```
1
2 //
                           Hospital Management System
4 #include < iostream >
5 #include <fstream >
6 #include < iomanip >
7 #include < string >
8 #include < stdlib.h>
9 #include < stdio.h>
10
11
12
13 using namespace std;
14
15 //function declarations
16
void clear_screen();
void menu();
int chooseMain();
void getDoctorDatabase();
void getPatientDatabase();
void getBedDatabase();
void getPatientReport();
24
25
_{26} //the password class
27 // -----
28
29 class password {
30 private:
31
   string pass;
32 public:
33
    void getPassword() {
34
      cout << "\n\t\t\t\t\t\tChoose a password for your system: " ;</pre>
35
36
      cin >> pass;
37
38
    int verifyPassword()
39
40
41
      string x;
      cout << "\n\t\t\t\t\t\tEnter the password: ";</pre>
42
43
      cin >> x;
      if (x == pass)
44
45
        return 1;
       else
46
        return 0;
47
48
49
50
    void passwordProtect() {
      int veri = verifyPassword();
51
52
53
      if (veri == 1) {
        cout << "\n\t\t\t\t\t\tAccess Granted!" << endl;</pre>
54
55
      else
56
```

```
cout << "\n\t\t\t\t\tAccess Denied!\n\n\t\t\t\t\tSystem will</pre>
58
             \n\n\t\t\t\t\tPlease come back again." << endl;
59
         exit(0);
60
61
    }
62
63 };
64
65 // password class ends
66 // -----
67
68
69
71 //the doctor class
73
74
75 class doctor {
76 public:
    string d_fname, d_lname;
    int d_ID, d_age, experience, d_totalno;
78
   string qual, d_city;
79
string getSpec();
    friend void addDoc();
81
     friend void editDoc(doctor &docobj);
    friend void displayDoc();
83
   friend void deleteDoc();
84
    friend void dispDatabase();
85
    friend void numberofDocs();
friend void getDoctorDatabase();
86
87
88 };
90
91 // doctor class ends here
92 // -----
93
95
96 // Doctor Specility
97 //----
98
99 string doctor::getSpec() {
    string sp;
100
101
     cout << "\t\t\t\t\t\t\t1.GENERAL_MEDICINE" << endl;</pre>
102
    cout << "\t\t\t\t\t\t\t\t2.NEUROLOGY" << endl;</pre>
103
    cout << "\t\t\t\t\t\t\t\t3.ONCOLOGY" << endl;</pre>
104
     cout << "\t\t\t\t\t\t\t\t4.HAEMATOLOGY" << endl;</pre>
105
106
     cout << "\t\t\t\t\t\t\t5.GASTROENTEROLOGY" << endl;</pre>
     cout << "\t\t\t\t\t\t\t6.GYNAECOLOGY " << endl;</pre>
107
     cout << endl;</pre>
108
109
     int s;
     cout << "\t\t\t\t\t\t";</pre>
110
111
     cin >> s;
     switch (s) {
112
113
```

```
case 1: {
114
115
       sp = "GENERAL_MEDICINE";
       break;
116
117
     case 2: {
118
      sp = "NEUROLOGY";
119
120
       break;
121
122
     case 3: {
      sp = "ONCOLOGY";
123
124
       break;
125
     case 4: {
126
      sp = "HAEMATOLOGY";
127
       break;
128
129
     case 5: {
130
       sp = "GASTROENTEROLOGY";
131
132
133
134
     case 6: {
      sp = "GYNAECOLOGY ";
135
       break;
136
137
     default: {
138
       \label{lem:cout} \verb|cout| << "\n\t\t\t\t\t\come on!Enter a valid option." << endl; \\
139
140
141
142
143
144
     return sp;
145
146 }
147 // Doctor Speciality Ends
148 //-----
149
150
151
152
153
154 //the Adding New Doctor function
155 //---
156
157
158
void addDoc() {
   doctor d;
160
     cout << "\n\t\t\t\tFill up the following details" << endl;</pre>
161
     cout << "\t\t
162
      " << endl;
    cout << "\n\t\t\t\t\t\tID: ";</pre>
163
164
     cin >> d.d_ID;
     cout << "\n\t\t\t\t\t\tFirst Name: ";</pre>
165
166
     cin >> d.d_fname;
     cout << "\n\t\t\t\t\t\tLast Name: ";</pre>
167
cin >> d.d_lname;
```

```
cout << "\n\t\t\t\t\t\tAge: ";</pre>
169
170
     cin >> d.d_age;
     cout << "\n\t\t\t\t\t\tChoose Qualification among the following:</pre>
171
          172
     int q;
173
     cout << "\t\t\t\t\t\t";</pre>
174
175
     cin >> q;
     if (q == 1)
176
       d.qual = "MBBS";
177
     else d.qual = "MD";
178
     cout << "\n\t\t\t\t\t\tChoose Specialization among the following:</pre>
179
        " << endl;;
     string spec = d.getSpec();
180
     cout << "\n\t\t\t\t\tExperience (in Years): ";</pre>
181
     cin >> d.experience;
182
     cout << "\n\t\t\t\t\t\tCity: ";</pre>
183
184
     cin >> d.d_city;
185
186
     clear_screen();
187
     fstream fileObj;
188
     fileObj.open("doctor.txt", ios::app );
189
     fileObj.seekp (0, ios::end);
190
191
     fileObj << d.d_ID << endl << d.d_fname << endl << d.d_lname <<
              endl << d.d_age << endl << d.qual << endl << spec << endl
192
              d.experience << endl << d.d_city << endl;</pre>
193
     fileObj.close();
194
195
196
197
     cout << "\n\t\t\t\t\t\tNew Doctor profile created successfully!" <<</pre>
198
        endl << endl << endl;</pre>
199
200
201
     cout << "\n\t\t\t\tEnter 1 to return to Doctor Database\n\t\t\</pre>
       \t\tEnter 2 to Exit." << endl;</pre>
202
     cout << "\t\t\t\t\t";</pre>
     int c;
203
204
     cin >> c;
     if (c == 1) {
205
206
       clear_screen();
       getDoctorDatabase();
207
208
209
210
     else
       exit(0);
211
212
213 }
214
215 // Add Doctor Functions End Here
216 //-----
217
218
219
220
221 // Edit Doctor Function Starts Here
```

```
222 //-----
223
224
void editDoc(doctor &docobj)
226 {
227
228
              string x;
              cout << "\n\n\t\t\t\tEnter the ID of the Doctor whose profile</pre>
229
                  you want to Edit: ";
230
              cin >> x;
              fstream fileObj("doctor.txt");
231
              fileObj.seekg(0);
232
233
234
              int age, exp, count = 0;
              string ID, fname, lname, ci, qua, spe;
235
              while (fileObj >> ID >> fname >> lname >> age >> qua >> spe >>
236
                   exp >> ci)
237
238
                    if (ID == x) {
                        239
                                      << "\t\t\t\t\t2.First Name:" << fname << endl << "\t\t\t\t\t\t3.Last Name:" << lname << endl
240
241
                                       << "\t\t\t\t\t4.Age:" << age << endl
242
                                      243
                                      << "\t\t\t\t\t6.Specialization:" << spe << endl
244
                                      << "\t\t\t\t\t7.Experience:" << exp << endl
245
