



Topic : Online Auction System

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Campus : Malabe

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We declare that this is our own work and this Assignment does not incorporate without acknowledgment any material previously submitted by anyone else in SLIIT or any other university/Institute. And we declare that each one of us equally contributed to the completion of this Assignment.

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## Exercise 1

(1)

### Identifying the Requirements

1. In this auction system, sellers are allowed to add items.
2. The buyers are allowed to place their bids on the items according to their wish after viewing them.
3. The payments can only be done using online. The methods of payment can be categorized in to three as credit cards, debit cards and PayPal.
4. In this system the sellers are allowed to delete or edit a specific item according to their requirements.
5. Admin gains the authority to let the buyers leave feedbacks related to the auction.
6. The sellers are allowed to categorize the items which they have added priorly.
7. Buyers are allowed to request for a refund within 3 days after the auction time expires.
8. Admin has the ability to generate 3 types of auction reports as Daily reports, sales reports, and Monthly reports.
9. Sellers have the authority to accept or refuse the bids placed by the buyers.
10. Seller gets the chance to notify the highest bidders in this Online Auction System.

(2)

## Noun verb Analysis

Nouns

Verbs

1. In this auction system, Sellers are allowed to add items.
2. The buyers are allowed to place their bids on the items according to their preferences after viewing them.
3. The payments can only be done using online. The methods of payment can be categorized in to three as credit cards, debit cards and PayPal.
4. In this system the sellers are allowed to delete or edit a specific item according to their Preferences.
5. Admin gains the authority to let the buyers leave feedbacks related to the auction.
6. The sellers are allowed to categorize the items which they have added priorly.
7. Buyers are allowed to request for a refund within 3 days after the auction time expires.
8. Admin has the ability to generate 3 types of auction reports as Daily reports, sales reports, and Monthly reports.
9. Sellers have the authority to accept or refuse the bids placed by the buyers.
10. Seller gets the chance to notify the highest bidders in this Online Auction System.

**(3)**

## Classes

-  Admin
-  Item
-  Buyer
-  Payment
-  Seller
-  Report

## Exercise 2

### **(1)** CRC cards

Admin class	
Responsibility	Collaborators
Give access to buyers To leave feedback	Reports
Generate reports	

Report class	
Responsibility	Collaborators
Prepare daily reports	Admin
Prepare monthly reports	
Prepare sales reports	

Seller class	
Responsibility	Collaborators
Accept bids	Admin
Refuse bids	items
Notify bidders	
Add item	
Delete item	

