],
     ... Area_of_Interest:["DBMS","Networking"]},
67
     ... {S_id:"S115",S_name:"David Smith",Branch:"ECE",Age:20,Panel:"B",
68
     ... Address: {Area: "Kothrud", City: "Pune", Pincode: 412300},
69
```

```
... Subjects:[{sub name:"TOC",score:78},{sub name:"AI",score:80}],
 71
      ... Area of Interest: ["AI", "DS"] },
 72
      ... {S id: "S116", S name: "Maria Rodriguez", Branch: "CSE", Age: 21, Panel: "B",
      ... Address: {Area: "Sangamvadi", City: "Pune", Pincode: 412311},
 73
 74
      ... Subjects:[{sub name:"IS",score:72},{sub name:"TOC",score:75}],
 75
      ... Area_of_Interest:["Networking","DWDM","OS"]},
 76
      ... {S id: "S117", S name: "Mary Smith", Branch: "Civil", Age: 20, Panel: "C",
 77
      ... Address: {Area: "Hadapsar", City: "Pune", Pincode: 412312},
 78
      ... Subjects:[{sub name:"TOC",score:92},{sub name:"IS",score:93}],
 79
      ... Area of Interest: ["DBMS", "DWDM", "OS"]},
 80
      ... {S id: "S118", S name: "Maria Hernandez", Branch: "Mech", Age: 21, Panel: "E",
      ... Address: {Area: "Swargate", City: "Pune", Pincode: 412303},
 81
      ... Subjects:[{sub name:"TOC",score:93},{sub name:"AI",score:91}],
 82
      ... Area of Interest: ["DBMS", "Web Dev"]},
 83
 84
      ... {S id: "S119", S name: "Lilly Martinez", Branch: "ECE", Age: 20, Panel: "C",
 85
      ... Address: {Area: "Kothrud", City: "Pune", Pincode: 412300},
      ... Subjects:[{sub_name:"IS",score:81},{sub name:"AI",score:90}],
 87
      ... Area of Interest: ["AWS", "Web Dev"] },
 88
      ... {S id: "S120", S name: "James Johnson", Branch: "CSE", Age: 21, Panel: "C",
 89
      ... Address: {Area: "Kothrud", City: "Pune", Pincode: 412300},
 90
      ... Subjects: [{sub name: "DBMS", score: 83}, {sub name: "AI", score: 87}],
 91
      ... Area of Interest: ["AWS", "Develops"] },
 92
      ...]);
 93
      {
 94
               "acknowledged" : true,
 95
               "insertedIds" : [
 96
                        ObjectId("60bb5739ae0512016f998c40"),
 97
                        ObjectId("60bb5739ae0512016f998c41"),
 98
                        ObjectId("60bb5739ae0512016f998c42"),
 99
                        ObjectId("60bb5739ae0512016f998c43"),
100
                        ObjectId("60bb5739ae0512016f998c44"),
101
                        ObjectId("60bb5739ae0512016f998c45"),
102
                        ObjectId("60bb5739ae0512016f998c46"),
103
                        ObjectId("60bb5739ae0512016f998c47"),
104
                        ObjectId("60bb5739ae0512016f998c48")
105
               ]
106
      }
107
      >
108
109
      > db.Student.find().pretty()
110
               " id" : ObjectId("60bb5715ae0512016f998c3f"),
111
               "S id" : "S111",
112
113
               "S name" : "James Smith",
               "Branch" : "CSE",
114
               "Age" : 20,
115
               "Panel" : "E",
116
117
               "Address" : {
118
                        "Area": "Kothrud",
                        "City" : "Pune",
119
120
                        "Pincode" : 412300
121
               "Subjects" : [
122
123
                        {
124
                                 "sub name" : "DBMS",
125
                                 "score": 85
126
                        },
127
                        {
128
                                 "sub name" : "TOC",
129
                                 "score" : 81
130
                        }
131
132
               "Area of Interest" : [
                        "DBMS",
133
134
                        "Networking"
135
               ]
136
      }
137
138
               " id" : ObjectId("60bb5739ae0512016f998c40"),
```

```
139
                "S id" : "S112",
140
                "S name" : "Michael Smith",
                "Branch" : "CSE",
141
                "Age" : 20,
"Panel" : "E",
142
143
                "Address" : {
144
                         "Area" : "ShivTirth",
145
                         "City" : "Pune",
146
147
                         "Pincode" : 412301
148
149
                "Subjects" : [
150
                         {
151
                                  "sub name" : "DBMS",
152
                                  "score" : 81
153
                         },
154
                         {
155
                                  "sub name" : "IS",
                                  "score" : 83
156
157
                         }
158
159
                "Area_of_Interest" : [
160
                         "DBMS",
                         "AI",
161
                         "ML"
162
163
                ]
164
165
      {
                " id" : ObjectId("60bb5739ae0512016f998c41"),
166
167
                "\overline{S} id" : "S113",
168
                "S name" : "Robert Smith",
169
                "Branch" : "ECE",
                "Age" : 21,
170
                "Panel" : "A",
171
                "Address" : {
172
                         "Area" : "Swargate",
173
                         "City" : "Pune",
174
                         "Pincode" : 412303
175
176
177
                "Subjects" : [
178
                         {
179
                                  "sub name" : "AI",
                                  "score" : 79
180
181
                         },
182
                         {
183
                                  "sub name" : "TOC",
                                  "score": 80
184
185
                         }
186
                "Area of Interest" : [
187
                         "DBMS",
188
189
                         "AI",
190
                         "ML",
191
                         "Networking"
192
                ]
193
      }
194
195
                " id" : ObjectId("60bb5739ae0512016f998c42"),
                "\overline{S} id" : "\overline{S}114",
196
                "S name" : "Maria Garcia",
197
                "Branch" : "MECH",
198
                "Age" : 21,
199
200
                "Panel" : "A",
                "Address" : {
201
202
                         "Area": "Shivajinagar",
203
                         "City" : "Pune",
204
                         "Pincode" : 412307
205
206
                "Subjects" : [
207
                         {
```

```
208
                                 "sub name" : "IS",
209
                                 "score": 90
210
                        },
211
                        {
212
                                 "sub name" : "AI",
                                 "score": 82
213
214
                        }
215
               ],
               "Area of_Interest" : [
216
217
                        "DBMS",
218
                        "Networking"
219
               ]
220
      }
221
      {
               " id" : ObjectId("60bb5739ae0512016f998c43"),
222
               "S id" : "S115",
223
224
               "S_name" : "David Smith",
225
               "Branch" : "ECE",
226
               "Age" : 20,
227
               "Panel" : "B",
228
               "Address" : {
229
                        "Area": "Kothrud",
230
                        "City" : "Pune",
                        "Pincode" : 412300
231
232
               "Subjects" : [
233
234
                        {
235
                                 "sub name" : "TOC",
                                 "score" : 78
236
237
                        },
238
                        {
239
                                 "sub name" : "AI",
                                 "score" : 80
240
241
                        }
242
               ],
               "Area_of_Interest" : [
243
                        "AI",
244
                        "DS"
245
246
               ]
247
      }
248
      {
               " id" : ObjectId("60bb5739ae0512016f998c44"),
249
               "S id" : "S116",
250
251
               "S name" : "Maria Rodriguez",
252
               "Branch" : "CSE",
253
               "Age" : 21,
               "Panel" : "B",
254
               "Address" : {
255
                        "Area" : "Sangamvadi",
256
                        "City" : "Pune",
257
258
                        "Pincode" : 412311
259
260
               "Subjects" : [
261
                        {
262
                                 "sub name" : "IS",
263
                                 "score" : 72
264
                        },
265
                        {
266
                                 "sub name" : "TOC",
                                 "score" : 75
267
268
                        }
269
               ],
270
               "Area of Interest" : [
271
                        "Networking",
272
                        "DWDM",
273
                        "OS"
274
               ]
275
      }
276
      {
```