                                      << "\t\t\t\t\t8.City:" << ci << endl << endl;
246
247
                         count++;
248
                        break;
249
250
251
              fileObj.close();
252
253
254
255
              if (count == 0) {
256
257
                    cout << "\n\t\t\t\t\t\t\t\no matching records found!" << endl;</pre>
                    \label{lem:cout} \begin{tabular}{lll} \begin{tabu
258
                    \n\t\t\t\t\ttEnter 2 to Exit." << endl;</pre>
                   cout << "\t\t\t\t\t\t";</pre>
259
                    int c;
260
261
                    cin >> c;
                    if (c == 1) {
262
                        clear_screen();
263
264
                        getDoctorDatabase();
265
266
                    else
267
268
                        exit(0);
269
270
271
272
              fstream file("doctor.txt");
273
              file.seekg (0, ios::beg);
274
file.seekg(0);
```

```
string line;
276
277
      ofstream tempObj;
      tempObj.open("copy.txt");
278
      tempObj.seekp(0);
279
     int skip = 0;
int age1, exp1;
280
281
282
      string fname1, lname1, ci1, qua1, spe1;
     file.seekg(0); file.seekg(0, ios::cur);
283
284
285
      while (file >> line >> fname1 >> lname1 >> age1 >> qua1 >> spe1
286
       >> exp1 >> ci1)
287
288
        if (line != x) {
          tempObj << line << endl << fname1 << endl</pre>
289
                   << lname1 << endl << age1 << endl << qua1 << endl
290
                   << spe1 << endl << exp1 << endl << ci1 << endl;
291
292
293
     }
294
295
     file.close();
     tempObj.close();
296
     remove("doctor.txt");
297
298
      int result;
     char oldname[] = "copy.txt";
299
      char newname[] = "doctor.txt";
300
     result = rename( oldname , newname );
301
     //datatransfer ends
302
     int edit;
303
     cout << "\t\t\t\tEnter number corresponding to the Field you</pre>
304
       want to Edit: ";
     cin >> edit;
305
     cout << endl;</pre>
306
     switch (edit)
307
308
309
     case 1: {
       cout << "\t\t\t\t\tID :";</pre>
310
311
        cin >> ID;
       break;
312
313
     case 2: {
314
       cout << "\t\t\t\t\tFirst Name: ";</pre>
315
        cin >> fname;
316
317
318
       break;
     }
319
     case 3: {
320
        cout << "\t\t\t\t\tLast Name: ";</pre>
321
        cin >> lname;
322
323
324
       break;
325
326
     case 4: {
        cout << "\t\t\t\t\tAge: ";</pre>
327
328
        cin >> age;
       break;
329
330
```

```
case 5: {
331
                     332
                     t\t\t\t
                                  1.MBBS\n\t\t\t\t\t\t\t2.MD" << endl;
333
                     cout << "\t\t\t\t\t";</pre>
334
                     int q;
335
336
                     cin >> q;
                     if (q == 1) {
337
                         qua = "MBBS";
338
339
340
                     else {
341
                         qua = "MD";
342
343
344
345
                    break;
              }
346
              case 6: {
347
348
                     clear_screen();
                     spe = docobj.getSpec();
349
350
                     break;
351
              case 7: {
352
                     cout << "\t\t\t\t\tExperience: ";</pre>
353
                     cin >> exp;
354
355
                     break;
356
              case 8: {
357
                     cout << "\t\t\t\tCity: ";</pre>
358
                     cin >> ci;
359
360
                     break;
361
               default: {
362
                     cout << "\t\t\t\t\t\tInvalid Input!" << endl;</pre>
363
                     cout << "\n\n\t\t\t\t\tEnter 1 to return to Doctor Database\n</pre>
364
                     cout << "\t\t\t\t\t\t";</pre>
365
366
                     int c;
                     cin >> c;
367
                     if (c == 1) {
368
                          clear_screen();
369
                          getDoctorDatabase();
370
371
372
373
                          exit(0);
374
375
376
              }
377
378
               clear_screen();
379
               cout << "\t\t\t-----"
380
                     << endl << endl;
               381
                       \label{lambda} {\tt Name:"} \begin{tabular}{ll} \tt Name:" & \tt Condlete 
                     << endl << "\t\t\t\t\t\t4.Age:" << age << endl << "\t\t\t\t\t\t5.
                    Qualification: " << qua << endl << "\t\t\t\t\t\t\6.Specialization:"
```

```
<< spe << endl << "\t\t\t\t\t7.Experience:" << exp << endl <<
      "\t\t\t\t << ci << endl << endl;
382
     fstream newObj;
383
     newObj.open("doctor.txt", ios::app);
384
     newObj.seekp (0, ios::end);
385
     newObj << ID << endl << fname << endl << lname
386
     << endl << age << endl << qua << endl << spe
387
     << endl << exp << endl << ci << endl;
    newObj.close();
389
390
391
392
     cout << "\t\t\t\t" << "
393
       -----" << endl;
394
     395
      \t\t\tEnter 2 to Exit." << endl;</pre>
396
     cout << "\n\t\t\t\t";
    int c;
397
     cin >> c;
    if (c == 1) {
399
      clear_screen();
400
      getDoctorDatabase();
401
402
403
    else
404
      exit(0);
405
406 }
407
408
409 // Edit Doctor Functions Ends Here
410 //----
411
412
413
414
415 //the Display Doctor Function
416 //-
417
418
419 void displayDoc()
420 {
421
    int x;
    cout << "\n\n\t\t\t\tEnter the ID of the Doctor whose profile</pre>
422
      you want to Edit: ";
     cin >> x;
423
    ifstream file; file.open("doctor.txt", ios::out | ios::in);
424
    file.seekg(0);
425
427
     int ID, age, exp, count = 0;
     string fname, lname, ci, qua, spe;
428
429
    while (file >> ID >> fname >> lname >> age >> qua >> spe >> exp
430
      >> ci)
431
432
```

```
if (ID == x)
433
434
         cout << "\n\n\t\t\t\t\t\1.ID:" << ID << endl</pre>
435
              436
              << "\t\t\t\t\t\3.Last Name:" << lname << endl
437
              << "\t\t\t\t\t4.Age:" << age << endl
438
              439
              << "\t\t\t\t\t6.Specialization:" << spe << endl
440
              << "\t\t\t\t\t7.Experience:" << exp << endl
441
              << "\t\t\t\t\t8.City:" << ci << endl << endl;
442
443
         count++;
       }
444
