```cpp
#include<iostream>
#include<windows.h>
#include<conio.h>
#include<fstream>
#include<cstring>
#include<cstdio>
#include<cstdlib>
#include<iomanip>
using namespace std;
//global variable declaration
int k=7,r=0,flag=0;
COORD coord = {0, 0};

void gotoxy(int x, int y)
{
    COORD coord;
    coord.X = x;
    coord.Y = y;
    SetConsoleCursorPosition(GetStdHandle(STD_OUTPUT_HANDLE), coord);
}
struct date
{
    int mm,dd,yy;
};

ofstream fout;
ifstream fin;

class item
{
    int itemno;
    char name[25];
    date d;
public:
    void add()
    {
        cout<<"\n\n\tItem No: ";
        cin>>itemno;
        cout<<"\n\n\tName of the item: ";
        cin>>name;
//gets(name);
        cout<<"\n\n\tManufacturing Date(dd-mm-yy): ";
        cin>>d.mm>>d.dd>>d.yy;
    }
    void show()
    {
        cout<<"\n\tItem No: ";
        cout<<itemno;
        cout<<"\n\n\tName of the item: ";
        cout<<name;
        cout<<"\n\n\tDate : ";
        cout<<d.mm<<"-"<<d.dd<<"-"<<d.yy;
    }
    void report()
    {
```

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56:            gotoxy(3,k);
57:            cout<<itemno;
58:            gotoxy(13,k);
59:            puts(name);
60:        }
61:        int retno()
62:        {
63:            return(itemno);
64:
65:        }
66:
67: };
68:
69: class amount: public item
70: {
71:        float price,qty,tax,gross,dis,netamt;
72: public:
73:        void add();
74:        void show();
75:        void report();
76:        void calculate();
77:        void pay();
78:        float retnetamt()
79:        {
80:            return(netamt);
81:        }
82: } amt;
83:
84: void amount::add()
85: {
86:        item::add();
87:        cout<<"\n\n\tPrice: ";
88:        cin>>price;
89:        cout<<"\n\n\tQuantity: ";
90:        cin>>qty;
91:        cout<<"\n\n\tTax percent: ";
92:        cin>>tax;
93:        cout<<"\n\n\tDiscount percent: ";
94:        cin>>dis;
95:        calculate();
96:        fout.write((char *)&amt,sizeof(amt));
97:        fout.close();
98: }
99: void amount::calculate()
100: {
101:        gross=price+(price*(tax/100));
102:        netamt=qty*(gross-(gross*(dis/100)));
103: }
104: void amount::show()
105: {
106:        fin.open("itemstore.dat",ios::binary);
107:        fin.read((char*)&amt,sizeof(amt));
108:        item::show();
109:        cout<<"\n\n\tNet amount: ";
110:        cout<<netamt;
```

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111:        fin.close();
112: }
113:
114: void amount::report()
115: {
116:        item::report();
117:        gotoxy(23,k);
118:        cout<<price;
119:        gotoxy(33,k);
120:        cout<<qty;
121:        gotoxy(44,k);
122:        cout<<tax;
123:        gotoxy(52,k);
124:        cout<<dis;
125:        gotoxy(64,k);
126:        cout<<netamt;
127:        k=k+1;
128:        if(k==50)
129:        {
130:            gotoxy(25,50);
131:            cout<<"PRESS ANY KEY TO CONTINUE...";
132:            getch();
133:            k=7;
134:            system("cls");
135:            gotoxy(30,3);
136:            cout<<" ITEM DETAILS ";
137:            gotoxy(3,5);
138:            cout<<"NUMBER";
139:            gotoxy(13,5);
140:            cout<<"NAME";
141:            gotoxy(23,5);
142:            cout<<"PRICE";
143:            gotoxy(33,5);
144:            cout<<"QUANTITY";
145:            gotoxy(44,5);
146:            cout<<"TAX";
147:            gotoxy(52,5);
148:            cout<<"DEDUCTION";
149:            gotoxy(64,5);
150:            cout<<"NET AMOUNT";
151:        }
152: }
153:
154: void amount::pay()
155: {
156:        show();
157:        cout<<"\n\n\n\t\t***********************************************";
158:        cout<<"\n\t\t                    DETAILS                    ";
159:        cout<<"\n\t\t***********************************************";
160:        cout<<"\n\n\t\tPRICE                          :"<<price;
161:        cout<<"\n\n\t\tQUANTITY                       :"<<qty;
162:        cout<<"\n\t\tTAX PERCENTAGE                 :"<<tax;
163:        cout<<"\n\t\tDISCOUNT PERCENTAGE            :"<<dis;
164:        cout<<"\n\n\n\t\tNET AMOUNT                 :Rs."<<netamt;