```
277
               " id" : ObjectId("60bb5739ae0512016f998c45"),
               "\bar{S} id" : "S117",
278
               "S name" : "Mary Smith",
279
               "Branch" : "Civil",
280
               "Age" : 20,
281
               "Panel" : "C",
282
               "Address" : {
283
284
                        "Area" : "Hadapsar",
                        "City" : "Pune",
285
                        "Pincode" : 412312
286
287
               "Subjects" : [
288
289
                        {
290
                                 "sub name" : "TOC",
                                 "score": 92
291
                        },
292
293
                        {
294
                                 "sub name" : "IS",
295
                                 "score" : 93
296
                        }
297
               ],
298
               "Area of Interest" : [
299
                        "DBMS",
                        "DWDM",
300
301
                        "OS"
302
               ]
303
      }
304
      {
               " id" : ObjectId("60bb5739ae0512016f998c46"),
305
306
               "S id" : "S118",
               "S name" : "Maria Hernandez",
307
308
               "Branch" : "Mech",
309
               "Age" : 21,
               "Panel" : "E",
310
               "Address" : {
311
                        "Area" : "Swargate",
312
                        "City" : "Pune",
313
314
                        "Pincode" : 412303
315
316
               "Subjects" : [
317
                        {
318
                                 "sub name" : "TOC",
319
                                 "score" : 93
320
                        },
321
                        {
322
                                 "sub name" : "AI",
                                 "score": 91
323
324
                        }
325
326
               "Area of Interest" : [
327
                        "DBMS",
328
                        "Web Dev"
329
               ]
330
      }
331
332
               " id" : ObjectId("60bb5739ae0512016f998c47"),
333
               "\overline{S} id" : "S119",
               "S name" : "Lilly Martinez",
334
               "Branch" : "ECE",
335
               "Age" : 20,
336
               "Panel" : "C",
337
               "Address" : {
338
339
                        "Area" : "Kothrud",
340
                        "City" : "Pune",
341
                        "Pincode" : 412300
342
343
               "Subjects" : [
344
                        {
                                 "sub name" : "IS",
345
```

```
"score": 81
346
347
                         },
348
                         {
349
                                   "sub name" : "AI",
350
                                   "score" : 90
351
                         }
352
353
                "Area of Interest" : [
354
                         "AWS",
355
                         "Web Dev"
356
                ]
357
       }
358
       {
                " id" : ObjectId("60bb5739ae0512016f998c48"),
359
                "\bar{S} id" : "S120",
360
                "S name" : "James Johnson",
361
                "Branch" : "CSE",
362
                "Age" : 21,
363
                "Panel" : "C",
364
365
                "Address" : {
366
                         "Area": "Kothrud",
367
                         "City" : "Pune",
368
                         "Pincode" : 412300
369
370
                "Subjects" : [
371
                         {
372
                                   "sub name" : "DBMS",
373
                                   "score" : 83
374
                         },
375
                         {
376
                                   "sub name" : "AI",
377
                                   "score": 87
378
                         }
379
                "Area of Interest" : [
380
381
                         "AWS",
                         "Develops"
382
383
                ]
384
       }
385
386
387
       Increment Age by 2
388
       > db.Student.find({S id:"S111"})
       { "_id" : ObjectId("\bar{6}0bb5715ae0512016f998c3f"), "S_id" : "S111", "S_name" : "James
389
       Smith", "Branch" : "CSE", "Age" : 20, "Panel" : "E", "Address" : { "Area" : "Kothrud", "City" : "Pune", "Pincode" : 412300 }, "Subjects" : [ { "sub_name" : "DBMS", "score" :
       85 }, { "sub name" : "TOC", "score" : 81 } ], "Area of Interest" : [ "DBMS",
       "Networking" ] }
390
       > db.Student.find((S_id:"S111")).pretty()
391
392
                " id" : ObjectId("60bb5715ae0512016f998c3f"),
393
                "S id" : "S111",
                "S name" : "James Smith",
394
                "Branch" : "CSE",
395
396
                "Age" : 20,
397
                "Panel" : "E",
398
                "Address" : {
399
                         "Area" : "Kothrud",
                         "City" : "Pune",
400
                         "Pincode" : 412300
401
402
                "Subjects" : [
403
404
                         {
405
                                   "sub name" : "DBMS",
406
                                   "score": 85
407
                         },
408
                         {
409
                                   "sub name" : "TOC",
410
                                   "score" : 81
```

```
411
                       }
412
               ],
413
               "Area of Interest" : [
                       "DBMS",
414
415
                        "Networking"
416
               ]
417
      }
418
      >
419
      > db.Student.update({S id:"S111"}, {$inc:{Age:2}});
420
      WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })
421
422
      > db.Student.find({S id:"S111"}).pretty()
423
424
               " id" : ObjectId("60bb5715ae0512016f998c3f"),
               \overline{S} id" : "S111",
425
               "S name" : "James Smith",
426
               "Branch" : "CSE",
427
428
               "Age" : 22,
429
               "Panel" : "E",
430
               "Address" : {
431
                       "Area": "Kothrud",
432
                       "City" : "Pune",
433
                       "Pincode" : 412300
434
               "Subjects" : [
435
436
                        {
437
                                "sub name" : "DBMS",
438
                                "score": 85
439
                       },
440
                        {
441
                                "sub name" : "TOC",
442
                                "score" : 81
443
                       }
444
               ],
               "Area of Interest" : [
445
                       "DBMS",
446
447
                        "Networking"
448
               ]
449
      }
450
451
452
453
      Push Area of Interest
454
      > db.Student.update({S id:"S111"},{$push:{Area of Interest:{$each:["NLP"]}}})
455
      WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })
456
457
      > db.Student.find({S id:"S111"}).pretty()
458
459
               " id" : ObjectId("60bb5715ae0512016f998c3f"),
460
               "S id" : "S111",
               "S_name" : "James Smith",
461
462
               "Branch" : "CSE",
463
               "Age" : 22,
               "Panel" : "E",
464
465
               "Address" : {
466
                       "Area" : "Kothrud",
467
                       "City" : "Pune",
                       "Pincode" : 412300
468
469
               "Subjects" : [
470
471
                        {
472
                                "sub name" : "DBMS",
473
                                "score": 85
474
                       },
475
                        {
476
                                "sub name" : "TOC",
477
                                "score": 81
478
                        }
479
               ],
```