445
446
     file.close();
     if (count == 0)
447
       cout << "\n\t\t\t\t\t\t\t\no matching records found!" << endl;</pre>
448
449
     cout << "\t\t\t\t\t" << "
450
       -----" << endl;
451
     cout << "\n\n\t\t\t\tEnter 1 to return to Doctor Database\n\n\t</pre>
452
      \t\t\tEnter 2 to Exit." << endl;</pre>
     cout << "\n\t\t\t\t\t";</pre>
453
454
     int c;
     cin >> c;
455
     if (c == 1) {
456
      clear_screen();
457
       getDoctorDatabase();
458
459
460
461
      exit(0);
462
463
464 }
465
466 // Display Doctor Functions End
467 // -
468
469
470
_{471} //the Delete Doctor function
472 // --
473
474
475 void deleteDoc() {
476
    string x;
     cout << "\n\n\t\t\t\tEnter the ID of the Doctor whose profile</pre>
477
      you want to Edit: ";
478
479
     cin >> x;
     fstream fileObj("doctor.txt");
480
     fileObj.seekg(0);
481
482
     int age, exp, count = 0;
483
     string ID, fname, lname, ci, qua, spe;
484
     while (fileObj >> ID >> fname >> lname >> age >> qua >> spe >>
485
    exp >> ci)
```

```
{
486
487
                  if (ID == x) {
                       cout << "\n\t\t\t\t\t\t
488
                                        489
                                        << "\t\t\t\t\t3.Last Name:" << lname << end
490
                                        << "\t\t\t\t\t4.Age:" << age << endl
491
                                        << "\t\t\t\t\t5.Qualification:" << qua << endl
492
                                        << "\t\t\t\t\t\6.Specialization:" << spe << endl
493
                                        494
                                        << "\t\t\t\t\t8.City:" << ci << endl << endl;
495
496
                       count++;
497
                       break;
498
            }
499
500
             fileObj.close();
501
            if (count == 0) {
502
                  cout << "\n\t\t\t\t\t\t\t\no matching records found!" << endl;</pre>
503
504
                  \label{lem:cout} \begin{tabular}{lll} \begin{tabu
                 cout << "\t\t\t\t\t\t";</pre>
                 int c;
506
                  cin >> c;
507
508
                  if (c == 1) {
                     clear_screen();
509
510
                       getDoctorDatabase();
511
512
513
                  else
                      exit(0);
514
515
516
517
             cout << "\t\t\t\t\tAre you sure you want to delete this profile?</pre>
518
             \n \text{t} t t t 1.YES
519
520
             << endl;
             cout << "\n\t\t\t\t\t";</pre>
522
             int n; cin >> n;
523
524
             if (n == 1) {
                  fstream file("doctor.txt");
                  file.seekg (0, ios::beg);
527
                  file.seekg(0);
                  string line;
528
                  ofstream tempObj;
529
                  tempObj.open("copy.txt");
530
                 tempObj.seekp(0);
531
532
                  int skip = 0;
                  int age1, exp1;
534
                  string fname1, lname1, ci1, qua1, spe1;
                  file.seekg(0); file.seekg(0, ios::cur);
536
537
                  while (file >> line >> fname1 >> lname1 >> age1 >> qua1 >> spe1
538
                  >> exp1 >> ci1)
539
540
                     if (line != x) {
```

```
tempObj << line << endl << fname1 << endl</pre>
541
542
                    << lname1 << end1 << age1 << end1 << qua1
                    << endl << spe1 << endl << exp1 << endl
543
                    << ci1 << endl;
544
         }
545
546
547
       file.close();
548
549
       tempObj.close();
       remove("doctor.txt");
550
       int result;
551
       char oldname[] = "copy.txt";
552
       char newname[] = "doctor.txt";
553
       result = rename( oldname , newname );
554
       clear_screen();
555
       cout << "\n\t\t\t\tFile successfully deleted" << endl;</pre>
556
557
558
559
     clear_screen();
560
     cout << "\t\t\t\t\t" << "
562
563
     \verb|cout| << \verb|"\n\n\t\t\t\t\t\tEnter| 1 to return to Doctor Database \n\n|
      \t\t\t\t\t\tEnter 2 to Exit." << endl;</pre>
     cout << "\n\t\t\t\t\t";
     int c;
565
     cin >> c;
566
     if (c == 1) {
567
       clear_screen();
568
569
       getDoctorDatabase();
570
571
     else
572
       exit(0);
573
574
575 }
577 // Delete Doctor Functions Ends Here
578 // -----
579
580
581
582
583
584 //the Display DataBase Function
585 //-----
586
587
589
590
591 void dispDatabase() {
    fstream fileObj("doctor.txt");
592
593
     fileObj.seekg(0);
    cout << "\t\t\t\t\t\tDOCTOR DATABASE" << endl << endl;</pre>
594
int age, exp, count = 0;
```

```
string ID, fname, lname, ci, qua, spe;
596
     while (fileObj >> ID >> fname >> lname >> age >> qua >> spe >>
597
      exp >> ci)
     { count++;
598
      cout << "\t\t\t\t\tDoctor Profile:" << count << endl;</pre>
599
      600
601
           << "\t\t\t\t\t3.Last Name:" << lname << endl
602
           603
           604
           << "\t\t\t\t\t6.Specialization:" << spe << endl
605
           << "\t\t\t\t\t7.Experience:" << exp << endl
606
           << "\t\t\t\t\t\t8.City:" << ci << endl << endl;
607
608
609
610
611
    if (count == 0) {
      cout << "\n\t\t\t\t\t\t\t\no matching records found!" << endl;</pre>
612
613
614
    615
                           -----" << endl;
616
617
    cout << "\n\n\t\t\t\tEnter 1 to return to Doctor Database\n\n\t</pre>
618
      \t\t\tEnter 2 to Exit." << endl;</pre>
    cout << "\n\t\t\t\t\t";</pre>
619
620
    int c;
621
    cin >> c;
    if (c == 1) {
622
623
      clear_screen();
      getDoctorDatabase();
624
625
626
627
    else
628
      exit(0);
629 }
631 // Display Database Function Ends Here
632
633
634
635
636
637
638 //Total NUmber Of Doctors function
639 // -----
640
641
642 void numberofDocs() {
643
    fstream fileObj("doctor.txt");
644
645
    fileObj.seekg(0);
    int age, exp, count = 0;
646
    string ID, fname, lname, ci, qua, spe;
647
    while (fileObj >> ID >> fname >> lname >> age >> qua >> spe >>
648
   exp >> ci)
```

```
{ count++;
649
 650
                                            \label{lem:cout} \begin{tabular}{ll} \begin{
 651
