**RANI LAXMI BAI MEM. Senior Secondary School**

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**iBigMarket**

I would like to thank to my Computer teacher Jyoti Mam for giving me a chance to work on a project. I would like to thank my principal Mrs Asha Arora ma’am, who gave us opportunity to complete his project, to make it true.

**Acknowledgement**

I learned many new things by working on this project.I would like to thank Sarita Ma’am & Jyoti Ma’am again for helping me in solving many errors during writing & debugging of the program.

I am really thankful to My Best Friend, Friends, classmates & parents who helped me in completing the project & who gave suggestions to improve the project.

(#GIJOE)

Madhurendra Sachan

XII – A2

**Source Code**

/\*\*

\* Name("iBigMarket : Billing system");

\* Description("Just a simple billing program with few options");

\*

\* Programmed\_by(1,"Madhurendra Sachan","XII","A2",30);

\* Programmed\_by(2,"Deavershi Tewari ","XII","A2",2 );

\*

\*/

#include <iostream.h>

#include <iomanip.h>

#include <fstream.h>

#include <conio.h>

#include <string.h>

#include <stdio.h>

#include <dos.h>

#include <ctype.h>

#include <stdlib.h>

#define screenX 40

#define screenY 14

//prints a blank line with | |

void msg\_insertALine**(**int xPos**,**int yPos**,**int **&**lineCount**,**char casc**[],**int maxLen**){**

gotoxy**(**xPos**,**yPos**+(++**lineCount**));**

cout**<<**" "**<<**casc**[**11**]<<**" "**;**

gotoxy**(**xPos**+**maxLen**+**4**,**yPos**+**lineCount**);**

cout**<<**casc**[**11**]<<**" "**;**

gotoxy**(**xPos**+**4**,**yPos**+**lineCount**);**

**}**

//prints a character n times

void msg\_printNTimes**(**char toPrint**,**int n**){**

**for(**int i**=**0**;**i**<**n**;**i**++)**

cout**<<**toPrint**;**

**}**

//prints a message box, operator overloading can be used for better experience :)

void msgbox**(**char title**[],**char msg**[],**int mode**=**0**,**int xPos**=-**1**,**int yPos**=-**1**){**

clrscr**();**

//int l=strlen(msg);cout<<l;getch();

int maxLen**=**6**,**maxHeight**=**3**;** //width & height of box

//cout.write(msg,strlen(msg));

//array with box element

char casc**[**15**];**

casc**[**1**]** **=**'ɧ**;**casc**[**2**]** **=**'ͧ**;**casc**[**3**]** **=**'˧**;**casc**[**4**]** **=**''**;**

casc**[**5**]** **=**'̧**;** casc**[**6**]** **=**'Χ**;**casc**[**7**]** **=**''**;**

casc**[**8**]** **=**'ȧ**;** casc**[**9**]** **=**'ʧ**;**casc**[**10**]=**''**;**

casc**[**11**]=**''**;**

int i**=**0**;**

int prePos**=**0**;**

//get max length of line & number of lines

**for(**i**=**0**;**msg**[**i**]!=**'\0'**;**i**++){**

**if(**msg**[**i**]==**'\n'**||**i**-**prePos**==**50**){**

**if(**maxLen**<**i**-**prePos**)**

maxLen**=**i**-**prePos**;**

**if(**i**-**prePos**==**50**)**

i**--;**

prePos**=**i**;**

maxHeight**++;**

**}**

**}**

**if(**maxLen**<**i**-**prePos**)**

maxLen**=**i**-**prePos**;**

maxLen**=**maxLen**+**3**;**

**if((**strlen**(**title**)+**0**+**4**)>(**maxLen**))**

maxLen**=**strlen**(**title**)+**0**+**4**;**

maxHeight**=**maxHeight**+**4**;**

**if(**maxLen**%**2**==**0**)**maxLen**+=**1**;**

//center postion box if xPos is -1 or yPos=-1

**if(**xPos**==-**1**)**

xPos**=**screenX**-((**maxLen**+**4**+**4**)/**2**);**

**if(**yPos**==-**1**)**

yPos**=**screenY**-((**maxHeight**)/**2**);**

gotoxy**(**xPos**,**yPos**);**

//begin printing title

cout**<<**" "**<<**casc**[**1**]<<**casc**[**2**];**

msg\_printNTimes**(**casc**[**2**],(**maxLen**-**0**-**strlen**(**title**)-**2**)/**2**);**