```
480
               "Area of Interest" : [
481
                       "DBMS",
482
                       "Networking",
483
                        "NLP"
484
               ]
485
      }
486
487
488
489
      pop subjects
490
      > db.Student.update({S id:"S111"},{$pop:{Subjects:-1}})
      WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })
491
      > db.Student.find({S id:"S111"}).pretty()
492
493
               " id" : ObjectId("60bb5715ae0512016f998c3f"),
494
               "S id" : "S111",
495
496
               "S_name" : "James Smith",
497
               "Branch" : "CSE",
498
               "Age" : 22,
499
               "Panel" : "E",
500
               "Address" : {
501
                       "Area": "Kothrud",
502
                       "City" : "Pune",
                       "Pincode" : 412300
503
504
               "Subjects" : [
505
506
                       {
507
                                "sub name" : "TOC",
                                "score" : 81
508
509
                       }
510
511
               "Area_of_Interest" : [
                       "DBMS",
512
513
                       "Networking",
514
                        "NLP"
515
               ]
516
517
518
519
      Update record
520
      >
      db.Student.update({S id:"S111"}, {$set:{Branch:"Mech", Address:{Area:"Hadapsar", Pincode:412
521
      WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })
522
523
      > db.Student.find((S_id:"S111")).pretty()
524
               " id" : ObjectId("60bb5715ae0512016f998c3f"),
525
               "S id" : "S111",
526
527
               "S name" : "James Smith",
528
               "Branch" : "Mech",
               "Age" : 22,
529
530
               "Panel" : "E",
               "Address" : {
531
532
                       "Area" : "Hadapsar",
                       "Pincode" : 412312
533
534
535
               "Subjects" : [
536
                        {
                                "sub name" : "TOC",
537
538
                                "score" : 81
539
                        }
540
541
               "Area of Interest" : [
542
                       "DBMS",
543
                       "Networking",
544
                       "NLP"
545
               ]
546
```

```
548
549
550
551
      Update Panel B to Panel A
552
      > db.Student.update({Panel:"B"},{$set:{Panel:"A"}},{multi:true})
      WriteResult({ "nMatched" : 2, "nUpserted" : 0, "nModified" : 2 })
553
554
555
      > db.Student.find({Panel:"A"}).pretty()
556
557
               " id" : ObjectId("60bb5739ae0512016f998c41"),
               \overline{S} id" : "S113",
558
               "S name": "Robert Smith",
559
               "Branch" : "ECE",
560
               "Age" : 21,
561
               "Panel" : "A",
562
               "Address" : {
563
564
                        "Area" : "Swargate",
565
                        "City" : "Pune",
566
                        "Pincode" : 412303
567
568
               "Subjects" : [
569
                        {
570
                                 "sub name" : "AI",
571
                                 "score" : 79
572
                        },
573
                        {
574
                                 "sub name" : "TOC",
                                 "score": 80
575
576
                        }
577
               ],
               "Area of Interest" : [
578
                        "DBMS",
579
                        "AI",
580
                        "ML",
581
582
                        "Networking"
583
               ]
584
      }
585
586
               " id" : ObjectId("60bb5739ae0512016f998c42"),
               "S id" : "S114",
587
               "S name" : "Maria Garcia",
588
589
               "Branch" : "MECH",
590
               "Age" : 21,
               "Panel" : "A",
591
               "Address" : {
592
593
                        "Area": "Shivajinagar",
                        "City" : "Pune",
594
                        "Pincode" : 412307
595
596
597
               "Subjects" : [
598
                        {
599
                                 "sub name" : "IS",
                                 "score" : 90
600
601
                        },
602
                        {
603
                                 "sub name" : "AI",
604
                                 "score" : 82
605
                        }
606
               ],
607
               "Area_of_Interest" : [
608
                        "DBMS",
609
                        "Networking"
610
               ]
611
      }
612
               " id" : ObjectId("60bb5739ae0512016f998c43"),
613
               \bar{S} id" : "S115",
614
615
               "S name" : "David Smith",
```

547

```
"Branch" : "ECE",
616
617
               "Age" : 20,
                "Panel" : "A",
618
                "Address" : {
619
620
                        "Area": "Kothrud",
                        "City" : "Pune",
621
                        "Pincode" : 412300
622
623
                "Subjects" : [
624
625
                         {
626
                                  "sub name" : "TOC",
627
                                  "score" : 78
628
                        },
629
                         {
                                  "sub name" : "AI",
630
631
                                  "score" : 80
632
                         }
633
               ],
634
                "Area of Interest" : [
635
                        "AI",
                        "DS"
636
637
               1
638
      }
639
               " id" : ObjectId("60bb5739ae0512016f998c44"),
640
               \overline{S} id" : "S116",
641
642
               "S name" : "Maria Rodriguez",
643
               "Branch" : "CSE",
               "Age" : 21,
644
               "Panel" : "A",
645
               "Address" : {
646
647
                        "Area": "Sangamvadi",
                        "City" : "Pune",
648
                        "Pincode" : 412311
649
650
                "Subjects" : [
651
652
                         {
653
                                  "sub name" : "IS",
654
                                  "score" : 72
655
                        },
656
                         {
657
                                  "sub name" : "TOC",
                                  "score" : 75
658
659
                        }
660
661
               "Area of Interest" : [
                        \overline{\ }Networking",
662
                        "DWDM",
663
                        "OS"
664
665
               ]
666
      }
667
668
669
670
671
      Update with upsert
672
673
      > db.Student.update({S id:"S121"},{$set:{Branch:"CSE",Panel:"A"}},{upsert:true})
674
      WriteResult({
675
               "nMatched" : 0,
                "nUpserted" : 1,
676
677
               "nModified" : 0,
678
                " id" : ObjectId("60bb5830f5322caf711ed8b1")
679
      })
680
      >
681
      > db.Student.find({S id:"S121"}).pretty()
682
683
                " id" : ObjectId("60bb5830f5322caf711ed8b1"),
               \overline{S} id" : "S121",
684
```