                                                          hospital=" << count << endl << endl;
 652
 653
                                            cout << "\t\t\t\t\t" << "</pre>
                                                            -----" << endl;
 654
                                            \mbox{\bf cout} ~<<\mbox{\bf "}\mbox{\bf n}\mbox{\bf t}\mbox{\bf n}\mbox{\bf n}\mbox{\bf
 655
                                                  \t\t\t\t\t\tEnter 2 to Exit." << endl;</pre>
                                            cout << "\n\t\t\t\t\t\t";</pre>
 656
                                            int c;
  657
                                            cin >> c;
 658
                                        if (c == 1) {
 659
                                                clear_screen();
  660
                                                          getDoctorDatabase();
  661
 662
663
 664 else
                                                  exit(0);
 665
 666 }
667 //Total NUmber Of Doctors function Ends Here
668 // -----
```

```
1
2 //Patient Class
3 // -----
4 class patient {
5 public:
    string fname, lname, occupation, p_city, dis, addDate, relDate;
6
    int p_age, p_ID;
    long double phnumber, bill;
   string getDept();
    friend void getDoctor();
10
    friend void addPat();
11
    friend void editPat(patient &pat);
12
    friend void displayPat();
13
    friend void deletePat();
    friend void dispPatDatabase();
15
    friend void numberofPats();
16
17
    friend void getPatientDatabase();
18
19 };
20
21 //-
22
23
24
25 // Department Function
27
28
29 string patient::getDept() {
    string sp;
30
    cout << "\t\t\t\t\t\t\t1.GENERAL_MEDICINE" << endl;</pre>
31
    cout << "\t\t\t\t\t\t\t2.NEUROLOGY" << endl;</pre>
32
    cout << "\t\t\t\t\t\t\t\t3.ONCOLOGY" << endl;</pre>
33
    cout << "\t\t\t\t\t\t\t\t4.HAEMATOLOGY" << endl;</pre>
34
    cout << "\t\t\t\t\t\t\t\t5.GASTROENTEROLOGY" << endl;</pre>
35
    cout << "\t\t\t\t\t
36
    int s;
37
    cout << "\t\t\t\t\t\t";</pre>
    cin >> s;
39
40
    switch (s) {
41
    case 1: {
42
     sp = "GENERAL_MEDICINE";
43
      break;
44
45
    case 2: {
46
      sp = "NEUROLOGY";
47
48
      break;
49
50
    case 3: {
      sp = "ONCOLOGY";
51
52
      break;
53
    case 4: {
54
      sp = "HAEMATOLOGY";
55
      break;
56
```

```
case 5: {
58
59
      sp = "GASTROENTEROLOGY";
60
      break;
61
    case 6: {
62
      sp = "GYNAECOLOGY ";
63
64
      break;
65
    default: {
66
      cout << "\nCome on!Enter a valid option." << endl;</pre>
67
68
69
70
71
    }
72
    return sp;
73 }
74 //-----
75
76
77
78 // Get Doctor Function
79 //----
80
81
82 void getDoctor() {
    patient p;
83
    string dept;
84
    cout << "\n\t\t\tEnter the kind of specialization you are</pre>
85
      looking for:" << endl << endl;</pre>
    dept = p.getDept();
86
    fstream fileObj("doctor.txt");
87
    fileObj.seekg(0);
88
89
90
    int age, exp, count = 0;
    string ID, fname, lname, ci, qua, spe;
91
    while (fileObj >> ID >> fname >> lname >> age >> qua >> spe >>
92
      exp >> ci)
93
      if (spe == dept) {
94
95
        cout << "\n\t\t\t\tThe doctors available with " << dept <<</pre>
       " specialization are:" << endl << endl;</pre>
        cout << "\n\t\t\t\t\t\t1.ID:" << ID << endl</pre>
96
             << "\t\t\t\t\t\t\2.First Name:" << fname << endl
97
             << "\t\t\t\t\t\t\t3.Last Name:" << lname << endl
98
             << "\t\t\t\t\t\t4.Age:" << age << endl
99
             << "\t\t\t\t\t\t5.Qualification:" << qua << endl
             << "\t\t\t\t\t\t6.Specialization:" << spe << endl
101
             << "\t\t\t\t\t\t7.Experience:" << exp << endl
102
             104
        count++;
106
107
    fileObj.close();
108
    if (count == 0) {
109
      110
```

```
111
112
      cout << "\t\t\t\t\t" << "
                                          ----" << endl:
113
114
     cout << "\n\n\t\t\t\t\tEnter 1 to return to Patient Database\n\</pre>
115
       t\t\t\t\tEnter 2 to Exit." << endl;
     cout << "\n\t\t\t\t\t\t";</pre>
116
     int c;
117
118
     cin >> c;
     if (c == 1) {
119
       clear_screen();
120
        getPatientDatabase();
121
122
123
124
125
       exit(0);
126 }
127 // Get Doctor Functions End Here
128 //
129
130
131
_{132} // Add patient Function
133 //---
134
135
136
137 void addPat() {
138
139
     cout << "\n\t\t\t\tFill up the following details" << endl;</pre>
140
     cout << "\t\t
141
       " << endl;
142
     cout << "\n\t\t\t\t\t\tID: ";</pre>
143
144
     cin >> p.p_ID;
     cout << "\n\t\t\t\t\t\tFirst Name: ";</pre>
145
     cin >> p.fname;
146
     cout << "\n\t\t\t\t\t\tLast Name: ";</pre>
147
     cin >> p.lname;
148
     cout << "\n\t\t\t\t\tAge: ";</pre>
149
     cin >> p.p_age;
150
     cout << "\n\t\t\t\t\t\tPhone No: ";</pre>
151
     cin >> p.phnumber;
152
     cout << "\n\t\t\t\t\t\t\tCccupation: ";</pre>
153
     cin >> p.occupation;
154
     cout << "\n\t\t\t\t\t\tCity: ";</pre>
155
     cin >> p.p_city;
cout << "\n\t\t\t\t\tDisease/Symptoms: ";</pre>
156
157
     cin >> p.dis;
158
     cout << "\n\t\t\t\t\tAdmission date (DD/MM/YYYY): ";</pre>
159
     cin >> p.addDate;
160
     cout << "\n\t\t\t\t\tRelease date (DD/MM/YYYY): ";</pre>
161
     cin >> p.relDate;
162
cout << "\n\t\t\t\t\tTotal Bill generated: ";
```

```
cin >> p.bill;
164
165
     cout << "\n\t\t\t\t\tKind of Specialization required: " << endl</pre>
     string dept = p.getDept();
166
     clear_screen();
167
     fstream patObj;
168
     patObj.open("patient.txt", ios::app );
169
     patObj.seekp (0, ios::end);
170
171
     patObj << p.p_ID << endl << p.fname << endl << p.lname << endl
     << p.p_age << endl << p.phnumber << endl << p.occupation << endl
172
     << p.p_city << endl << p.dis << endl << p.addDate << endl
173
     << p.relDate << endl << p.bill << endl << dept << endl;
174
     patObj.close();
175
176
177
     cout << "\n\t\t\t\t\tNew Patient profile created successfully!"</pre>
178
      << endl << endl;
179
     cout << "\n\t\t\t\t\t" << "</pre>
                                      -----" << endl;
     182
