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1  #include<stdio.h>
2  #include<string.h>
3  #include<conio.h>
4
5  struct hospitalSystem
6  {
7      char name[30]; //Write
8      int age;
9      char symptom[30];
10     char address[30];
11     char gender[10];
12     char phoneNo[15];
13     char beneficiaryNo[15];
14     char date[20];
15     float BMI , height;
16     int weight;
17 } x[100];
18 int n,i,j=0,a=0,sum=0,g,flag,num;
19 void read(); //read data
20 void write();//write data
21 void add(); //add data
22 void view(); //view data
23 void update(); //update
24 void del(); //delete data
25 void calculateBMI(float height,int weight);//BMI data
26 void show();
27
28 void main()
29 {
30     read();
31     int c,i,q;
32
33     while(c!=6)
34     {
35         printf("Hospital Management System\n");
36         printf("\n\n1.Add Patients Details");
37         printf("\n2.View Patients Details:");
38         printf("\n3.Update Patients Details");
39         printf("\n4.Delete Patients Details");
40         printf("\n5.Exit");
41         printf("\n\nChoose the option above (Write the number) : ");
42         scanf("%d",&c);//option
43         fflush(stdin);
44
45         if(c==1)//add
46         {
47             system("cls");
48             add();
49         }
50         else if(c==2)//view
51         {
52             system("cls");
53             view();
54         }
55         else if(c==3)//update
56         {
57             system("cls");
58             update();
59         }
60         else if(c==4)//delete
61         {
62             system("cls");
63             del();
64         }
65         else if(c==5)
66         {

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67         write();
68         return 0;
69     }
70     else
71     {
72         system("cls");
73         printf("\n\nInvalid input, please try again");
74         getch();
75     }
76     printf("\n\n");
77 }
78 }
79 void add()
80 {
81     system("cls");
82     printf("\n\n");
83     printf("Data already in system = %d\n\n",num); //how many inputs
84     printf("How many new entry? =");
85     scanf("%d",&n);
86     sum=n+num;
87
88     for(i=num,j=0; i<sum; i++)
89     {
90         printf("\n");
91         fflush(stdin);
92         printf("Enter patient's Name = ");
93         gets(x[i].name);
94
95         fflush(stdin);
96         printf("Enter age = ");
97         scanf("%d",&x[i].age);
98
99         fflush(stdin);
100        printf("Enter symptom = ");
101        gets(x[i].symptom);
102
103        fflush(stdin);
104        printf("Enter address = ");
105        gets(x[i].address);
106
107        fflush(stdin);
108        printf("Enter gender = ");
109        gets(x[i].gender);
110
111        fflush(stdin);
112        printf("Enter phone number = ");
113        gets(x[i].phoneNo);
114
115        fflush(stdin);
116        printf("Enter beneficiary phone number = ");
117        gets(x[i].beneficiaryNo);
118
119        fflush(stdin);
120        printf("Enter date = "); //exp: 23 June 2021
121        gets(x[i].date);
122
123        fflush(stdin);
124        printf("Enter height = ");
125        scanf("%f", &x[i].height);
126
127        fflush(stdin);
128        printf("Enter weight = ");
129        scanf("%d", &x[i].weight);
130
131        float height = x[i].height, BMI;
132        int weight = x[i].weight;

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133
134     fflush(stdin);
135     x[i].BMI = (weight) / (height*height);
136
137     printf("\nBMI is %.2f kg/m^2", x[i].BMI);
138
139     fflush(stdin);
140     printf("\n");
141     j++;
142     a++;
143     num++;
144 }
145
146 }
147 void view()
148 {
149     for(i=0; i<num; i++)
150     {
151         printf("\n");
152
153         printf("Patient Number = %d\n",i);
154
155         printf("Name = ");
156         puts(x[i].name);
157
158         printf("Age = %d",x[i].age);
159
160         printf("\r\nSymptom = ");
161         puts(x[i].symptom);
162
163         printf("Address = ");
164         puts(x[i].address);
165
166         printf("Gender = ");
167         puts(x[i].gender);
168
169         printf("Phone Number = ");
170         puts(x[i].phoneNo);
171
172         printf("Beneficiary Phone Number = ");
173         puts(x[i].beneficiaryNo);
174
175         printf("Date = ");
176         puts(x[i].date);
177
178         printf("Height = %.2f",x[i].height);
179
180         printf("\nWeight = %d",x[i].weight);
181
182         float height = x[i].height, BMI;
183         int weight = x[i].weight;
184         fflush(stdin);
185         x[i].BMI = (weight) / (height*height);
186
187         printf("\nBMI = %.2f",x[i].BMI);
188
189         printf("\n\n");
190     }
191 }
192
193 void update()
194 {
195     int q,p;
196     fflush(stdin);
197     printf("What do you want to update?\n");
198     printf("\n\n1.Name");

