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1  #include <iostream>
2  #include <fstream>
3  #include <string.h>
4
5  using namespace std;
6
7  fstream f;
8  fstream t;
9
10 //global function prototypes
11 void menu();
12 void menuV();
13 int countMed();
14
15 //global var
16 int choice;
17
18 //functions for conditional input
19 void pinput(int &v,int u, int l)
20 {
21     while(!(cin>>v)) || v<l || v>u)
22     {
23         cout<<"Enter Correct Value: ";
24         cin.clear();
25         cin.ignore(100, '\n');
26     }
27     cin.ignore(1, '\n');
28 }
29 void pfinput(float &v,float u, float l)
30 {
31     while(!(cin>>v)) || v<l || v>u)
32     {
33         cout<<"Enter Correct Value: ";
34         cin.clear();
35         cin.ignore(100, '\n');
36     }
37     cin.ignore(1, '\n');
38 }
39
40 //CLASSES
41 class medicine
42 {
43     int K;
44     char name[20];
45     int quantity;
46     float u_price;
47
48     public:
49
50     void getDetails()
51     {
52         cout<<endl<<"Enter details about medicine: "<<endl;
53
54         K = countMed();
55         cout<<"Enter Name: ";
56         gets(name);
57         cout<<"Enter Quantity(in units): ";
58         pinput(quantity, 100, 1);
59         cout<<"Enter Price of 1 unit(INR): ";
60         pfinput(u_price, 10000, 1);
61     }
62     void showDetails()
63     {
64         cout<<K<<"\t\t"<<name<<"\t\t"<<quantity<<"\t\t"<<u_price<<endl;
65     }

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66     float rPrice()
67     {
68         return u_price;
69     }
70     int rQuantity()
71     {
72         return quantity;
73     }
74     int rK()
75     {
76         return K;
77     }
78     void changeK(int newK)
79     {
80         K = newK;
81     }
82     void decQuantity(int dQ)
83     {
84         quantity -= dQ;
85     }
86     char* rName()
87     {
88         return name;
89     }
90 } med;
91
92
93 //GLOBAL FUNCTIONS
94 int nameID(char medN[20])
95 {
96     int medK, flag=1;
97     f.open("Medicines.dat", ios::in | ios::binary);
98     while(f.read((char*) &med, sizeof(medicine)))
99     {
100         if(!strcmp(medN, med.rName()))
101         {
102             flag=0;
103             medK = med.rK();
104             f.close();
105             return medK;
106         }
107     }
108     if(flag)
109     {
110         f.close();
111         cout<<"\nMedicine Not Found";
112         return 0;
113     }
114 }
115 int countMed()
116 {
117     int k=0;
118     f.open("Medicines.dat", ios::in | ios::binary);
119     while(f.read((char*) &med, sizeof(medicine)))
120     {
121         k++;
122     }
123     f.close();
124     k++;
125     return k;
126 }
127 float countWorth()
128 {
129     float w=0;
130     f.open("Medicines.dat", ios::in | ios::binary);

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131     while(f.read((char*) &med, sizeof(medicine)))
132     {
133         w+=med.rQuantity()*med.rPrice();
134     }
135     f.close();
136     return w;
137 }
138 int countQuantity()
139 {
140     int q=0;
141     f.open("Medicines.dat", ios::in | ios::binary);
142     while(f.read((char*) &med, sizeof(medicine)))
143     {
144         q+=med.rQuantity();
145     }
146     f.close();
147     return q;
148 }
149 void showMed()
150 {
151     f.open("Medicines.dat", ios::in | ios::binary);
152
153     cout<<"\nLIST OF MEDICINES IN STOCK"<<endl;
154     cout<<"S.no\t\tNAME\t\tQUANTITY\tPRICE(INR)\n";
155
156     while(f.read((char*) &med, sizeof(medicine)))
157     {
158         med.showDetails();
159     }
160     f.close();
161 }
162 void delMed(int remK)
163 {
164     f.open("Medicines.dat", ios::in | ios::binary);
165     t.open("temp.dat", ios::out | ios::binary);
166     while(f.read((char*) &med, sizeof(medicine)))
167     {
168         if(med.rK()!=remK)
169         {
170             t.write((char*) &med, sizeof(medicine));
171         }
172     }
173     f.close();
174     t.close();
175
176     remove("Medicines.dat");
177     rename("temp.dat", "Medicines.dat");
178 }
179 void remMed()
180 {
181     showMed();
182     int remK=0, c;
183     char medN[20];
184
185     cout<<endl<<"Select Medicine using: "<<"\n1. Serial Number"<<"\n2. Name"<<"\nChoice
: ";
186     pinput(choice, 2, 1);
187     if(choice==2)
188     {
189         while(!remK)
190         {
191             cout<<endl<<"Enter Medicine Name to remove: ";
192             gets(medN);
193             remK = nameID(medN);
194         }