      t\t\tEnter 2 to Exit." << endl;
183
     cout << "\t\t\t\t\t";</pre>
     int c;
184
185
     cin >> c;
     if (c == 1) {
186
      clear_screen();
187
       getPatientDatabase();
188
189
190
191
     else
       exit(0);
192
193 }
194
195 // Add Patient Ends Here
196 //--
197
198
199
200
201
202
203
204
205 // Edit Patient Detail
206 //-----
207
208
209 void editPat(patient &pat)
210 {
211
    cout << "\n\n\t\t\t\tEnter the ID of the Patient whose profile</pre>
212
      you want to Edit: ";
    cin >> x;
    fstream patObj("patient.txt");
214
patObj.seekg(0);
```

```
string fname, lname, occupation, p_city, dis, addDate, relDate,
216
     int p_age, p_ID, count = 0;
217
     long double phnumber, bill;
218
     while (patObj >> p_ID >> fname >> lname >> p_age >> phnumber
219
     >> occupation >> p_city >> dis >> addDate >> relDate >> bill >>
220
      dept)
    {
221
       if (p_ID == x) {
222
       223
         << "\t\t\t\t\t\t2.First Name:" << fname << endl << "\t\t\t\t\t\t3.Last Name:" << lname << endl
224
225
         << "\t\t\t\t\t4.Age" << p_age << endl
226
         227
         << "\t\t\t\t\t6.Occupation:" << occupation << endl
228
         << "\t\t\t\t\t7.City:" << p_city << endl
229
         << "\t\t\t\t\t\t8.Disease/Symptoms:" << dis << endl
230
         <<"\t\t\t\t\t
231
      endl
         << "\t\t\t\t\t10.Release date(DD/MM/YYYY):" << relDate <<
       endl
         << "\t\t\t\t\t11.Total Bill generated:" << bill << endl
         << "\t\t\t\t\t12.Kind of Specialization required:" << dept
234
      << endl << endl;
        break;
235
236
    }
238
     patObj.close();
239
     if (count == 0)
240
241
      cout << "\n\t\t\t\t\t\t\t\no matching records found!" << endl;</pre>
242
      \verb"cout" << "\n\t\t\t\t\t"" << "
243
       -----" << endl:
244
245
      n\n\t\t\t\t\t\tEnter 2 to Exit." << endl;</pre>
246
      cout << "\t\t\t\t\t\t";</pre>
      int c;
247
      cin >> c;
248
       if (c == 1) {
249
        clear_screen();
250
        getPatientDatabase();
251
252
      else
253
254
        exit(0);
255
256
257
     fstream file("patient.txt");
258
    file.seekg (0, ios::beg);
259
    file.seekg(0);
260
261
     int line;
    ofstream tempObj;
262
263
     tempObj.open("copy2.txt");
     tempObj.seekp(0);
264
265   int skip = 0;
```

```
string fname1, lname1, occupation1, p_city1, dis1, addDate1,
266
       relDate1, dept1;
267
     int p_age1;
     long double phnumber1, bill1;
268
     file.seekg(0); file.seekg(0, ios::cur);
269
270
     while (file >> line >> fname1 >> lname1 >> p_age1 >> phnumber1 >>
271
        occupation1 >> p_city1 >> dis1 >> addDate1 >> relDate1 >>
       bill1 >> dept1)
272
     {
        if (line != x) {
273
          tempObj << line << endl << fname1 << endl << lname1
274
          << endl << p_age1 << endl << phnumber1 << endl << occupation1
275
         << endl << p_city1 << endl << dis1 << endl << addDate1 <<
276
       endl
         << relDate1 << endl << bill1 << endl << dept1 << endl;
277
278
     }
279
280
     file.close();
281
     tempObj.close();
     remove("patient.txt");
283
     int result;
284
     char oldname[] = "copy2.txt";
285
     char newname[] = "patient.txt";
286
     result = rename( oldname , newname );
287
     //datatransfer ends
288
     int edit;
289
     cout << "\t\t\t\tEnter number corresponding to the Field you</pre>
290
       want to Edit: ";
     cin >> edit;
     switch (edit)
292
293
294
     case 1: {
       cout << "\n\t\t\t\tID :";</pre>
295
296
       cin >> p_ID;
       break;
297
298
299
     case 2: {
300
       cout << "\n\t\t\t\t\tFirst Name:";</pre>
       cin >> fname;
301
302
303
       break;
304
     case 3: {
305
       cout << "\n\t\t\t\tLast Name:" ;</pre>
306
       cin >> lname;
307
308
309
       break:
310
311
     case 4: {
       cout << "\n\t\t\t\t\tAge:";</pre>
312
313
       cin >> p_age;
       break;
314
315
     case 5: {
316
cout << "\n\t\t\t\tPhone No.:";
```

```
cin >> phnumber;
318
319
                     break;
320
               case 6: {
321
                      cout << "\n\t\t\t\t\t0ccupation:";</pre>
322
                     cin >> occupation;
323
324
                     break;
325
326
               case 7: {
                     cout << "\n\t\t\t\t\tCity:";</pre>
327
328
                      cin >> p_city;
329
                     break;
330
331
               case 8: {
332
                     cout << "\n\t\t\t\tDisease/Symptoms:";</pre>
333
334
                      cin >> dis;
335
                     break;
336
               }
               case 9: {
337
                     cout << "\n\t\t\t\t
338
                      cin >> addDate;
339
                     break;
340
               }
341
              case 10:
342
343
                     cout << "\n\t\t\t\t\tRelease date (DD/MM/YYYY):";</pre>
344
                     cin >> relDate;
345
346
               case 11: {
347
                      cout << "\n\t\t\t\tTotal Bill generated:";</pre>
348
                      cin >> bill;
349
350
                     break;
351
               case 12: {
352
                     \label{eq:cout} \begin{tabular}{ll} \begin{t
353
                     dept = pat.getDept();
354
355
                     break;
356
357
               default: {
                      cout << "\n\t\t\t\t\t\tInvalid Input!" << endl;</pre>
358
                      cout << "\n\n\t\t\t\t\tEnter 1 to return to Doctor Database\n</pre>
359
                     cout << "\t\t\t\t\t\t";</pre>
360
                      int c;
361
                     cin >> c;
362
                      if (c == 1) {
363
364
                          clear_screen();
                           // getDoctorDatabase();
365
366
                           getPatientDatabase();
367
                     }
368
369
                      else
370
                           exit(0);
371
372
373
```

```
374
375
376
     clear_screen();
377
     cout << "\t\t\t-
                         -----Updated Profile-----
378
       << endl << endl;
     \verb|cout| << "\n\t\t\t\t\t\t\t.ID:" << p_ID << endl|
           << "\t\t\t\t\t2.First Name:" << fname << endl