**if((**maxLen**-**0**-**strlen**(**title**)-**2**)%**2**)**

cout**<<**casc**[**2**]<<**" "**<<**title**<<**" "**<<**casc**[**2**];**

**else**

cout**<<**" "**<<**title**<<**" "**;**

msg\_printNTimes**(**casc**[**2**],(**maxLen**-**0**-**strlen**(**title**)-**2**)/**2**);**

cout**<<**casc**[**4**]<<**" \n"**;**

int lineCount**=**0**;**

//leave few blank lines

msg\_insertALine**(**xPos**,**yPos**,**lineCount**,**casc**,**maxLen**);**

msg\_insertALine**(**xPos**,**yPos**,**lineCount**,**casc**,**maxLen**);**

//print message

prePos**=**0**;**

**for(** i**=**0**;**msg**[**i**]!=**'\0'**;**i**++){**

**if(**msg**[**i**]==**'\n'**||**i**-**prePos**==**50**){**

msg\_insertALine**(**xPos**,**yPos**,**lineCount**,**casc**,**maxLen**);**

prePos**=**i**;**

**if(**i**-**prePos**==**50**)**

i**--;**

**}else{**

cout**<<**msg**[**i**];**

**}**

**}**

//check for input mode

**if(**mode**==**1**){**

msg\_insertALine**(**xPos**,**yPos**,**lineCount**,**casc**,**maxLen**);**

msg\_printNTimes**(**'\_'**,**maxLen**-**2**);**

**}**

msg\_insertALine**(**xPos**,**yPos**,**lineCount**,**casc**,**maxLen**);**//insert a fresh line

gotoxy**(**xPos**,**yPos**+(++**lineCount**));**

cout**<<**' '**<<**casc**[**8**];**msg\_printNTimes**(**casc**[**2**],**maxLen**-**11**);**cout**<<**" iBigMarket "**<<**casc**[**2**]<<**casc**[**10**]<<**' '**;**//bottom of box

cin**.**clear**();**

gotoxy**(**xPos**+**4**,**yPos**+**lineCount**-**2**);** //move cursor to beg

**}**

//converts an number argument to character, type casting cannot be used

char**\*** toChar**(**float num**){**

char str**[**10**];**

ltoa**(**num**,**str**,**10**);**

**return** str**;**

**}**

//return potion of string needle in string haysack

int indexOf**(**char needle**[],**char haysack**[]** **){**

**for(**int i**=**0**;**haysack**[**i**]!=**'\0'**;**i**++){**

**for(**int j**=**0**;**needle**[**j**]!=**'\0'**;**j**++)**

**if(**tolower**(**haysack**[**i**+**j**])!=**tolower**(**needle**[**j**]))**//if a character doesnot matches..continue with next char comaprison

**break;**

**else** **if(**needle**[**j**+**1**]==**'\0'**)**//if end of needle is reached return pos

**return** i**;**

**}**

**return** **-**1**;**

**}**

//class containing item description

class item\_description**{**

private**:**

float value**;** //value of item.usually price

int total**;** //total items in stock

int sold**;** //items sold

public**:**

char description**[**100**];** //description of item,good for better search result

char code**[**30**],**name**[**100**];** //code & name of item

char print**();**

void in**();**

//functions used to prevent illegal value,accessors & mutators

float getValue**(){** **return** value**;** **}**

void setValue**(**float f**){if(**f**>**0**)**value**=**f**;}**

int getTotal**(){** **return** total**;** **}**

void setTotal**(**int i**){if(**i**>**total**&&**i**>**0**)**total**=**i**;}**

int getSold**(){** **return** sold**;** **}**

void setSold**(**int i**){if(**i**>**0**){**sold**+=**i**;**total**-=**i**;}}**

//constructor to initalise

item\_description**(){**

description**[**0**]=**code**[**0**]=**name**[**0**]=**'\0'**;**//ends the string as soon as it begins

value**=**sold**=**total**=**0**;**

**}**

**};**

char item\_description**::**print**(){**

char message**[**1000**]=**""**;**

strcat**(**message**,**"Code : "**);**strcat**(**message**,**code**);**strcat**(**message**,**"\n"**);**

strcat**(**message**,**"Name : "**);**strcat**(**message**,**name**);**strcat**(**message**,**"\n"**);**

strcat**(**message**,**"Description : "**);**strcat**(**message**,**description**);**strcat**(**message**,**"\n"**);**

strcat**(**message**,**"Price/unit : "**);**strcat**(**message**,**toChar**(**value**));**strcat**(**message**,**"\n"**);**