165:        cout<<"\n\t\t***********************************************";
```

```cpp
166: }
167:
168: int main()
169: {
170:     cout.setf(ios::fixed);
171:     cout.setf(ios::showpoint);
172:     cout<<setprecision(2);
173:     fstream tmp("temp.dat",ios::binary|ios::out);
174: menu:
175:     system("cls");
176:     gotoxy(25,2);
177:     cout<<"Super Market Billing ";
178:     gotoxy(25,3);
179:     cout<<"============================\n\n";
180:     cout<<"\n\t\t1.Bill Report\n\n";
181:     cout<<"\t\t2.Add/Remove/Edit Item\n\n";
182:     cout<<"\t\t3.Show Item Details\n\n";
183:     cout<<"\t\t4.Exit\n\n";
184:     cout<<"\t\tPlease Enter Required Option: ";
185:     int ch,ff;
186:     float gtotal;
187:     cin>>ch;
188:     switch(ch)
189:     {
190:     case 1:
191: ss:
192:         system("cls");
193:         gotoxy(25,2);
194:         cout<<"Bill Details";
195:         gotoxy(25,3);
196:         cout<<"=================\n\n";
197:         cout<<"\n\t\t1.All Items\n\n";
198:         cout<<"\t\t2.Back to Main menu\n\n";
199:         cout<<"\t\tPlease Enter Required Option: ";
200:         int cho;
201:         cin>>cho;
202:         if(cho==1)
203:         {
204:             system("cls");
205:             gotoxy(30,3);
206:             cout<<" BILL DETAILS ";
207:             gotoxy(3,5);
208:             cout<<"ITEM NO";
209:             gotoxy(13,5);
210:             cout<<"NAME";
211:             gotoxy(23,5);
212:             cout<<"PRICE";
213:             gotoxy(33,5);
214:             cout<<"QUANTITY";
215:             gotoxy(44,5);
216:             cout<<"TAX %";
217:             gotoxy(52,5);
218:             cout<<"DISCOUNT %";
219:             gotoxy(64,5);
220:             cout<<"NET AMOUNT";
```

```cpp
221:                fin.open("itemstore.dat",ios::binary);
222:                if(!fin)
223:                {
224:                    cout<<"\n\nFile Not Found...";
225:                    goto menu;
226:                }
227:                fin.seekg(0);
228:                gtotal=0;
229:                while(!fin.eof())
230:                {
231:                    fin.read((char*)&amt,sizeof(amt));
232:                    if(!fin.eof())
233:                    {
234:                        amt.report();
235:                        gtotal+=amt.retnetamt();
236:                        ff=0;
237:                    }
238:                    if(ff!=0) gtotal=0;
239:                }
240:                gotoxy(17,k);
241:                cout<<"\n\n\n\t\t\tGrand Total="<<gtotal;
242:                getch();
243:                fin.close();
244:            }
245:        if(cho==2)
246:        {
247:            goto menu;
248:        }
249:        goto ss;
250:     case 2:
251: db:
252:        system("cls");
253:        gotoxy(25,2);
254:        cout<<"Bill Editor";
255:        gotoxy(25,3);
256:        cout<<"=================\n\n";
257:        cout<<"\n\t\t1.Add Item Details\n\n";
258:        cout<<"\t\t2.Edit Item Details\n\n";
259:        cout<<"\t\t3.Delete Item Details\n\n";
260:        cout<<"\t\t4.Back to Main Menu ";
261:        int apc;
262:        cin>>apc;
263:        switch(apc)
264:        {
265:        case 1:
266:            fout.open("itemstore.dat",ios::binary|ios::app);
267:            amt.add();
268:            cout<<"\n\t\tItem Added Successfully!";
269:            getch();
270:            goto db;
271:
272:        case 2:
273:            int ino;
274:            flag=0;
275:            cout<<"\n\n\tEnter Item Number to be Edited :";
```

```cpp
276:                cin>>ino;
277:                fin.open("itemstore.dat",ios::binary);
278:                fout.open("itemstore.dat",ios::binary|ios::app);
279:                if(!fin)
280:                {
281:                    cout<<"\n\nFile Not Found...";
282:                    goto menu;
283:                }
284:                fin.seekg(0);
285:                r=0;
286:                while(!fin.eof())
287:                {
288:                    fin.read((char*)&amt,sizeof(amt));
289:                    if(!fin.eof())
290:                    {
291:                        int x=amt.item::retno();