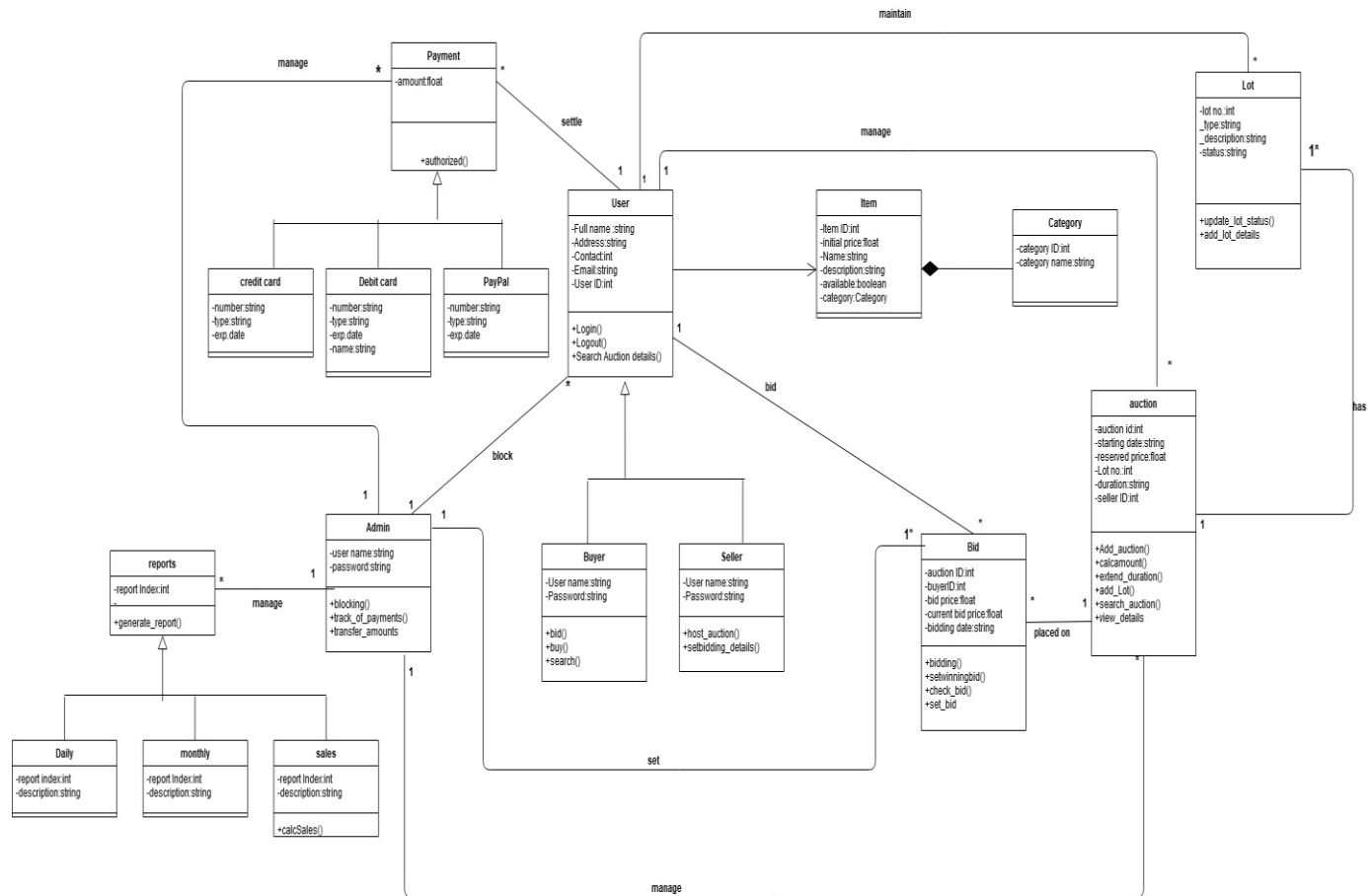
Payment class	
Responsibility	Collaborators
Store the payment details	item
Check the validity of the details	

Buyer class	
Responsibility	Collaborators
Place bid	item
View items	seller
Leave a feedback	
Refund request	

Item class	
Responsibility	Collaborators
Edit items	seller
Categorize items	

## Exercise 3

# (1) Class Diagram



## Exercise 4

### (1) The Coding for the class diagram

```
#include <iostream>
#include <cstring>
#include <istream>
using namespace std;
class payment;
class admin;
class bid;
class auction;
class lot;
class item;
class reports;
class user;
class category;

class admin{
private:
    char username[20];
    char password[20];
    reports*reports[100];
    user *user[100];
    payment*pment[100];
    bid*pbid[100];
    auction*auc[100];
    int noOfbids;
    int noOfpayments;
    int noOfusers;
public:
    admin();
    void blocking();
    void transferamounts();
    void trackOfpayments();
};

class user{
protected:
    char fullname[20];
    char address[20];
    char email[20];
    char user_id[20];
    int contact;
    char loginuserName[20];
    char loginpassword[20];
    admin *ad;
    bid*pbid;
    auction*auc;
```



```

lot*lot[100];
payment*pment[100];
int noOfpayments;
int noOfbid;
int noOfauc;
item*itm;
public:
    user(){}

    user(int c)
    {
        contact=c;
    }
    void displaycon();
    void setname(char *n);
    void displayname()
    {
        cout<<fullname;
    }
    void setaddress(char *a);
    void displayaddress()
    {
        cout<<address;
    }
    void setemail(char *e);
    void displayemail()
    {
        cout<<email;
    }
    void setuid(char *id);
    void login(char *username,char *password);
    void logout();
    void searchAuctiondetails();
    void displaysampleddata()
    {
        cout<<"SAMPLE DATA"<<endl;
        cout<<"--ADMIN INPUT DATA--"<<endl;
        cout<<"USERNAME   :admin"<<endl;
        cout<<"PASSWORD   :password"<<endl<<endl;
        cout<<"--SELLER INPUT DATA--"<<endl;
        cout<<"USERNAME   :seller"<<endl;
        cout<<"PASSWORD   :password"<<endl<<endl;;
        cout<<"--BUYER INPUT DATA--"<<endl;
        cout<<"USERNAME   :buyer"<<endl;
        cout<<"PASSWORD   :password"<<endl;
    }

};

void user::displaycon()
{
    cout<<contact;