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199 printf("\n2.Age");
200 printf("\n3.Symptom");
201 printf("\n4.Address");
202 printf("\n5.Gender");
203 printf("\n6.Phone Number");
204 printf("\n7.Beneficiary Phone Number");
205 printf("\n8.Date");
206 printf("\n9.Height");
207 printf("\n10.Weight");
208 printf("\n\nChoose the option above (1-10) : ");
209 scanf("%d",&q);//option
210 if(q<=10)
211 {
212     printf("Enter the number of the patient in the record = ");
213     scanf("%d",&p);//patient number in the list
214     if(p<num)
215     {
216         if(q==1)
217         {
218             fflush(stdin);
219             printf("Enter new patients name = ");
220             gets(x[p].name);
221         }
222         else if(q==2)
223         {
224             fflush(stdin);
225             printf("Enter the new Age = ");
226             scanf("%d",&x[p].age);
227         }
228         else if(q==3)
229         {
230             fflush(stdin);
231             printf("Enter the new Symptom = ");
232             gets(x[p].symptom);
233         }
234         else if(q==4)
235         {
236             fflush(stdin);
237             printf("Enter the new Address = ");
238             gets(x[p].address);
239         }
240         else if(q==5)
241         {
242             fflush(stdin);
243             printf("Enter the new Gender = ");
244             gets(x[p].gender);
245         }
246         else if(q==6)
247         {
248             fflush(stdin);
249             printf("Enter the new Phone Number = ");
250             gets(x[p].phoneNo);
251         }
252         else if(q==7)
253         {
254             fflush(stdin);
255             printf("Enter the new Beneficiary phone number = ");
256             gets(x[p].beneficiaryNo);
257         }
258         else if(q==8)
259         {
260             fflush(stdin);
261             printf("Enter the new Date(exp:23 June 2021) = ");//exp: 23 June
2021 gets(x[p].date);
262         }
263     }

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264         else if(q==9)
265         {
266             fflush(stdin);
267             printf("Enter the new height = ");
268             scanf("%f",&x[p].height);
269         }
270         else if(q==10)
271         {
272             fflush(stdin);
273             printf("Enter the new weight = ");
274             scanf("%d",&x[p].weight);
275         }
276     }
277     else
278     {
279         printf("\n\nInvalid Number \nTry Again.\n\n");
280     }
281 }
282 else
283 {
284     printf("\n\nInvalid option\nTry Again\n\n");
285 }
286 }
287 }
288 void del()
289 {
290     int f,h;
291     printf("Enter the number of the patient that you want to delete base on the list
in the record(0-%d) =",num);
292     scanf("%d",&f);
293     if(f<num)
294     {
295         printf("Choose the option below:\n");
296         printf("1.Remove the whole record");
297         printf("\n2.Remove Name");
298         printf("\n3.Remove Age");
299         printf("\n4.Remove Symptom");
300         printf("\n5.Remove Address");
301         printf("\n6.Remove Gender");
302         printf("\n7.Remove Phone Number");
303         printf("\n8.Remove Beneficiary Phone Number");
304         printf("\n9.Remove Date");
305         printf("\n10.Remove Height");
306         printf("\n11.Remove Weight");
307         printf("\nChoose the option(1-11):");
308         scanf("%d",&h);
309         if(h==1)
310         {
311             while(f<num)
312             {
313                 strcpy(x[f].name,x[f+1].name);
314                 x[f].age=x[f+1].age;
315                 strcpy(x[f].symptom,x[f+1].symptom);
316                 strcpy(x[f].address,x[f+1].address);
317                 strcpy(x[f].gender,x[f+1].gender);
318                 strcpy(x[f].phoneNo,x[f+1].phoneNo);
319                 strcpy(x[f].beneficiaryNo,x[f+1].beneficiaryNo);
320                 strcpy(x[f].date,x[f+1].date);
321                 x[f].height=x[f+1].height;
322                 x[f].weight=x[f+1].weight;
323                 x[f].BMI=x[f+1].BMI;
324
325                 f++;
326             }
327             num--;
328         }

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329     else if(h==2)
330     {
331         strcpy(x[f].name, "Cleared");
332     }
333     else if(h==3)
334     {
335         x[f].age=0;
336     }
337     else if(h==4)
338     {
339         strcpy(x[f].symptom, "Cleared");
340     }
341     else if(h==5)
342     {
343         strcpy(x[f].address, "Cleared");
344     }
345     else if(h==6)
346     {
347         strcpy(x[f].gender, "Cleared");
348     }
349     else if(h==7)
350     {
351         strcpy(x[f].phoneNo, "Cleared");
352     }
353     else if(h==8)
354     {
355         strcpy(x[f].beneficiaryNo, "Cleared");
356     }
357     else if(h==9)
358     {
359         strcpy(x[f].date, "Cleared");
360     }
361     else if(h==10)
362     {
363         x[f].height=0;
364     }
365     else if(h==11)
366     {
367         x[f].weight=0;
368     }
369 }
370
371 }
372 else
373     printf("\n\nInvalid Number\n");
374
375 }
376 void calculateBMI(float height, int weight)
377 {
378     float BMI;
379
380     //BMI = (weight) / (height*height);
381     BMI = (weight) / (height*height);
382
383     printf("\nBMI is %.2f kg/m^2", x[i].BMI);
384     return;
385 }
386 void read()
387 {
388     FILE *fp = fopen("patientbook.txt", "r");
389     if(fp == NULL)
390     {
391         fp = fopen("patientbook.txt", "w");
392         fclose(fp);
393         printf("File does not exist\n\n\n");
394         return 0;

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395     }
396
397     num = fread(x, sizeof(struct hospitalSystem),100, fp);
398     fclose(fp);
399 }
400 void write()
401 {
402     FILE *fp = fopen("patientbook.txt","w");
403     if(fp == NULL)
404     {
405         printf("Error");
406         exit(1);
407     }
408     fwrite(x, sizeof(struct hospitalSystem),num, fp);
409
410     fclose(fp);
411 }
```