380
           << "\t\t\t\t\t3.Last Name:" << lname << endl
381
          << \text{ "}\t\t\t\t\t\t\t\Age" << p\_age << endl
382
          << "\t\t\t\t\t5.Phone No.:" << phnumber << endl
<< "\t\t\t\t6.Occupation:" << occupation << endl</pre>
383
384
           << "\t\t\t\t\t7.City:" << p_city << endl
385
           << "\t\t\t\t\t8.Disease/Symptoms:" << dis << endl
386
          387
       endl
388
          << "\t\t\t\t\t10.Release date(DD/MM/YYYY):" << relDate <</pre>
       endl
           << "\t\t\t\t\t11.Total Bill generated:" << bill << endl
           << "\t\t\t\t\t12.Kind of Specialization required:" << dept
390
       << endl << endl;
     fstream newObj;
391
     newObj.open("patient.txt", ios::app);
392
393
     newObj.seekp (0, ios::end);
     newObj << p_ID << endl << fname << endl << lname << endl</pre>
394
395
     << p_age << endl << phnumber << endl << occupation << endl
     << p_city << endl << dis << endl << addDate << endl
396
     << relDate << endl << bill << endl << dept << endl;
397
     newObj.close();
398
399
400
     //after completion
     cout << "\n\t\t\t\t\t" << "
401
                                     -----" << endl;
402
403
404
     cout << "\n\n\t\t\t\t\tEnter 1 to return to Patient Database\n\n\</pre>
      t\t\t\tEnter 2 to Exit." << endl;
405
     cout << "\n\t\t\t\t\t";</pre>
     int c;
406
407
     cin >> c;
     if (c == 1) {
408
       clear_screen();
409
410
       getPatientDatabase();
411
     }
412
413
414
415
       exit(0);
416
417 }
418
419 // Edit Patient Detail Function Ends Here
420 //--
421
422
423
424
```

```
425
426
427
428
429 //the Display Particular Patient Function
430 //----
431
432
433 void displayPat()
434 €
              int x;
435
              \begin{tabular}{ll} \textbf{cout} &<< \begin{tabular}{ll} \textbf{cout} &<< \begin{tabular}{ll} \textbf{n} \textbf{n} \textbf{t} \textbf{t} \textbf{t} \textbf{t} \textbf{Enter} & \textbf{ID} & \textbf{of} & \textbf{the Patient whose profile} \\ \textbf{cout} &<< \begin{tabular}{ll} \textbf{cout} &< \bular} &< \begin{tabular}{ll} \textbf{cout} &< \begin{tabular} \textbf{cout} &< \begin{tabular}{ll} \textbf{co
436
                 you want to Edit: ";
437
              cin >> x;
             fstream patObj("patient.txt");
438
439
              patObj.seekg(0);
440
              string fname, lname, occupation, p_city, dis, addDate, relDate,
                  dept;
441
              int p_age, p_ID, count = 0;
              long double phnumber, bill;
442
              while (patObj >> p_ID >> fname >> lname >> p_age >> phnumber >>
                   occupation >> p_city >> dis >> addDate >> relDate >> bill >>
                   dept)
              {
444
                   if (p_ID == x) {
445
                         cout << "\n\n\t\t\t\t\t1.ID:" << p_ID << endl</pre>
446
                           << "\t\t\t\t\t2.First Name:" << fname << endl
447
                            << "\t\t\t\t\t\3.Last Name:" << lname << endl
448
                           << \text{"}\ \text{t}\ \text{t}\ \text{t}\ \text{t4.Age"} \ << \ \text{p}\ \text{age} \ << \ \text{endl}
449
                           << "\t\t\t\t\t\t5.Phone No.:" << phnumber << endl
<< "\t\t\t\t6.Occupation:" << occupation << endl</pre>
450
451
                            << "\t\t\t\t\t7.City:" << p_city << endl
452
                            << "\t\t\t\t\t\t8.Disease/Symptoms:" << dis << endl
453
                           <<"\t\t\t\t\t\t\19.Admission date(DD/MM/YYYY):" << addDate <<
454
                   endl
                           << "\t\t\t\t\t10.Release date(DD/MM/YYYY):" << relDate <</pre>
                   endl
                           << "\t\t\t\t\11.Total Bill generated:" << bill << endl
456
                           << "\t\t\t\t12.Kind of Specialization required:" << dept
457
                    << endl << endl;
458
                        count++;
                         break;
459
460
                   }
             }
461
462
463
              patObj.close();
              if (count == 0)
464
                   cout << "\n\t\t\t\t\tNo matching records found!" << endl;</pre>
465
466
              cout << "\t\t\t\t\t" << "
468
              469
                 t\t\t\tEnter 2 to Exit." << endl;
              cout << "\n\t\t\t\t\t";</pre>
             int c:
471
472 cin >> c;
```

```
if (c == 1) {
473
474
       clear_screen();
       getPatientDatabase();
475
476
477
    else
478
479
       exit(0);
480 }
481 //the Display Particular Patient Function Ends Here
482 //-
483
484
485
486
487
488 //Delete Patient function
489 //-----
490
491
492
493
   void deletePat()
494 €
495
     cout << "\n\n\t\t\t\tEnter the ID of the Patient whose profile</pre>
496
      you want to Edit: ";
     cin >> x;
    fstream patObj("patient.txt");
498
499
    patObj.seekg(0);
    string fname, lname, occupation, p_city, dis, addDate, relDate,
500
      dept;
     int p_age, p_ID, count = 0;
502
     long double phnumber, bill;
     while (patObj >> p_ID >> fname >> lname >> p_age >> phnumber >>
503
       occupation >> p_city >> dis >> addDate >> relDate >> bill >>
       dept)
504
     {
       if (p_ID == x) {
505
        506
          507
          << "\t\t\t\t\t3.Last Name:" << lname << endl
508
          << "\t\t\t\t\t\4.Age" << p_age << endl
509
510
          << "\t\t\t\t\t5.Phone No.:" << phnumber << endl
          << "\t\t\t\t\t6.Occupation:" << occupation << endl
511
          << "\t\t\t\t\t7.City:" << p_city << endl
512
          << "\t\t\t\t\t\t8.Disease/Symptoms:" << dis << endl
513
          <<"\t\t\t\t\t\t\19.Admission date(DD/MM/YYYY):" << addDate <<
514
       endl
          << "\t\t\t\t\t10.Release date(DD/MM/YYYY):" << relDate <<
          << "\t\t\t\t\t11.Total Bill generated:" << bill << endl
          << "\t\t\t\t\t12.Kind of Specialization required:" << dept
517
       << endl << endl;
518
        count++:
         break;
519
520
    }
521
522
```

```
patObj.close();
523
524
     if (count == 0) {
       cout << "\n\t\t\t\t\t\t\no matching records found!" << endl;</pre>
       526