```

```

}
//derived class1(user)
class buyer:public user{
private:
    char b_username[20];
    char b_password[20];
    int quantity;
    float totalsum;
    char category[10];
    char itemname[10];
public:
    buyer(){}
    buyer(char b_uname[],char b_upass[])
    {
        strcpy(b_username,b_uname);
        strcpy(b_password,b_upass);
    }

    void buyerprocess();

};

string balert;
string salert;
int sum;
string code;
float qtty;
char categoryname[10];
void buyer::buyerprocess()
{
    int cat;

    float pc[2] = { 5.00,10.00 };
        float pt[2] = { 5.60,27.00 };
        float pe[2] = { 10.00,40.00 };
    float pf[2] = { 23.00,49.00 };
    cout<<"SIGNED AS A BUYER"<<endl<<endl;
    cout<<balert<<endl<<endl;
    cout<<"-----STORE CATEGORIES-----"<<endl;
    cout<<"1. CLOTHES"<<endl;
    cout<<"2. TOYS"<<endl;
    cout<<"3. ELECTRONICS"<<endl;
    cout<<"4. FURNITHURE"<<endl<<endl;
    cout<<"ENTER CATEGORY NUMBER  :";cin>>cat;
    cout<<endl<<endl;
    switch(cat){
        case 1:
            cout<<"CLOTHES CATEGORY SELECTED"<<endl<<endl;
            strcpy(categoryname,"CLOTHES");
            cout<<"  CHOOSE PRODUCT BELOW  "<<endl;

```

```

cout<<"    T SHIRT [C1] \t"<<"U$."<<pc[0]<<endl;
        cout<<"    JEANS  [C2] \t"<<"U$."<<pc[1]<< endl;
        cout<<endl;
cout<<endl<<endl;
cout << "ENTER CODE  :";cin >> code;
        if (code == "C1") {

                cout << "T SHIRT => \t" << "U$." << pc[0] << endl;
                cout << "QUANTITY: ";cin>>qty;
                sum = pc[0]*qty;
                cout << "TOTAL :U$" << sum << endl;

        }
else if (code == "C2") {

                cout << "JEANS => \t" << "U$." << pc[1] << endl;
                cout << "QUANTITY: ";cin>>qty;
                sum = pc[1]*qty;
                cout << "TOTAL :U$" << sum << endl;

        }

}

break;
case 2:
cout<<"toys category selected"<<endl<<endl;
strcpy(categoryname,"TOYS");
cout<<"choose product in below"<<endl;
cout<<"TEDDY BEAR  [T1] \t"<<"U$."<<pt[0]<<endl;
        cout<<"REMOTE CAR  [T2] \t"<<"U$."<<pt[1]<< endl;
        cout<<endl;
cout<<endl<<endl;
cout << "enter code:";cin >> code;
        if (code == "T1") {

                cout << "TEDDY BEAR => \t" << "U$." << pt[0] << endl;
                cout << "quantity: ";cin>>qty;
                sum = pc[0]*qty;
                cout << "total :U$" << sum << endl;

        }
else if (code == "T2") {

                cout << "DOLL => \t" << "U$." << pc[1] << endl;
                cout << "quantity: ";cin>>qty;
                sum = pt[1]*qty;
                cout << "total :U$" << sum << endl;

        }
break;
case 3:
cout<<"electronic category selected"<<endl<<endl;