```
685
               "Branch" : "CSE",
686
               "Panel" : "A"
687
      }
688
      >
689
      > db.Student.remove({Panel:"C"})
690
      WriteResult({ "nRemoved" : 3 })
691
692
      > db.Student.find({"Subjects.score":{$gte:85}})
693
      { "id": ObjectId("60bb5739ae0512016f998c42"), "Sid": "S114", "S name": "Maria
      Garcia", "Branch": "MECH", "Age": 21, "Panel": "A", "Address": { "Area":
      "Shivajinagar", "City": "Pune", "Pincode": 412307 }, "Subjects": [ { "sub name":
      "IS", "score" : 90 }, { "sub_name" : "AI", "score" : 82 } ], "Area_of_Interest" : [
      "DBMS", "Networking" ] }
      { " id" : ObjectId("60bb5739ae0512016f998c46"), "S id" : "S118", "S_name" : "Maria
694
      Hernandez", "Branch": "Mech", "Age": 21, "Panel": "E", "Address": { "Area": "Swargate", "City": "Pune", "Pincode": 412303 }, "Subjects": [ { "sub_name": "TOC",
      "score": 93 }, { "sub name": "AI", "score": 91 } ], "Area of Interest": [ "DBMS",
      "Web Dev" ] }
695
      > db.Student.find({"Subjects.score":{$gte:85}}).pretty()
696
697
               " id" : ObjectId("60bb5739ae0512016f998c42"),
               "\overline{S} id" : "S114",
698
699
               "S name" : "Maria Garcia",
               "Branch" : "MECH",
700
701
               "Age" : 21,
702
               "Panel" : "A",
703
               "Address" : {
                        "Area" : "Shivajinagar",
704
705
                        "City" : "Pune",
706
                        "Pincode" : 412307
707
708
               "Subjects" : [
709
                        {
710
                                 "sub name" : "IS",
711
                                 "score" : 90
712
                        },
713
                        {
714
                                 "sub name" : "AI",
715
                                 "score" : 82
716
                        }
717
718
               "Area_of_Interest" : [
                        "DBMS",
719
720
                        "Networking"
721
               ]
722
      }
723
               " id" : ObjectId("60bb5739ae0512016f998c46"),
724
               "S id" : "S118",
725
726
               "S name" : "Maria Hernandez",
727
               "Branch" : "Mech",
               "Age" : 21,
728
729
               "Panel" : "E",
730
               "Address" : {
731
                        "Area" : "Swargate",
732
                        "City" : "Pune",
733
                        "Pincode" : 412303
734
735
               "Subjects" : [
736
                        {
737
                                 "sub name" : "TOC",
738
                                 "score" : 93
739
                        },
740
                        {
741
                                 "sub name" : "AI",
742
                                 "score" : 91
743
                        }
744
               "Area of Interest" : [
745
```

```
"DBMS",
746
747
                        "Web Dev"
748
               ]
749
750
751
752
753
      Use $gt, $gte, $lt
754
755
      > db.Student.find({"Subjects.score":{$gt:90}}).pretty()
756
      {
757
               " id" : ObjectId("60bb5739ae0512016f998c46"),
               "\bar{S} id" : "S118",
758
               "S name" : "Maria Hernandez",
759
               "Branch" : "Mech",
760
               "Age" : 21,
761
               "Panel" : "E",
762
               "Address" : {
763
764
                        "Area" : "Swargate",
765
                        "City" : "Pune",
766
                        "Pincode" : 412303
767
768
               "Subjects" : [
769
                        {
770
                                 "sub name" : "TOC",
771
                                 "score" : 93
772
                        },
773
                        {
774
                                 "sub name" : "AI",
775
                                 "score" : 91
776
                        }
777
               ],
778
               "Area of Interest" : [
779
                        "DBMS",
780
                        "Web Dev"
781
               ]
782
      }
783
      >
784
785
      > db.Student.find({"Subjects.score":{$1t:80}}).pretty()
786
787
               " id" : ObjectId("60bb5739ae0512016f998c41"),
               "S id" : "S113",
788
789
               "S name" : "Robert Smith",
790
               "Branch" : "ECE",
               "Age" : 21,
791
               "Panel" : "A",
792
               "Address" : {
793
                        "Area" : "Swargate",
794
795
                        "City" : "Pune",
796
                        "Pincode" : 412303
797
798
               "Subjects" : [
799
                        {
800
                                 "sub name" : "AI",
801
                                 "score" : 79
802
                        },
803
                        {
804
                                 "sub name" : "TOC",
                                 "score": 80
805
806
                        }
807
               ],
808
               "Area of Interest" : [
809
                        "DBMS",
                        "AI",
810
                        "ML",
811
812
                        "Networking"
813
               ]
814
```

```
815
      {
816
               " id" : ObjectId("60bb5739ae0512016f998c43"),
               \overline{S} id" : "S115",
817
818
               "S name": "David Smith",
               "Branch" : "ECE",
819
820
               "Age" : 20,
               "Panel" : "A",
821
               "Address" : {
822
                        "Area" : "Kothrud",
823
                        "City" : "Pune",
824
825
                        "Pincode": 412300
826
827
               "Subjects" : [
828
                        {
                                 "sub name" : "TOC",
829
830
                                 "score" : 78
831
                        },
832
                        {
833
                                 "sub name" : "AI",
834
                                 "score" : 80
835
                        }
836
               ],
               "Area of Interest" : [
837
                        "AI",
838
                        "DS"
839
840
               ]
841
      }
842
      {
843
               " id" : ObjectId("60bb5739ae0512016f998c44"),
844
               "S id" : "S116",
               "S name" : "Maria Rodriguez",
845
846
               "Branch" : "CSE",
847
               "Age" : 21,
               "Panel" : "A",
848
               "Address" : {
849
                        "Area" : "Sangamvadi",
850
                        "City" : "Pune",
851
852
                        "Pincode" : 412311
853
854
               "Subjects" : [
855
                        {
856
                                 "sub name" : "IS",
                                 "score" : 72
857
858
                        },
859
                        {
860
                                 "sub name" : "TOC",
861
                                 "score": 75
862
                        }
863
               ],
864
               "Area_of_Interest" : [
865
                        "Networking",
                        "DWDM",
866
867
                        "OS"
868
               ]
869
      }
870
      >
871
      >
872
873
      > db.Student.find({Age:{$gt:20}}).pretty()
874
875
               "_id" : ObjectId("60bb5715ae0512016f998c3f"),
               "\bar{S} id" : "S111",
876
               "S name" : "James Smith",
877
878
               "Branch" : "Mech",
879
               "Age" : 22,
880
               "Panel" : "E",
881
               "Address" : {
882
                        "Area" : "Hadapsar",
                        "Pincode" : 412312
883
```

```
884
885
               "Subjects" : [
886
                        {
887
                                 "sub name" : "TOC",
888
                                 "score" : 81
889
                        }
890
891
               "Area of Interest" : [
                        "DBMS",
892
893
                        "Networking",
                        "NLP"
894
895
               ]
896
      }
897
               " id" : ObjectId("60bb5739ae0512016f998c41"),
898
               "S_id" : "S113",
899
900
               "S_name" : "Robert Smith",
901
               "Branch" : "ECE",
902
               "Age" : 21,
903
               "Panel" : "A",
904
               "Address" : {
905
                        "Area": "Swargate",
906
                        "City" : "Pune",
907
                        "Pincode" : 412303
908
               "Subjects" : [
909
910
                        {
911
                                 "sub name" : "AI",
                                 "score" : 79
912
913
                        },
914
                        {
915
                                 "sub name" : "TOC",
                                 "score" : 80
916
917
                        }
918
               ],
               "Area of Interest" : [
919
                        "DBMS",
920
921
                        "AI",
922
                        "ML",
923
                        "Networking"
924
               ]
925
      }
926
927
               " id" : ObjectId("60bb5739ae0512016f998c42"),
               "\bar{S} id" : "S114",
928
               "S name" : "Maria Garcia",
929
               "Branch" : "MECH",
930
               "Age" : 21,
931
               "Panel" : "A",
932
933
               "Address" : {
                        "Area" : "Shivajinagar",
934
                        "City" : "Pune",
935
                        "Pincode" : 412307
936
937
938
               "Subjects" : [
939
                        {
940
                                 "sub name" : "IS",
                                 "score" : 90
941
942
                        },
943
                        {
944
                                 "sub name" : "AI",
945
                                 "score": 82
946
                        }
947
               "Area of_Interest" : [
948
949
                        "DBMS",
950
                        "Networking"
951
               ]
952
```