strcat**(**message**,**"Total unit(s) : "**);**strcat**(**message**,**toChar**(**total**));**strcat**(**message**,**"\n"**);**

strcat**(**message**,**"Sold unit(s) : "**);**strcat**(**message**,**toChar**(**sold**));**strcat**(**message**,**"\n\nPress any key to continue...\0"**);**

msgbox**(**"Item"**,**message**);**

**return** getch**();**

**}**

void item\_description**::**in**(){**

msgbox**(**"Enter item code : " **,**""**,**1**);**

cin**>>**code**;**

msgbox**(**"Enter item name : " **,**""**,**1**);**

cin**.**ignore**();**//clean the remaining \n in buffer

cin**.**getline**(**name**,**100**);**

msgbox**(**"Enter item description : " **,**""**,**1**);**

cin**.**getline**(**description**,**100**);**

msgbox**(**"Enter item value : " **,**""**,**1**);**

cin**>>**value**;**

msgbox**(**"Enter items in stock : " **,**""**,**1**);**

cin**>>**total**;**

**}**

//return description by item code

item\_description getDescriptionById**(**char code**[]){**

item\_description tmp**;**

fstream f**(**"items.db"**,**ios**::**in**|**ios**::**binary**);**

**while(**f**.**read**((**char**\*)&**tmp**,sizeof** tmp**)){**

**if(!**strcmp**(**tmp**.**code**,**code**))**

**return** tmp**;**

**else**

tmp**.**name**[**0**]=**'\0'**;**

**}**

f**.**close**();**

**return** tmp**;**

**}**

void removeDescription**(){**

item\_description tmp**;**

char code**[**30**];**

msgbox**(**"Enter item code : " **,**""**,**1**);**

cin**>>**code**;**

ifstream i**(**"items.db"**,**ios**::**in**|**ios**::**binary**);**

ofstream f**(**"items.tmp.db"**,**ios**::**out**|**ios**::**binary**);**

**while(**i**.**read**((**char**\*)&**tmp**,sizeof** tmp**)){**

**if(**strcmp**(**tmp**.**code**,**code**)!=**0**)**

f**.**write**((**char**\*)&**tmp**,sizeof** tmp**);**

**}**

i**.**close**();**

f**.**close**();**

remove**(**"items.db"**);**

rename**(**"items.tmp.db"**,**"items.db"**);**

**}**

void modifyDescription**(){**

item\_description tmp**;**

char code**[**30**];**

msgbox**(**"Enter item code : " **,**""**,**1**);**

cin**>>**code**;**

fstream f**(**"items.db"**,**ios**::**in**|**ios**::**out**|**ios**::**binary**);**

**while(**f**.**read**((**char**\*)&**tmp**,sizeof** tmp**)){**

**if(!**strcmpi**(**tmp**.**code**,**code**)){**

float var**;**

msgbox**(**"Enter item new value : " **,**""**);**

cin**>>**var**;**

tmp**.**setValue**(**var**);**

msgbox**(**"Enter items to add in stock : " **,**""**);**

cin**>>**var**;**

tmp**.**setTotal**(**tmp**.**getTotal**()+(**int**)**var**);**

tmp**.**print**();**

f**.**seekp**(**f**.**tellg**()-sizeof(**tmp**));**//move one object back

f**.**write**((**char**\*)&**tmp**,sizeof(**tmp**));**//overwrite the object with new

**break;**

**}**

**}**

f**.**close**();**

**}**

void searchDescription**(){**

char keyword**[**100**];**

msgbox**(**"Enter keyword to search (description,code) :" **,**""**,**1**);**

cin**>>**keyword**;**

msgbox**(**"Info"**,**"Anytime press 'x' to exit from search.\nor any key to continue to next result.\n\nPress any key to continue..."**);**

getch**();**

fstream f**(**"items.db"**,**ios**::**in**|**ios**::**binary**);**

item\_description tmp**;**

**while(**f**.**read**((**char**\*)&**tmp**,sizeof** tmp**))**

**if((!**strcmpi**(**tmp**.**code**,**keyword**))||**indexOf**(**keyword**,**tmp**.**description**)>-**1**||**indexOf**(**keyword**,**tmp**.**name**)>-**1**)**