292:                        if(x==ino)
293:                        {
294:                            flag=1;
295:                            fout.seekp(r*sizeof(amt));
296:                            system("cls");
297:                            cout<<"\n\t\tCurrent Details are\n";
298:                            amt.show();
299:                            cout<<"\n\n\t\tEnter New Details\n";
300:                            amt.add();
301:                            cout<<"\n\t\tItem Details editted";
302:                        }
303:                    }
304:                    r++;
305:                }
306:                if(flag==0)
307:                {
308:                    cout<<"\n\t\tItem No does not exist...Please Retry!";
309:                    getch();
310:                    goto db;
311:                }
312:                fin.close();
313:                getch();
314:                goto db;
315:
316:          case 3:
317:                flag=0;
318:                cout<<"\n\n\tEnter Item Number to be deleted :";
319:                cin>>ino;
320:                fin.open("itemstore.dat",ios::binary);
321:                if(!fin)
322:                {
323:                    cout<<"\n\nFile Not Found...";
324:                    goto menu;
325:                }
326://fstream tmp("temp.dat",ios::binary|ios::out);
327:                fin.seekg(0);
328:                while(fin.read((char*)&amt, sizeof(amt)))
329:                {
330:                    int x=amt.item::retno();
```

```cpp
                  if(x!=ino)
                      tmp.write((char*)&amt,sizeof(amt));
                  else
                  {
                      flag=1;
                  }
            }
            fin.close();
            tmp.close();
            fout.open("itemstore.dat",ios::trunc|ios::binary);
            fout.seekp(0);
            tmp.open("temp.dat",ios::binary|ios::in);
            if(!tmp)
            {
                cout<<"Error in File";
                goto db;
            }
            while(tmp.read((char*)&amt,sizeof(amt)))
                fout.write((char*)&amt,sizeof(amt));
            tmp.close();
            fout.close();
            if(flag==1)
                cout<<"\n\t\tItem Succesfully Deleted";
            else if (flag==0)
                cout<<"\n\t\tItem does not Exist! Please Retry";
            getch();
            goto db;
        case 4:
            goto menu;
        default:
            cout<<"\n\n\t\tWrong Choice!!! Retry";
            getch();
            goto db;
        }
    case 3:
        system("cls");
        flag=0;
        int ino;
        cout<<"\n\n\t\tEnter Item Number :";
        cin>>ino;
        fin.open("itemstore.dat",ios::binary);
        if(!fin)
        {
            cout<<"\n\nFile Not Found...\nProgram Terminated!";
            goto menu;
        }
        fin.seekg(0);
        while(fin.read((char*)&amt,sizeof(amt)))
        {
            int x=amt.item::retno();
            if(x==ino)
            {
                amt.pay();
                flag=1;
                break;
```

```cpp
386:                    }
387:                }
388:            if(flag==0)
389:                cout<<"\n\t\tItem does not exist....Please Retry!";
390:            getch();
391:            fin.close();
392:            goto menu;
393:        case 4:
394:            system("cls");
395:            gotoxy(20,20);
396:            cout<<"ARE YOU SURE, YOU WANT TO EXIT (Y/N)?";
397:            char yn;
398:            cin>>yn;
399:            if((yn=='Y')||(yn=='y'))
400:            {
401:                gotoxy(12,20);
402:                system("cls");
403:                cout<<"********************** THANKS  ***************************************";
404:                getch();
405:                exit(0);
406:            }
407:            else if((yn=='N')||(yn=='n'))
408:                goto menu;
409:            else
410:            {
411:                goto menu;
412:            }
413:        default:
414:            cout<<"\n\n\t\tWrong Choice....Please Retry!";
415:            getch();
416:            goto menu;
417:        }
418:    return 0;
419: }
```