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195     }
196     else
197     {
198         cout<<endl<<"Enter Medicine Serial Number to remove: ";
199         pinput(remK, countMed()-1, 1);
200     }
201
202     cout<<"\nConfirm? Yes(1) / No:-Change Choice(0): ";
203     pinput(c, 1, 0);
204     if(!c)
205     {
206         remMed();
207         return;
208     }
209
210     delMed(remK);
211
212     f.open("Medicines.dat", ios::in | ios::out | ios::binary);
213     f.seekg(0, ios::beg);
214     int pos;
215     c=1;
216     for(;;)
217     {
218         pos = f.tellg();
219         if(f.read((char*) &med, sizeof(medicine)))
220         {
221             med.changeK(c);
222
223             f.seekg(pos);
224             f.write((char*) &med, sizeof(medicine));
225
226             f.seekg(pos+sizeof(medicine));
227             c++;
228             continue;
229         }
230         else
231         {
232             break;
233         }
234     }
235     f.close();
236
237     showMed();
238     cout<<"\nMedicine Removed from List";
239
240     menuV();
241 }
242 void sellMed()
243 {
244     showMed();
245     int sellK=0, sellQ, c;
246     char medN[20];
247
248     cout<<endl<<"Select Medicine using: "<<"\n1. Serial Number"<<"\n2. Name"<<"\nChoice
: ";
249     pinput(choice, 2, 1);
250     if(choice==2)
251     {
252         while(!sellK)
253         {
254             cout<<endl<<"Enter Medicine Name to sell: ";
255             gets(medN);
256             sellK = nameID(medN);
257         }
258     }

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```

259     else
260     {
261         cout<<endl<<"Enter Medicine Serial Number to sell: ";
262         pinput(sellK, countMed()-1, 1);
263     }
264
265     f.open("Medicines.dat", ios::in | ios::binary);
266     f.seekg((sellK-1)*sizeof(med), ios::beg);
267     f.read((char*) &med, sizeof(medicine));
268
269     cout<<"\nMedicine Found\n";
270     cout<<"S.no\t\tNAME\t\tQUANTITY\tPRICE(INR)\n";
271     med.showDetails();
272
273     cout<<"Enter Quantity of Item: ";
274     pinput(sellQ, med.rQuantity(), 1);
275     cout<<endl<<"Cost (INR): "<<sellQ*med.rPrice();
276
277     cout<<"\nConfirm? Yes(1) / No(0): ";
278     pinput(c, 1, 0);
279     if(!c)
280     {
281         f.close();
282         sellMed();
283         return;
284     }
285
286     if(sellQ == med.rQuantity())
287     {
288         c = sellK;
289         f.close();
290         delMed(c);
291
292         f.open("Medicines.dat", ios::in | ios::out | ios::binary);
293         f.seekg(0, ios::beg);
294         int pos;
295         c=1;
296         for(;;)
297         {
298             pos = f.tellg();
299             if(f.read((char*) &med, sizeof(medicine)))
300             {
301                 med.changeK(c);
302
303                 f.seekg(pos);
304                 f.write((char*) &med, sizeof(medicine));
305
306                 f.seekg(pos+sizeof(medicine));
307                 c++;
308                 continue;
309             }
310             else
311             {
312                 break;
313             }
314         }
315         f.close();
316     }
317     else
318     {
319         f.open("Medicines.dat", ios::in | ios::out | ios::binary);
320         f.seekg((sellK-1)*sizeof(med), ios::beg);
321         f.read((char*) &med, sizeof(medicine));
322
323         med.decQuantity(sellQ);

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324         f.close();
325
326         f.open("Medicines.dat", ios::in | ios::out | ios::binary);
327         f.seekg((sellK-1)*sizeof(medicine), ios::beg);
328         f.write((char*) &med, sizeof(medicine));
329         f.close();
330
331     }
332
333     showMed();
334     cout<<"\nTransaction Complete";
335
336     menuV();
337 }
338 void addMed()
339 {
340     med.getDetails();
341     f.open("Medicines.dat", ios::app | ios::in | ios::binary);
342     f.write((char*) &med, sizeof(medicine));
343     f.close();
344
345     menuV();
346 }
347 void searchMed()
348 {
349     char medN[20];
350     int flag=1;
351     cout<<"Enter name of Medicine to Search: ";
352     gets(medN);
353
354     f.open("Medicines.dat", ios::in | ios::binary);
355     while(f.read((char*) &med, sizeof(medicine)))
356     {
357         if(!strcmp(medN, med.rName()))
358         {
359             flag=0;
360             cout<<"\nMedicine Found\n";
361             cout<<"S.no\t\tNAME\t\tQUANTITY\tPRICE(INR)\n";
362             med.showDetails();
363         }
364     }
365     if(flag)
366     {
367         cout<<"\nMedicine NOT Found\n";
368     }
369     f.close();
370
371     menuV();
372 }
373 void ovMed()
374 {
375     cout<<"\nOVERVIEW:\n";
376     cout<<"TOTAL ITEMS\t\tTOTAL WORTH\t\tTOTAL STOCK\n";
377     cout<<countMed()-1<<"\t\t\t"<<countWorth()<<"\t\t\t"<<countQuantity()<<endl;
378 }
379
380 //MENU FUNCTIONS
381 void menuV()
382 {
383     int c;
384     cout<<"\nShow Menu? Yes(1) / Exit(0): ";
385     pinput(c, 1, 0);
386     if(c) menu();
387 }
388 void menu()

```

```

389 {
390     cout<<endl<<"Menu"<<endl;
391     cout<<"1. Sell\n"<<"2. Add\n"<<"3. Remove\n"<<"4. Search\n"<<"5. Overview\n";
392     cout<<endl<<"Enter Your Choice: ";
393     pinput(choice, 5, 1);
394     if(choice==1) sellMed();
395     else if(choice==2) addMed();
396     else if(choice==3) remMed();
397     else if(choice==4) searchMed();
398     else if(choice==5)
399     {
400         ovMed();
401         showMed();
402         menuV();
403     }
404 }
405
406 int main()
407 {
408     cout<<"Welcome to Pharmacy Manager"<<endl;
409     cout<<"BY Shashank Sengar, 12th-C"<<endl;
410     menu();
411     cout<<"\nThank You For Using Pharmacy Manager\nPress Any Key to Exit...";
412     getchar();
413     return 0;
414 }

```