**if(**tmp**.**print**()==**'x'**)**

**break;**

f**.**close**();**

**}**

void addDescription**(){**

item\_description tmp**;**

tmp**.**in**();**

tmp**.**print**();**

fstream f**(**"items.db"**,**ios**::**out**|**ios**::**app**|**ios**::**binary**|**ios**::**ate**);**

f**.**write**((**char**\*)&**tmp**,sizeof** tmp**);**

f**.**close**();**

**}**

void codeGetDescription**(){**

char code**[**30**];**

msgbox**(**"Enter item code : " **,**""**,**1**);**

cin**>>**code**;**

item\_description tmp**=**getDescriptionById**(**code**);**

**if(**tmp**.**name**[**0**]!=**'\0'**)**

tmp**.**print**();**

**}**

void manageItems**(){**

char ch**;**

**do{**

msgbox**(**" Manage Items ! "**,**"1. Add Item \n2. Modify Item\n3. Remove Item\n4. Search Item \n5. Item by Code\n6. Back"**);**

ch**=**tolower**(**getch**());**

**if(**ch**==**'1'**||**ch**==**'a'**)**

addDescription**();**

**else** **if(**ch**==**'2'**||**ch**==**'r'**)**

modifyDescription**();**

**else** **if(**ch**==**'3'**||**ch**==**'c'**)**

removeDescription**();**

**else** **if(**ch**==**'4'**||**ch**==**'s'**)**

searchDescription**();**

**else** **if(**ch**==**'5'**||**ch**==**'i'**)**

codeGetDescription**();**

**if(**ch**==**'6'**||**ch**==**'x'**||**ch**==**'b'**)**

**break;**

**}while(**1**);**

**}**

class item**:**public item\_description**{** //inherit description class

public**:**

int quantity**;**

float amount**;**

item**(){**

strcpy**(**code**,**""**);**

strcpy**(**name**,**""**);**

quantity**=**0**;**

amount**=**0**;**

**}**

void print**();**

int in**();**

**};**

int item**::**in**(){**

msgbox**(**"Enter item code : " **,**""**,**1**);**

cin**>>**code**;**

item\_description tmp**;**

tmp**=**getDescriptionById**(**code**);**

**if(**tmp**.**name**[**0**]==**'\0'**)**

**return** 0**;**

msgbox**(**"Enter quantity : " **,**""**,**1**);**

cin**>>**quantity**;**

strcpy**(**name**,**tmp**.**name**);**

setValue**(**tmp**.**getValue**());**

amount**=**quantity**\***getValue**();**

print**();**

**return** 1**;**

**}**

void item**::**print**(){**

char message**[**500**]=**""**;**

strcat**(**message**,**"Code : "**);**strcat**(**message**,**code**);**strcat**(**message**,**"\n"**);**

strcat**(**message**,**"Name : "**);**strcat**(**message**,**name**);**strcat**(**message**,**"\n"**);**

strcat**(**message**,**"Quantity : "**);**strcat**(**message**,**toChar**((**float**)**quantity**));**strcat**(**message**,**"\n"**);**

strcat**(**message**,**"Amount : "**);**strcat**(**message**,**toChar**(**amount**));**strcat**(**message**,**"\n\nPress any key to continue...\0"**);**

msgbox**(**"Item"**,**message**);**

getch**();**

**}**

void itemSold**(**item bill**[],**int cnt**){**

item\_description tmp**;**

fstream f**(**"items.db"**,**ios**::**in**|**ios**::**out**|**ios**::**binary**);**

**while(**f**.**read**((**char**\*)&**tmp**,sizeof** tmp**))**

**for(**int i**=**0**;**i**<**cnt**;**i**++)**

**if((!**strcmpi**(**tmp**.**code**,**bill**[**i**].**code**))&&** bill**[**i**].**quantity**){**

tmp**.**setSold**(**bill**[**i**].**quantity**);**//decrease total & increase sold

f**.**seekp**(**f**.**tellg**()-sizeof(**tmp**));**//move one object back

f**.**write**((**char**\*)&**tmp**,sizeof(**tmp**));**//rewrite with new object

**break;**

**}**

f**.**close**();**

**}**

void printReceipt**(**item bill**[],**int cnt**,**float paid**){**

itemSold**(**bill**,**cnt**);**

clrscr**();**

float total**=**0**;**

cout**<<**"\n"**;**

cout**<<** setw**(**55**)<<**"------------------- Bill : iBigMarket -------------------"**<<**"\n\n"**;**

cout**<<**setw**(**12**)<<**"Code "**<<**" | "**<<**setw**(**22**)<<**"Name"**<<**" | "**<<**setw**(**15**)<<**"Amount"**<<**endl**;**

cout**<<**setw**(**12**)<<**"----------"**<<**" | "**<<**setw**(**22**)<<**"--------------------"**<<**" | "**<<**setw**(**15**)<<**"------------"**<<**endl**;**