```

```

strcpy(categoryname,"ELECTRONICS");
cout<<"choose product in below"<<endl;
cout<<"PHONE  [E1] \t"<<"U$."<<pe[0]<<endl;
        cout<<"LAPTOP  [E2] \t"<<"U$."<<pe[1]<< endl;
        cout<<endl;
cout<<endl<<endl;
cout << "enter code:";cin >> code;
        if (code == "E1") {

                cout << "PHONE => \t" << "U$." << pe[0] << endl;
                cout << "quantity: ";cin>>qty;
                sum = pe[0]*qty;
                cout << "total :U$" << sum << endl;
        }
        else if (code == "E2") {

                cout << "LAPTOP => \t" << "U$." << pe[1] << endl;
                cout << "quantity: ";cin>>qty;
                sum = pe[1]*qty;
                cout << "total :U$" << sum << endl;
        }
        break;
case 4:
cout<<"furniture category selected"<<endl<<endl;
strcpy(categoryname,"FURNITHURE");
cout<<"choose product in below"<<endl;
cout<<"CHAIR  [F1] \t"<<"U$."<<pf[0]<<endl;
        cout<<"DESK  [F2] \t"<<"U$."<<pf[1]<< endl;
        cout<<endl;
cout<<endl<<endl;
cout << "enter code:";cin >> code;
        if (code == "F1") {

                cout << "CHAIR => \t" << "U$." << pf[0] << endl;
                cout << "quantity: ";cin>>qty;
                sum = pf[0]*qty;
                cout << "total :U$" << sum << endl;
        }
        else if (code == "F2") {

                cout << "DESK => \t" << "U$." << pf[1] << endl;
                cout << "quantity: ";cin>>qty;
                sum = pf[1]*qty;
                cout << "total :U$" << sum << endl;
        }
        break;
default:
        cout<<"unavailable category"<<endl;
}

```

```

}
//derived class2(user)
class seller:public user{
private:
    char s_username[20];
    char s_password[20];
public:
    seller(){}
    seller(char s_uname[],char s_upass[])
    {
        strcpy(s_username,s_uname);
        strcpy(s_password,s_upass);
    }
};
//user methods
void user::setname(char *n)
{
    strcpy(fullname,n);
}
void user::setaddress(char *a)
{
    strcpy(address,a);
}
void user::setemail(char *e)
{
    strcpy(email,e);
}
void user::setuid(char *id)
{
    strcpy(user_id,id);
}
class reports{
protected:
    int reportIndex;
    admin*ad;
public:
    void generateReport();
    void samplereport();
};
class daily:public reports{
    char description[];
};
class monthly:public reports{
    char description[];
};
class sales:public reports{
    char description[];
};
void reports::samplereport()
{

```

```
string rep[10] = {"buyer1","no72/25 colombo","0778899123","buyer12@gmail.com","credit card payment","CLOTHES","C1","3","$10.00","09/05/2020"};
```

```
    cout<<"-----"<<rep[9]<<"-----"<<endl<<endl;
    cout<<"BUYER NAME   : "<<rep[0]<<endl;
    cout<<"ADDRESS      : "<<rep[1]<<endl;
    cout<<"CONTACT NO   : "<<rep[2]<<endl;
    cout<<"EMAIL        : "<<rep[3]<<endl;
    cout<<"PAYMENT METHOD : "<<rep[4]<<endl;
    cout<<"CATEGORY    : "<<rep[5]<<endl;
    cout<<"ITEM CODE    : "<<rep[6]<<endl;
    cout<<"QUANTITY     : "<<rep[7]<<endl;
    cout<<"TOTAL       : "<<rep[8]<<endl<<endl<<endl;
}
```

```
class bid{
private:
    int auctionID;
    int buyerID;
    float bidPrice;
    float currentbid;
    char biddingdate;
    admin*ad;
    user*us;
    auction*auc;

public:
    bid(int auctionID,admin*ad){}
    void bidding();
    void setwinningbid();
    void check_bid();
    void set_bid();
};
```

```
class auction{
private:
    int auctionid;
    char stringdate[20];
    float reservedprice;
    int lotNo;
    char duration[10];
    int sellerID;
    bid*bid[100];
    lot*lot[100];
    user*u;
public:
    void add_auction();
    void calcamount();
    void extend_duration();
    void add_lot();
    void searchAuction();
};
```

```

    void viewdetails();

};

class lot{
private:
    int lotno();
    char type[20];
    char description[100];
    char status[10];
    user*u;
    auction*auc;
public:
    void update_lot_status();
    void add_lot_details();
};

class category{
private:
    int categoryno;
    char categoryname[10];
public:
    category();
    ~category();
};

class item{
private:
    category *cate[100];
    int itemID;
    float initialPrice;
    char name[10];
    char description[100];
    char available[10];
    char category[10];

public:
    item();
    ~item();
};

class payment{
protected:
    float amount;
    admin*ad;
    user*u;
public:
    payment(){};
    void setamount(float a);
    float getamount();
    void paymentprocess();

};

string pmethod;