```
953
       {
 954
                " id" : ObjectId("60bb5739ae0512016f998c44"),
                \overline{S} id" : "S116",
 955
 956
                "S name": "Maria Rodriguez",
                "Branch" : "CSE",
 957
 958
                "Age" : 21,
                "Panel" : "A",
 959
                "Address" : {
 960
                         "Area" : "Sangamvadi",
 961
                         "City" : "Pune",
 962
 963
                         "Pincode" : 412311
 964
 965
                "Subjects" : [
 966
                         {
                                  "sub name" : "IS",
 967
 968
                                  "score" : 72
 969
                         },
 970
                         {
 971
                                  "sub name" : "TOC",
 972
                                  "score" : 75
 973
                         }
 974
                ],
                "Area of Interest" : [
 975
 976
                         "Networking",
 977
                         "DWDM",
                         "OS"
 978
 979
                ]
 980
       }
 981
       {
 982
                " id" : ObjectId("60bb5739ae0512016f998c46"),
                "S id": "S118",
 983
 984
                "S name" : "Maria Hernandez",
 985
                "Branch": "Mech",
                "Age" : 21,
 986
                "Panel" : "E",
 987
                "Address" : {
 988
                         "Area" : "Swargate",
 989
 990
                         "City" : "Pune",
 991
                         "Pincode" : 412303
 992
                },
 993
                "Subjects" : [
 994
                         {
 995
                                  "sub name" : "TOC",
 996
                                  "score" : 93
 997
                         },
 998
                         {
 999
                                  "sub name" : "AI",
1000
                                  "score" : 91
1001
                         }
1002
1003
                "Area of Interest" : [
1004
                         "DBMS",
1005
                         "Web Dev"
1006
                ]
1007
       }
1008
1009
1010
1011
1012
       Record starting with M
1013
       > db.Student.find({S_name:{$regex:/^M/}}).pretty()
1014
       {
1015
                " id" : ObjectId("60bb5739ae0512016f998c40"),
                "\overline{S} id" : "S112",
1016
                "S name" : "Michael Smith",
1017
1018
                "Branch" : "CSE",
                "Age" : 20,
1019
                "Panel" : "E",
1020
                "Address" : {
1021
```

```
1022
                         "Area": "ShivTirth",
1023
                         "City" : "Pune",
                         "Pincode" : 412301
1024
1025
                "Subjects" : [
1026
1027
                         {
1028
                                  "sub name" : "DBMS",
                                  "score": 81
1029
1030
                         },
1031
                         {
1032
                                  "sub name" : "IS",
1033
                                  "score" : 83
1034
                         }
1035
                "Area of_Interest" : [
1036
                         "DBMS",
1037
1038
                         "AI",
1039
                         "ML"
1040
                ]
1041
1042
                " id" : ObjectId("60bb5739ae0512016f998c42"),
1043
                "S id" : "S114",
1044
                "S name" : "Maria Garcia",
1045
                "Branch" : "MECH",
1046
1047
                "Age" : 21,
1048
                "Panel" : "A",
1049
                "Address" : {
                         "Area" : "Shivajinagar",
1050
                         "City" : "Pune",
1051
                         "Pincode" : 412307
1052
1053
                "Subjects" : [
1054
1055
                         {
1056
                                  "sub name" : "IS",
                                  "score" : 90
1057
1058
                         },
1059
                         {
1060
                                  "sub name" : "AI",
1061
                                  "score" : 82
1062
                         }
1063
                ],
1064
                "Area of Interest" : [
1065
                         "DBMS",
1066
                         "Networking"
1067
                ]
1068
       }
1069
                " id" : ObjectId("60bb5739ae0512016f998c44"),
1070
1071
                "S_id" : "S116",
                "S_name" : "Maria Rodriguez",
1072
1073
                "Branch" : "CSE",
1074
                "Age" : 21,
1075
                "Panel" : "A",
1076
                "Address" : {
1077
                         "Area": "Sangamvadi",
1078
                         "City" : "Pune",
                         "Pincode" : 412311
1079
1080
                "Subjects" : [
1081
1082
                         {
1083
                                  "sub name" : "IS",
1084
                                  "score" : 72
1085
                         },
1086
                         {
                                  "sub name" : "TOC",
1087
1088
                                  "score" : 75
1089
                         }
1090
                ],
```

```
1091
                "Area of Interest" : [
1092
                         "Networking",
1093
                         "DWDM",
1094
                         "OS"
1095
                ]
1096
       }
1097
       {
1098
                " id" : ObjectId("60bb5739ae0512016f998c46"),
                "\bar{S} id" : "S118",
1099
                "S name" : "Maria Hernandez",
1100
1101
                "Branch" : "Mech",
                "Age" : 21,
1102
                "Panel" : "E",
1103
                "Address" : {
1104
1105
                         "Area" : "Swargate",
                         "City" : "Pune",
1106
                         "Pincode" : 412303
1107
1108
1109
                "Subjects" : [
1110
                         {
1111
                                  "sub name" : "TOC",
1112
                                  "score" : 93
1113
                         },
1114
                         {
1115
                                  "sub name" : "AI",
1116
                                  "score" : 91
1117
                         }
1118
                ],
                "Area_of_Interest" : [
1119
1120
                         "DBMS",
1121
                         "Web Dev"
1122
                ]
1123
1124
       >
1125
1126
       > db.Student.find({S name:{$regex:/z$/}}).pretty()
1127
1128
                " id" : ObjectId("60bb5739ae0512016f998c44"),
1129
                "S_id" : "S116",
                "S_name" : "Maria Rodriguez",
1130
1131
                "Branch" : "CSE",
1132
                "Age" : 21,
                "Panel" : "A",
1133
1134
                "Address" : {
                         "Area" : "Sangamvadi",
1135
                         "City" : "Pune",
1136
                         "Pincode" : 412311
1137
1138
                "Subjects" : [
1139
1140
                         {
1141
                                  "sub name" : "IS",
1142
                                  "score" : 72
1143
                         },
1144
                         {
1145
                                  "sub name" : "TOC",
1146
                                  "score" : 75
1147
                         }
1148
                "Area of_Interest" : [
1149
                         "Networking",
1150
1151
                         "DWDM",
                         "OS"
1152
1153
                ]
1154
       }
1155
                " id" : ObjectId("60bb5739ae0512016f998c46"),
1156
                "\overline{S} id" : "S118",
1157
                "S name" : "Maria Hernandez",
1158
1159
                "Branch" : "Mech",
```