       n\t t\t t\t t tenter 2 to Exit." << endl;
       cout << "\t\t\t\t\t\t\t";</pre>
527
528
       int c;
       cin >> c;
530
       if (c == 1) {
         clear_screen();
531
         getPatientDatabase();
532
533
534
535
       else
         exit(0);
536
537
538
     cout << "\t\t\t\tAre you sure you want to delete this profile?\</pre>
539
       n\t\t\t\t1.YES\n\t\t\t\t1.YES\n\t\t
     cout << "\n\t\t\t\t\t";
540
541
     int n; cin >> n;
     if (n == 1)
542
543
544
       fstream file("patient.txt");
       file.seekg (0, ios::beg);
545
546
       file.seekg(0);
       int line;
547
       ofstream tempObj;
548
       tempObj.open("copy2.txt");
549
       tempObj.seekp(0);
551
       int skip = 0;
       string fname1, lname1, occupation1, p_city1, dis1, addDate1,
552
       relDate1, dept1;
553
       int p_age1;
       long double phnumber1, bill1;
554
       file.seekg(0); file.seekg(0, ios::cur);
556
557
       while (file >> line >> fname1 >> lname1 >> p_age1 >> phnumber1
558
       >> occupation1 >> p_city1 >> dis1 >> addDate1 >> relDate1 >>
       bill1 >> dept1)
559
560
         if (line != x) {
           {\tt temp0bj} \ << \ {\tt line} \ << \ {\tt endl} \ << \ {\tt fname1} \ << \ {\tt endl} \ << \ {\tt lname1}
561
            << endl << p_age1 << endl << phnumber1 << endl <<
562
       occupation1
            << endl << p_{city1} << endl << dis1 << endl << addDate1 <<
563
       endl
           << relDate1 << endl << bill1 << endl << dept1 << endl;
564
         }
       }
566
567
568
       file.close();
       tempObj.close();
569
570
       remove("patient.txt");
       int result:
571
572
       char oldname[] = "copy2.txt";
```

```
char newname[] = "patient.txt";
573
574
      result = rename( oldname , newname );
      clear_screen();
575
       cout << "\n\t\t\t\t\tFile successfully deleted" << endl;</pre>
576
577
578
579
    clear_screen();
580
     cout << "\t\t\t\t\t" << "
581
       -----" << endl:
582
     \texttt{cout} << "\n\n\t\t\t\t\tEnter 1 to return to Patient Database\n\
583
      n\t\t\t\t\tEnter 2 to Exit." << endl;
584
     cout << "\t\t\t\t\t\t";</pre>
     int c;
585
     cin >> c;
586
    if (c == 1) {
587
      clear_screen();
588
589
       getPatientDatabase();
590
591
592
    else
593
594
      exit(0);
595 }
596 // Delete Patient Function Ends Here
597 //----
598
599
600
602 //the Display Patient Database function
603 //----
604
605
606 void dispPatDatabase()
607 {
608
     fstream Obj("patient.txt");
    Obj.seekg(0);
609
610
     cout << "\t\t\t\t\t\tPATIENT DATABASE" << endl << endl;</pre>
611
    string fname, lname, occupation, p_city, dis, addDate, relDate,
612
      dept;
     int p_age, p_ID, count = 0;
613
     long double phnumber, bill;
614
     while (Obj >> p_ID >> fname >> lname >> p_age >> phnumber >>
615
      occupation >> p_city >> dis >> addDate >> relDate >> bill >>
      dept)
     { count++;
616
       617
       618
         << "\t\t\t\t\t2.First Name:" << fname << endl
619
         << "\t\t\t\t\t3.Last Name:" << lname << endl
620
         << "\t\t\t\t\t4.Age" << p_age << endl
621
         << "\t\t\t\t\t5.Phone No.:" << phnumber << endl
622
         << "\t\t\t\t\t6.Occupation:" << occupation << endl
623
        << "\t\t\t\t\t7.City:" << p_city << endl
624
```

```
<< "\t\t\t\t\t8.Disease/Symptoms:" << dis << endl
625
         <<"\t\t\t\t\t\t9.Admission date(DD/MM/YYYY):" << addDate <<
       endl
         << "\t\t\t\t\t10.Release date(DD/MM/YYYY):" << relDate <<
627
       endl
         << "\t\t\t\t\t11.Total Bill generated:" << bill << endl
628
          << "\t\t\t\t\t12.Kind of Specialization required:" << dept
629
       << endl << endl;
631
632
633
     Obj.close();
634
635
     if (count == 0) {
636
      cout << "\n\t\t\t\t\t\t\t\no matching records found!" << endl;</pre>
637
638
639
640
     cout << "\t\t\t\t\t" << "
     642
      t\t\t\tEnter 2 to Exit." << endl;
     cout << "\n\t\t\t\t\t";</pre>
643
     int c;
644
645
     cin >> c;
    if (c == 1) {
646
      clear_screen();
647
       getPatientDatabase();
648
649
650
651
    else
      exit(0);
652
653
654 }
655
656 //the Display Patient Database Ends Here
658
659
660 // -----
661
662 //Number of Patient function
663 //-----
664
665
666 void numberofPats()
667 {
668
669
     fstream Obj("patient.txt");
670
     Obj.seekg(0);
    string fname, lname, occupation, p_city, dis, addDate, relDate,
671
      dept;
     int p_age, p_ID, count = 0;
672
673
     long double phnumber, bill;
    while (Obj >> p_ID >> fname >> lname >> p_age >> phnumber>>
674
occupation >> p_city >> dis >> addDate >> relDate >> bill >> dept
```

```
count++;
677
678
679
680
     Obj.close();
     cout << "\n\n\t\t\t\tThe Total number of Patients in the</pre>
681
      hospital=" << count << endl << endl;
     cout << "\t\t\t\t\t" << "
683
       -----" << endl;
684
     cout << "\n\n\t\t\t\t\tEnter 1 to return to Patient Database\n\</pre>
685
      n\t\t\t\t\t\tEnter 2 to Exit." << endl;</pre>
     cout << "\n\t\t\t\t\t\t";</pre>
686
687
     int c;
     cin >> c;
688
     if (c == 1) {
689
690
      clear_screen();
      getPatientDatabase();
691
692
693
694
    else
      exit(0);
695
696
697 }
698 // Number Of Patient Functions Ends Here
```

```
1 // Bed Class
2 //----
4 class bed {
5 public:
int total = 1500;
friend void getStatus();
8 };
9 //--
10
11
12 // Get Status of Bed Function
13 // --
14
void getStatus()
16 { bed b;
   cout << "\n\t\t\t\t\t
17
     b.total << endl;</pre>
   fstream file("patient.txt");
   file.seekg(0);
19
    string fname, lname, occupation, p_city, dis, addDate, relDate,
20
     dept;
    int p_age, p_ID, count = 0;
21
22
    long double phnumber, bill;
    while (file >> p_ID >> fname >> lname >> p_age >> phnumber
23
     >> occupation >> p_city >> dis >> addDate >> relDate >> bill >>
24
      dept)
    {
25
      count++;
26
27
29
    file.close();
    cout << "\n\n\t\t\t\t\tThe number of Occupied Beds=" << count</pre>
30
     << endl;
    cout << "\n\t\t\t\t\t\tThe number of Empty Beds=" << b.total -</pre>
31
     count << endl;</pre>
32
    cout << "\t\t\t\t\t" << "
33