**for(**int i**=**0**;**i**<**cnt**;**i**++){**

**if(**bill**[**i**].**quantity**>**0**){**

cout**<<**setw**(**12**)<<**bill**[**i**].**code**<<**" | "**<<**setw**(**22**)<<** bill**[**i**].**name **<<**" | "**<<**setw**(**5**)<<** bill**[**i**].**quantity**<<**"\*"**<<**bill**[**i**].**getValue**()** **<<**"="**<<**setw**(**6**)<<**bill**[**i**].**amount **<<**endl**;**

total**+=**bill**[**i**].**amount**;**

**}**

**}**

cout**<<** setw**(**55**)<<**"========================================================="**<<**"\n"**;**

cout**<<** setw**(**45**)<<**" Total : "**<<**total**<<**"\n"**;**

cout**<<** setw**(**45**)<<**" Paid : "**<<**paid**<<**'\n'**;**

cout**<<** setw**(**45**)<<**" Return : "**<<**paid**-**total**<<**'\n'**;**

cout**<<** setw**(**55**)<<**"----------------------- Thank You -----------------------"**<<**"\n"**;**

cout**<<**"\n\n Press any key to continue..."**;**

getch**();**

**}**

void removeItem**(**item bill**[],**int cnt**){**

char code**[**30**];**

msgbox**(**"Enter item code : " **,**""**,**1**);**

cin**>>**code**;**

**for(**int x**=**0**;**x**<**cnt**;**x**++)**

**if(**strcmpi**(**code**,**bill**[**x**].**code**)==**0**)**

bill**[**x**].**quantity**=**0**;**

**}**

float checkOut**(){**

char paid**[**10**]=**"\0"**;**

msgbox**(**"Checkout !"**,**"Enter amount paid : \n"**,**1**);**

cin**>>**paid**;**

float amount**=**0**;**

amount**=**strtod**(**paid**,NULL);**

**return** amount**;**

**}**

void newInvoice**(){**

char ch**;**

item bill**[**30**];** //max items in bill =30

int i**=**0**;** // items counter

**do{**

msgbox**(**" Invoice !"**,**"1. Add Item\n2. Remove Item\n3. CheckOut\n4. Cancel"**);**

ch**=**tolower**(**getch**());**

**if(**ch**==**'1'**||**ch**==**'a'**){**

**if(!**bill**[**i**++].**in**())**

i**--;**

**}else** **if(**ch**==**'2'**||**ch**==**'r'**){**

removeItem**(**bill**,**i**);**

**}else** **if(**ch**==**'3'**||**ch**==**'c'**){**

**if(**i**>**0**){**

float paid**=**0**;**

paid**=**checkOut**();**

**if(**paid**>**0**){**

printReceipt**(**bill**,**i**,**paid**);**

ch**=**'x'**;**

**}**

**}**

**}**

**if(**ch**==**'4'**||**ch**==**'x'**)**

**break;**

**}while(**1**);**

**}**

int main**(){**

char ch**;**

**do{**

msgbox**(**" Welcome !"**,**"1. Sell \n2. Manage \n3. Help \n4. About\n5. Exit"**);**

ch**=**tolower**(**getch**());**

**if(**ch**==**'1'**||**ch**==**'s'**)**

newInvoice**();**

**else** **if(**ch**==**'2'**||**ch**==**'m'**)**

manageItems**();**

**else** **if(**ch**==**'3'**||**ch**==**'h'**){**

clrscr**();**

msgbox**(**"Help !"**,**"To select option press the option number\nor simply first letter of option.\nNote : To Exit press 'x'\n\nPress any key to continue..."**);**

getch**();**

**}else** **if(**ch**==**'4'**||**ch**==**'a'**){**

int i**=**2**,**x**=**0**;**

**do{**

clrscr**();**

msgbox**(**" About !"**,**" iBigMarket\n Version : 1.0 beta\n Credits : Computer Teacher\nPress any key to continue..."**,**0**,**i**);**

delay**(**100**);**

**if(**x**==**0**&&**i**<(**screenX**-**30**))**

**if(++**i**==(**screenX**-**30**))**

x**++;**

**if(**x**==**1**&&**i**>**1**)**

**if(--**i**==**1**)**

x**=**0**;**

**if(**kbhit**())**

**break;**

**}while(**1**);**

getch**();**//will get input from buffer, so clears buffer

**}else** **if(**ch**==**'5'**||**ch**==**'x'**)**

**break;**

**}while(**1**);**

**return** 0**;**

**}**

**Screenshots**

  