```
"Age" : 21,
1160
1161
                "Panel" : "E",
                "Address" : {
1162
                        "Area" : "Swargate",
1163
                        "City" : "Pune",
1164
                        "Pincode" : 412303
1165
1166
1167
                "Subjects" : [
1168
                         {
                                 "sub name" : "TOC",
1169
1170
                                 "score" : 93
1171
                        },
1172
                         {
                                 "sub_name" : "AI",
1173
                                 "score": 91
1174
1175
                         }
1176
                ],
1177
                "Area of Interest" : [
1178
                        "DBMS",
1179
                        "Web Dev"
1180
                ]
1181
       }
1182
1183
1184
1185
       Total number od Doc
1186
       > db.Student.count()
1187
1188
1189
1190
1191
       Doc with Area of Interest having four value
1192
       > db.Student.find({Area of Interest:{$size:4}}).pretty()
1193
       {
1194
                " id" : ObjectId("60bb5739ae0512016f998c41"),
                "S id" : "S113",
1195
                "S name": "Robert Smith",
1196
1197
                "Branch" : "ECE",
1198
                "Age" : 21,
1199
                "Panel" : "A",
1200
                "Address" : {
1201
                        "Area" : "Swargate",
1202
                        "City" : "Pune",
1203
                        "Pincode" : 412303
1204
                "Subjects" : [
1205
1206
                         {
1207
                                 "sub name" : "AI",
                                 "score" : 79
1208
1209
                        },
1210
                         {
1211
                                 "sub name" : "TOC",
                                 "score": 80
1212
                        }
1213
1214
1215
                "Area of Interest" : [
                        "DBMS",
1216
1217
                        "AI",
                        "ML",
1218
1219
                         "Networking"
1220
                ]
1221
       }
1222
1223
1224
1225
       Display only name
1226
       > db.Student.find({},{_id:0,S_name:1}).pretty()
1227
       { "S_name" : "James Smith" }
1228
       { "S_name" : "Michael Smith" }
```

```
1229
       { "S name" : "Robert Smith" }
1230
         "S name" : "Maria Garcia" }
         "S name" : "David Smith" }
1231
         "S name" : "Maria Rodriguez" }
1232
       { "S name" : "Maria Hernandez" }
1233
1234
1235
1236
1237
1238
       Sorting Doc in descending
1239
       > db.Student.find().sort({S name:-1}).pretty()
1240
1241
                " id" : ObjectId("60bb5739ae0512016f998c41"),
1242
                "\overline{S} id" : "S113",
                "S name" : "Robert Smith",
1243
1244
                "Branch" : "ECE",
1245
                "Age" : 21,
                "Panel" : "A",
1246
1247
                "Address" : {
1248
                         "Area" : "Swargate",
1249
                         "City" : "Pune",
1250
                         "Pincode" : 412303
1251
                "Subjects" : [
1252
1253
                         {
1254
                                  "sub name" : "AI",
1255
                                  "score" : 79
1256
                         },
1257
                         {
1258
                                 "sub name" : "TOC",
                                 "score": 80
1259
1260
                         }
1261
                "Area of Interest" : [
1262
                         "DBMS",
1263
1264
                         "AI",
1265
                         "ML",
1266
                         "Networking"
1267
                ]
1268
       }
1269
                " id" : ObjectId("60bb5739ae0512016f998c40"),
1270
                "S id" : "S112",
1271
1272
                "S name" : "Michael Smith",
1273
                "Branch" : "CSE",
                "Age" : 20,
1274
                "Panel" : "E",
1275
                "Address" : {
1276
                         "Area" : "ShivTirth",
1277
1278
                         "City" : "Pune",
1279
                         "Pincode" : 412301
1280
1281
                "Subjects" : [
1282
                         {
1283
                                  "sub name" : "DBMS",
1284
                                  "score" : 81
1285
                         },
1286
                         {
                                  "sub name" : "IS",
1287
                                  "score": 83
1288
1289
                         }
1290
1291
                "Area of Interest" : [
1292
                         "DBMS",
                         "AI",
1293
                         "ML"
1294
1295
                ]
1296
1297
```

```
1298
                 " id" : ObjectId("60bb5739ae0512016f998c44"),
1299
                "S id" : "S116",
                 "S name" : "Maria Rodriguez",
1300
                "Branch" : "CSE",
1301
1302
                 "Age" : 21,
                 "Panel" : "A",
1303
                 "Address" : {
1304
1305
                         "Area" : "Sangamvadi",
                         "City" : "Pune",
1306
                         "Pincode" : 412311
1307
1308
                 "Subjects" : [
1309
1310
                          {
                                  "sub name" : "IS",
1311
                                  "score": 72
1312
1313
                         },
1314
                          {
1315
                                  "sub name" : "TOC",
1316
                                  "score" : 75
1317
                          }
1318
                ],
1319
                 "Area of Interest" : [
1320
                         "Networking",
                         "DWDM",
1321
1322
                         "0S"
1323
                ]
1324
       }
1325
                " id" : ObjectId("60bb5739ae0512016f998c46"),
1326
                \overline{S} id": "S118",
1327
                "S name" : "Maria Hernandez",
1328
1329
                "Branch" : "Mech",
1330
                "Age" : 21,
                "Panel" : "E",
1331
                 "Address" : {
1332
                         "Area" : "Swargate",
"City" : "Pune",
1333
1334
1335
                         "Pincode" : 412303
1336
1337
                 "Subjects" : [
1338
                          {
1339
                                  "sub name" : "TOC",
1340
                                  "score" : 93
1341
                         },
1342
                          {
                                  "sub name" : "AI",
1343
                                  "score" : 91
1344
1345
                          }
1346
1347
                 "Area of Interest" : [
1348
                          "DBMS",
1349
                         "Web Dev"
1350
                ]
1351
       }
1352
1353
                " id" : ObjectId("60bb5739ae0512016f998c42"),
1354
                "\overline{S} id" : "S114",
                "S name" : "Maria Garcia",
1355
                 "Branch" : "MECH",
1356
                 "Age" : 21,
1357
1358
                 "Panel" : "A",
                 "Address" : {
1359
1360
                         "Area" : "Shivajinagar",
1361
                         "City" : "Pune",
1362
                         "Pincode" : 412307
1363
1364
                 "Subjects" : [
1365
                          {
1366
                                  "sub name" : "IS",
```