                             -----" << endl;
34
    35
     t\t\tEnter 2 to Exit." << endl;
    cout << "\t\t\t\t\t\t";</pre>
    int c;
37
    cin >> c;
38
    if (c == 1) {
39
     clear_screen();
40
41
      getBedDatabase();
42
43
44
    else
     exit(0);
45
46
47 }
48 //--
49
```

```
51 //the main function
53 password A;
54
55 int main()
56 {
    A.getPassword();
57
    clear_screen();
58
    cout << "\t\t\t\t\t\tWELCOME TO MEDANTA HOSPITAL MANAGEMENT SYSTEM
60
    cout << endl << endl;</pre>
61
    cout << "\t\t\t\t\t" << "
62
      -----" << endl;
63
    cout << "\t\t\t\t\t\t\t1.Main Menu" << endl;</pre>
64
    cout << "\t\t\t\t\t\t\t\t2.Exit" << endl;</pre>
65
    cout << "\t\t\t\t\t</pre>
66
      -----" << endl <<
     endl;
    cout << "\t\t\t\t\tEnter your choice:";</pre>
67
    int choice1;
68
    cin >> choice1;
69
70
    if (choice1 == 1) {
71
72
      menu();
73
    else if (choice1 == 2) {
74
     return 0;
75
76
77
     cout << "\nCome on!Enter a valid option." << endl;</pre>
78
79
80
81
82 }
83
85
86
87 void menu()
88 {
clear_screen();
   int var = chooseMain();
90
    clear_screen();
91
    switch (var) {
92
    case 1: {
93
     A.passwordProtect();
94
      clear_screen();
95
96
      getDoctorDatabase();
97
      break;
    }
98
99
    case 2: {
100
     A.passwordProtect();
101
      clear_screen();
getPatientDatabase();
```

```
break;
104
105
106
107
     case 3: {
108
109
       A.passwordProtect();
       clear_screen();
110
       getBedDatabase();
111
112
       break;
113
114
115
     case 4:
     {
116
       exit(0);
117
       break;
118
119
120
     default:
       cout << "\nCome on!Enter a valid option." << endl;</pre>
121
122
123
124 }
125
126
127 //the chooseMain function
128 //--
129
130
131
int chooseMain() {
133
134
     int choice2;
     cout << "\n\t\t\t\t\t\tMAIN MENU" << endl << endl;</pre>
135
     cout << "\t\t
136
       " << endl;
     cout << endl;</pre>
     cout << "\t\t\t\t\t1.Enter Into Doctors' Database" << endl;</pre>
138
     cout << "\t\t\t\t\t2.Enter Into Patients' Database" << endl;</pre>
139
     cout << "\t\t\t\t\t3.Check for Hospital Bed Availability" <<</pre>
140
       endl;
     cout << "\t\t\t\t\t4.Exit" << endl << endl;</pre>
141
142
143
     cout << "\t\t
144
       " << endl;
145
146
     cout << "\n\t\tEnter the number corresponding to your choice: "</pre>
147
     cin >> choice2;
148
     return choice2;
149
150
151 }
152
153
```

```
155
156
157
void getDoctorDatabase()
159 {
160
161
     int choice_doc;
     cout << "\t\t\t\t\t\tWELCOME TO DOCTOR'S DATABASE" << endl <<</pre>
162
       endl;
     cout << "\t\t
163
       " << endl;
164
     165
     cout << "\t\t\t\t\t2.Edit a Doctor's Information" << endl;</pre>
166
     cout << "\t\t\t\t\t3.Display a Doctor's Information" << endl;</pre>
167
     cout << "\t\t\t\t\t4.Delete a Doctor's Information" << endl;</pre>
168
     cout << "\t\t\t\t\t5.Display Entire Doctor Database" << endl;</pre>
169
     \label{eq:cout} \verb|cout| << "\t\t\t\t\t.Total Number of Doctors" << endl; \\
170
     cout << "\t\t\t\t\t7.Go back to Main Menu" << endl << endl;</pre>
171
172
     cout << "\t\
173
       " << endl;
174
175
     cout << "\n\t\tEnter the number corresponding to your choice:</pre>
176
     cin >> choice_doc;
177
     clear_screen();
178
179
     switch (choice_doc) {
     case 1: {
180
       addDoc();
181
182
       break;
183
184
     case 2: {
       doctor k;
185
186
       editDoc(k);
       break;
187
188
     case 3: {
189
       displayDoc();
190
191
192
193
     case 4: {
194
       deleteDoc();
195
       break;
196
     }
     case 5: {
197
198
       dispDatabase();
199
       break;
200
201
     case 6: {
202
       numberofDocs();
203
       break;
204
205
```

```
206
207
     case 7: {
208
       menu();
209
       break;
210
211
212
213
214 }
215
216
217
218 //the getPatientDatabase function
219 //----
220
221
222
void getPatientDatabase() {
224
    int choice_pat;
     cout << "\n\t\t\t\t\t\t\tWELCOME TO PATIENT'S DATABASE" << endl <<</pre>
225
      endl;
    cout << "\t\t
226
      " << endl;
    cout << endl;</pre>
227
     228
     cout << "\t\t\t\t\t2.Edit a Patient's Information" << endl;</pre>
229
     cout << "\t\t\t\t\t3.Display a Patient's Information" << endl;</pre>
230
     231
     cout << "\t\t\t\t\t5.Display Entire Patient Database" << endl;</pre>
232
     cout << "\t\t\t\t\t6.Total Number of Patients" << endl;</pre>
233
     cout << "\t\t\t\t\t7.Check for doctor availability" << endl;</pre>
234
235
     cout << "\t\t\t\t\t\8.Go back to Main Menu" << endl << endl;</pre>
236
     cout << "\t\t
237
      " << endl;
238
239
240
     cout << "\n\t\tEnter the number corresponding to your choice: "</pre>
     cin >> choice_pat;
241
242
     clear_screen();
     switch (choice_pat) {
243
244
     case 1: {
245
      addPat();
246
      break;
    }
247
    case 2: {
248
249
      patient p;
       editPat(p);
250
251
      break;
252
    case 3: {
253
254
      displayPat();
      break;
255
256 }
```

```
case 4: {
257
258
       deletePat();
259
       break;
260
     case 5: {
261
       dispPatDatabase();
262
263
       break;
264
265
     case 6: {
      numberofPats();
266
267
       break;
268
     case 7: {
269
270
      getDoctor();
271
       break;
272
273
274
275
     case 8: {
       menu();
276
277
       break;
278
279
280
281 }
282
283
284 //the getBedDatabase function
285 //-----
286
287
288
void getBedDatabase() {
     int choice_bed;
290
     cout << "\n\t\t\t\t\t\t\t\t\t\t\t\t\ELCOME TO BED DATABASE" << endl << endl;</pre>
291
     cout << "\t\t
292
       " << endl;
     cout << endl;</pre>
293
294
     cout << "\t\t\t\t\t\t1.Check Bed Status" << endl;</pre>
     cout << "\t\t\t\t\t\t\t2.Go back to Main Menu" << endl << endl;</pre>
295
296
     cout << "\t\t
       " << endl;
297
     cout << "\n\t\tEnter the number corresponding to your choice:</pre>
298
     cin >> choice_bed;
299
     clear_screen();
300
301
      switch (choice_bed)
302
     case 1: {
303
       getStatus();
304
        break;
305
306
     case 2: {
307
308
    menu();
```