```

```

void payment::paymentprocess()
{
    cout<<endl<<endl;
    cout<<"choose your payment method in below"<<endl;
    cout<<"credit card  [c]"<<endl;
    cout<<"debit card  [d]"<<endl;
    cout<<"paypal      [p]"<<endl;
    cout<<"enter payment method  : ";cin>>pmethod;
    cout<<endl<<endl;

```

```

}
void payment::setamount(float a)
{
    amount=a;
}

```

```

class credit_card:public payment{
private:
    char number[20];
    char type[10];
    int month,year;
public:

    void settype(char ty);
    void setdate(int mm,int yy);
    void displaycrdno();
    int getmonth();
    int getyear();

};

```

```

void credit_card::setdate(int mm, int yy)
{
    if(mm>=1&&mm<=12)
        month=mm;
    else
        month=0;
    if(yy>=2020)
        year=yy;
    else
        year=0;
}
int credit_card::getmonth()
{
    return month;
}
int credit_card::getyear()
{

```



```
    return year;
}
```

```
class debit_card:public payment{
private:
    char number[20];
    char type[10];
    int month,year;
public:
    void setcardno(char no);
    void settype(char ty);
    void setdate(int mm,int yy);
    int getmonth();
    int getyear();

};
```

```
class paypal:public payment{
private:
    char pemail[20];
};
```

```
int main()
{
    user u1;
```

```

    int c,cat;
    payment p1;
    buyer b1;
    reports r1;
        char holdname[10];
    char payemail[20];
    char cno[30];
    float m,y;
    int cost;
    int refu;
    char n[30],a[100],e[30],i[30];
    credit_card c1;
    string ptype="";
    string username;
    string password;
    cout<<"-----WELCOME TO THE ONLINE AUCTION SYSTEM-----"<<endl<<endl;
    u1.displaysampledata();

    cout<<endl<<endl;
    int count=0;
    while(count<=0)
```

```

{
cout<<"    PLEASE ENTER YOUR DETAIL FOR SIGN UP    "<<endl<<endl;
cout<<"ENTER USER NAME  :";cin>>username;
cout<<"ENTER PASSWORD  :";cin>>password;
string choice;
if(username=="admin"&&password=="password"){
    int option;
    cout<<"SIGNED AS A ADMIN"<<endl<<endl;
    cout<<"admin options"<<endl;
    cout<<"1.transaction reports"<<endl;
    cout<<"2.restrict buyers"<<endl;
    cout<<"3.restrict sellers"<<endl<<endl;
    cout<<"ENTER OPTION  :";
    cin>>option;
    if(option==1){
        cout<<"-----TRANSACTION REPORTS-----"<<endl<<endl;
        cout<<"-----SAMPLE REPORT-----"<<endl<<endl;
        r1.samplereport();

    }
    else if(option==2){
        string c;
        cout<<endl<<endl;
        cout<<"Do you want restrict default buyer y/n:";cin>>c;
        if(c=="y")
        {
            balert="-----Warning! account restricted-----";
            cout<<"BUYER ACCOUNT RESTRICTRD";
        }

    }
    else if(option==3){
        string c;
        cout<<endl<<endl;
        cout<<"Do you want restrict default seller y/n:";cin>>c;
        if(c=="y")
        {
            salert="-----Warning! account restricted-----";
            cout<<"SELLER ACCOUNT RESTRICTRD";
        }

    }

    cout<<endl<<endl;
    cout<<"Do you want sign with other account y/n :";
    cin>>choice;

    if(choice=="n")
    {

```

```

        count++;
    }

}

else if(username=="seller"&&password=="password"){
    cout<<"SIGNED AS A SELLER"<<endl<<endl;
    cout<<"salert"<<endl<<endl;
    cout<<"do you want sign with other account y/n :";
    cin>>choise;

    if(choise=="n")
    {
        count++;
    }
}

else if(username=="buyer"&&password=="password"){
    b1.buyerprocess();
    p1.paymentprocess();
    if(pmethod=="c"){
        ptype="CREDIT CARD PAYMENT";
        cout<<"YOU SELECTED CREDIT CARD PAYMENT"<<endl<<endl;
        cout<<"PLEASE ENTER YOUR CARD INFORMATION"<<endl<<endl;
        cout<<"CARD HOLDER NAME      :";cin>>holdname;
        cout<<"CARD NUMBER          :";cin>>cno;
        cout<<endl<<endl;
        cout<<"----expire date---"<<endl;
        cout<<"month :";cin>>m;

        cout<<"year :";cin>>y;
        c1.setdate(m, y);
        cout<<endl<<endl;

    }
    else if(pmethod=="d"){
        ptype="DEBIT CARD PAYMENT";
        cout<<"YOU SELECTED DEBIT CAR PAYMENT"<<endl<<endl;
        cout<<"PLEASE ENTER YOUR CARD INFORMATION"<<endl<<endl;
        cout<<"CARD HOLDER NAME      :";cin>>holdname;
        cout<<"CARD NUMBER          :";cin>>cno;
        cout<<endl<<endl;

        cout<<"----expire date---"<<endl;
        cout<<"month :";cin>>m;

        cout<<"year :";cin>>y;
        c1.setdate(m, y);
        cout<<endl<<endl;
    }
    else if(pmethod=="p"){