```
1367
                                   "score": 90
1368
                          },
1369
                          {
1370
                                   "sub name" : "AI",
1371
                                   "score" : 82
1372
                          }
1373
1374
                 "Area of Interest" : [
                          "DBMS",
1375
1376
                          "Networking"
1377
                 ]
1378
        }
1379
        {
                 " id" : ObjectId("60bb5715ae0512016f998c3f"),
1380
                 \overline{S} id" : "S111",
1381
                 "S_name" : "James Smith",
"Branch" : "Mech",
1382
1383
                 "Age" : 22,
1384
1385
                 "Panel" : "E",
1386
                 "Address" : {
1387
                          "Area" : "Hadapsar",
1388
                          "Pincode" : 412312
1389
                 "Subjects" : [
1390
1391
                          {
1392
                                   "sub name" : "TOC",
1393
                                   "score" : 81
1394
                          }
1395
                 ],
1396
                 "Area of Interest" : [
                         "DBMS",
1397
                          "Networking",
1398
                          "NLP"
1399
1400
                 ]
1401
        }
1402
        {
1403
                 " id" : ObjectId("60bb5739ae0512016f998c43"),
1404
                 "S id" : "S115",
1405
                 "S_name" : "David Smith",
1406
                 "Branch" : "ECE",
                 "Age" : 20,
1407
                 "Panel" : "A",
1408
                 "Address" : {
1409
1410
                          "Area": "Kothrud",
1411
                          "City" : "Pune",
                          "Pincode" : 412300
1412
1413
1414
                 "Subjects" : [
1415
                          {
1416
                                   "sub name" : "TOC",
1417
                                   "score" : 78
1418
                          },
1419
                          {
1420
                                   "sub name" : "AI",
1421
                                   "score": 80
1422
                          }
1423
                 ],
1424
                 "Area of Interest" : [
                          ΨAΙ",
1425
                          "DS"
1426
1427
                 ]
1428
       }
1429
        {
                 " id" : ObjectId("60bb5830f5322caf711ed8b1"),
1430
                 "\overline{S} id" : "S121",
1431
                 "Branch" : "CSE",
1432
1433
                 "Panel" : "A"
1434
        }
1435
```

```
1437
1438
       Query using and operation
1439
       > db.Student.find({$and:[{Age:{$gt:20}},{Panel:"A"}]}).pretty()
1440
1441
                " id" : ObjectId("60bb5739ae0512016f998c41"),
                "\overline{S} id" : "S113",
1442
1443
                "S name" : "Robert Smith",
1444
                "Branch" : "ECE",
1445
                "Age" : 21,
                "Panel" : "A",
                "Address" : {
1447
                         "Area" : "Swargate",
1448
                         "City" : "Pune",
1449
                         "Pincode" : 412303
1450
1451
                "Subjects" : [
1452
1453
                         {
1454
                                  "sub name" : "AI",
1455
                                  "score" : 79
1456
                         },
1457
                         {
1458
                                  "sub name" : "TOC",
                                  "score" : 80
1459
                         }
1460
1461
                "Area of Interest" : [
1462
                         "DBMS",
1463
1464
                         "AI",
1465
                         "ML",
1466
                         "Networking"
1467
                ]
1468
1469
                " id" : ObjectId("60bb5739ae0512016f998c42"),
1470
                "\overline{S} id" : "S114",
1471
                "S name" : "Maria Garcia",
1472
1473
                "Branch" : "MECH",
1474
                "Age" : 21,
                "Panel" : "A",
1475
1476
                "Address" : {
1477
                         "Area": "Shivajinagar",
                         "City" : "Pune",
1478
1479
                         "Pincode" : 412307
1480
                "Subjects" : [
1481
1482
                         {
1483
                                  "sub name" : "IS",
1484
                                  "score" : 90
1485
                         },
1486
                         {
1487
                                  "sub name" : "AI",
1488
                                  "score": 82
                         }
1489
                ],
1491
                "Area of Interest" : [
1492
                         "DBMS",
1493
                         "Networking"
1494
                ]
1495
       }
1496
                "_id" : ObjectId("60bb5739ae0512016f998c44"),
1497
1498
                "S id" : "S116",
1499
                "S name" : "Maria Rodriguez",
                "Branch" : "CSE",
1500
1501
                "Age" : 21,
                "Panel" : "A",
1502
                "Address" : {
1503
1504
                         "Area": "Sangamvadi",
```

1436

```
1505
                         "City" : "Pune",
1506
                          "Pincode" : 412311
1507
                 "Subjects" : [
1508
1509
                          {
                                  "sub name" : "IS",
1510
1511
                                   "score" : 72
1512
                         },
1513
                          {
1514
                                  "sub name" : "TOC",
                                  "score" : 75
1516
                          }
1517
1518
                 "Area_of_Interest" : [
                          \overline{\text{"}}Networking",
1519
                          "DWDM",
1520
                          "OS"
1521
1522
                 ]
1523
       }
1524
1525
1526
1527
1528
       Query using or operation
1529
       > db.Student.find(($or:[{Panel:"E"}, {Panel:"A"}]}).pretty()
1530
1531
                 " id" : ObjectId("60bb5715ae0512016f998c3f"),
                 "\overline{S} id" : "S111",
1532
                 "S name" : "James Smith",
1533
1534
                 "Branch" : "Mech",
1535
                 "Age" : 22,
                 "Panel" : "E",
1536
                 "Address" : {
1537
                         "Area" : "Hadapsar",
1538
                          "Pincode" : 412312
1539
1540
1541
                 "Subjects" : [
1542
                          {
1543
                                  "sub name" : "TOC",
1544
                                  "score" : 81
1545
                          }
1546
                 ],
1547
                 "Area of Interest" : [
1548
                          "DBMS",
                          "Networking",
1549
1550
                          "NLP"
1551
                 ]
1552
1553
1554
                 " id" : ObjectId("60bb5739ae0512016f998c40"),
1555
                 "\overline{S} id" : "S112",
1556
                 "S name" : "Michael Smith",
1557
                 "Branch" : "CSE",
1558
                 "Age" : 20,
1559
                 "Panel" : "E",
                 "Address" : {
1560
1561
                         "Area" : "ShivTirth",
                          "City" : "Pune",
1562
                         "Pincode" : 412301
1563
1564
                 },
1565
                 "Subjects" : [
1566
                          {
1567
                                  "sub name" : "DBMS",
1568
                                  "score": 81
1569
                         },
1570
                          {
1571
                                  "sub name" : "IS",
                                  "score" : 83
1572
1573
                         }
```

```
1574
                ],
1575
                "Area of Interest" : [
                         "DBMS",
1576
1577
                         "AI",
                         "ML"
1578
1579
                ]
1580
       }
1581
       {
                " id" : ObjectId("60bb5739ae0512016f998c41"),
1582
                "\overline{S} id" : "S113",
1583
                "S name" : "Robert Smith",
1584
1585
                "Branch" : "ECE",
                "Age" : 21,
1586
                "Panel" : "A",
1587
                "Address" : {
1588
                         "Area" : "Swargate",
1589
                         "City": "Pune",
1590
1591
                         "Pincode" : 412303
1592
1593
                "Subjects" : [
1594
                         {
1595
                                  "sub name" : "AI",
1596
                                  "score" : 79
1597
                         },
1598
                         {
1599
                                  "sub name" : "TOC",
1600
                                  "score" : 80
1601
                         }
1602
                ],
1603
                "Area of Interest" : [
1604
                         "DBMS",
1605
                         "AI",
                         "ML",
1606
1607
                         "Networking"
1608
                ]
1609
       }
1610
1611
                " id" : ObjectId("60bb5739ae0512016f998c42"),
1612
                "S_id" : "S114",
1613
                "S_name" : "Maria Garcia",
1614
                "Branch" : "MECH",
                "Age" : 21,
1615
                "Panel" : "A",
1616
1617
                "Address" : {
                         "Area" : "Shivajinagar",
1618
                         "City" : "Pune",
1619
                         "Pincode" : 412307
1620
1621
                "Subjects" : [
1622
1623
                         {
1624
                                  "sub name" : "IS",
1625
                                  "score" : 90
1626
                         },
1627
                         {
1628
                                  "sub name" : "AI",
1629
                                  "score": 82
1630
                         }
1631
                "Area of Interest" : [
1632
                         "DBMS",
1633
1634
                         "Networking"
1635
                ]
1636
       }
1637
                " id" : ObjectId("60bb5739ae0512016f998c43"),
1638
                "\bar{S} id" : "S115",
1639
1640
                "S name" : "David Smith",
                "Branch" : "ECE",
1641
1642
                "Age" : 20,
```

```
1643
                "Panel" : "A",
1644
                "Address" : {
                         "Area" : "Kothrud",
1645
                         "City" : "Pune",
1646
                         "Pincode" : 412300
1647
1648
1649
                "Subjects" : [
1650
                         {
1651
                                  "sub name" : "TOC",
                                  "score" : 78
1652
                         },
1653
1654
                         {
1655
                                  "sub name" : "AI",
                                  "score" : 80
1656
1657
                         }
1658
1659
                "Area of Interest" : [
1660
                         "AI",
1661
                         "DS"
1662
                ]
1663
       }
1664
1665
                " id" : ObjectId("60bb5739ae0512016f998c44"),
                "S_id" : "S116",
"S_name" : "Maria Rodriguez",
1666
1667
                "Branch" : "CSE",
1668
                "Age" : 21,
1669
                "Panel" : "A",
1670
1671
                "Address" : {
1672
                         "Area" : "Sangamvadi",
                         "City" : "Pune",
1673
1674
                         "Pincode" : 412311
1675
1676
                "Subjects" : [
1677
                         {
1678
                                  "sub name" : "IS",
1679
                                  "score" : 72
1680
                         },
1681
                         {
1682
                                  "sub name" : "TOC",
1683
                                  "score" : 75
                         }
1684
1685
                "Area of Interest" : [
                         "Networking",
1687
1688
                         "DWDM",
1689
                         "OS"
1690
1691
       }
1692
1693
                " id" : ObjectId("60bb5739ae0512016f998c46"),
1694
                "S id" : "S118",
1695
                "S name" : "Maria Hernandez",
1696
                "Branch" : "Mech",
1697
                "Age" : 21,
                "Panel" : "E",
1698
1699
                "Address" : {
                         "Area" : "Swargate",
1700
                         "City" : "Pune",
1701
                         "Pincode" : 412303
1702
1703
1704
                "Subjects" : [
1705
                         {
1706
                                  "sub name" : "TOC",
1707
                                  "score" : 93
1708
                         },
1709
                         {
1710
                                  "sub name" : "AI",
1711
                                  "score" : 91
```

```
1712
                         }
1713
                ],
1714
                 "Area_of_Interest" : [
                         "DBMS",
1715
1716
                          "Web Dev"
1717
                ]
1718
       }
1719
       {
                " id" : ObjectId("60bb5830f5322caf711ed8b1"),
1720
                "S id" : "S121",
1721
1722
                "Branch" : "CSE",
1723
                "Panel" : "A"
1724
       }
1725
1726
1727
1728
       Display only two documents
1729
       > db.Student.find().pretty().limit(2)
1730
1731
                 " id" : ObjectId("60bb5715ae0512016f998c3f"),
                "\overline{S} id" : "S111",
1732
1733
                "S name" : "James Smith",
1734
                "Branch" : "Mech",
1735
                "Age" : 22,
1736
                "Panel" : "E",
                 "Address" : {
1737
                         "Area": "Hadapsar",
1738
                         "Pincode" : 412312
1739
1740
1741
                 "Subjects" : [
1742
                          {
1743
                                  "sub name" : "TOC",
                                  "score" : 81
1744
1745
                         }
1746
1747
                 "Area of Interest" : [
                         \overline{\ }DBMS",
1748
1749
                          "Networking",
1750
                         "NLP"
1751
                ]
1752
       }
1753
       {
                " id" : ObjectId("60bb5739ae0512016f998c40"),
1754
                "\overline{S} id" : "S112",
1755
                "S name" : "Michael Smith",
1756
                "Branch" : "CSE",
1757
1758
                "Age" : 20,
                "Panel" : "E",
1759
                 "Address" : {
1760
                         "Area" : "ShivTirth",
1761
                         "City" : "Pune",
1762
1763
                         "Pincode" : 412301
1764
1765
                 "Subjects" : [
1766
                          {
1767
                                  "sub name" : "DBMS",
                                  "score" : 81
1768
1769
                         },
1770
                          {
1771
                                  "sub name" : "IS",
1772
                                  "score": 83
1773
                          }
1774
1775
                 "Area of Interest" : [
                         "DBMS",
1776
                         "AI",
1777
1778
                         "ML"
1779
                ]
1780
```

```
1782
1783
1784
       Query using all operation
1785
       > db.Student.find({Area of Interest:{$all:["DBMS","ML"]}}).pretty()
1786
                " id" : ObjectId("60bb5739ae0512016f998c40"),
1787
                \overline{S} id" : "S112",
1788
                "S name" : "Michael Smith",
1789
                "Branch" : "CSE",
1790
1791
                "Age" : 20,
1792
                "Panel" : "E",
                "Address" : {
1793
1794
                         "Area" : "ShivTirth",
                         "City" : "Pune",
1795
                         "Pincode" : 412301
1796
1797
                },
1798
                "Subjects" : [
1799
                         {
1800
                                  "sub name" : "DBMS",
1801
                                  "score" : 81
1802
                         },
1803
                         {
                                  "sub name" : "IS",
1804
                                  "score": 83
1805
1806
                         }
1807
1808
                "Area of Interest" : [
                         "DBMS",
1809
1810
                         "AI",
                         "ML"
1811
1812
                ]
1813
       }
1814
                " id" : ObjectId("60bb5739ae0512016f998c41"),
1815
                "\bar{S} id" : "S113",
1816
1817
                "S name": "Robert Smith",
1818
                "Branch" : "ECE",
1819
                "Age" : 21,
                "Panel" : "A",
1820
1821
                "Address" : {
1822
                         "Area" : "Swargate",
1823
                         "City" : "Pune",
1824
                         "Pincode" : 412303
1825
                "Subjects" : [
1826
1827
                         {
1828
                                  "sub name" : "AI",
                                  "score" : 79
1829
1830
                         },
1831
                         {
1832
                                  "sub name" : "TOC",
1833
                                  "score": 80
1834
                         }
1836
                "Area of Interest" : [
                         "DBMS",
1837
1838
                         "AI",
                         "ML",
1839
                         "Networking"
1840
1841
                ]
1842
       }
1843
1844
1845
1846
1847
1848
```

1849

1781

1850 > db.Customer.drop()
1851 true
1852
1853