```

```

ptype="PAYPAL PAYMENT";
cout<<"YOU SELECTED PAYPAL PAYMENT"<<endl<<endl;
cout<<"PLEASE ENTER YOUR PAYPAL INFORMATION"<<endl<<endl;
cout<<"PAYPAL EMAIL      :";cin>>payemail;
cout<<endl<<endl;
}
else{
    cout<<"wrong method";
}
cout<<"--WE NEED SOME DETAILS ABOUT YOU--"<<endl<<endl;
cout<<"INPUT NAME      :";cin>>n;cout<<endl;
cout<<"INPUT ADDRESS   :";cin>>a;cout<<endl;
cout<<"INPUT EMAIL     :";cin>>e;cout<<endl;
cout<<"INPUT ID       :";cin>>i;cout<<endl;
cout<<"INPUT CONTACT   :";cin>>c;cout<<endl;
u1.setname(n);
u1.setaddress(a);
u1.setemail(e);
u1.setuid(i);
cout<<"-----ORDER DETAILS-----"<<endl;
if(pmethod=="c" | pmethod=="d")
{

    cout<<"BUYER NAME   :";u1.displayname();cout<<endl;
    cout<<"ADDRESS      :";u1.displayaddress();cout<<endl;
    cout<<"CONTACT NO    :";u1.displaycon();cout<<endl;
    cout<<"EMAIL        :";u1.displayemail();cout<<endl;
    cout<<"PAYMENT METHOD :"<<ptype<<endl;
    cout<<"CARD NO      :"<<cno<<endl;
    cout<<"CATEGORY     :"<<categoryname<<endl;
    cout<<"ITEM CODE    :"<<code<<endl;
    cout<<"QUANTITY     :"<<qtty<<endl;
    cout<<"TOTAL       :"<<sum;cout<<endl;
}
else if(pmethod=="p")
{
    cout<<"BUYER NAME   :";u1.displayname();cout<<endl;
    cout<<"ADDRESS      :";u1.displayaddress();cout<<endl;
    cout<<"CONTACT NO    :";u1.displaycon();cout<<endl;
    cout<<"EMAIL        :";u1.displayemail();cout<<endl;
    cout<<"PAYMENT METHOD :"<<ptype<<endl;
    cout<<"PAYPAL EMAIL  :"<<payemail<<endl;
    cout<<"CATEGORY     :"<<categoryname<<endl;
    cout<<"ITEM CODE    :"<<code<<endl;
    cout<<"QUANTITY     :"<<qtty<<endl;
    cout<<"TOTAL       :"<<sum;cout<<endl;
}
cout<<"do you want sign with other account y/n :";
cin>>choise;

if(choise=="n")

```

```

    {
        count++;
    }

}
else
{
    cout<<"wrong user name or password"<<endl<<endl;
    cout<<"do you want try again y/n :";
    cin>>choise;

    if(choise=="y")
    {
        count=0;
    }else
    {
        count++;
    }

}
}
cout << "\n\n-----thank you-----" << endl;
    cout << "-----thank you-----" << endl<<endl;
return 0;
}

```

## Files



main.cpp



main.cpp

```
1  #include <iostream>
2  #include<cstring>
3  #include <istream>
4  using namespace std;
5  class payment;
6  class admin;
7  class bid;
8  class auction;
9  class lot;
10 class item;
11 class reports;
12 class user;
13 class category;
14
15
16 class admin{
17     private:
18         char username[20];
19         char password[20];
20         reports*reports[100];
21         user *user[100];
22         payment*pmment[100];
23         bid*pbid[100];
24         auction*auc[100];
25         int noOfbids;
26         int noOfpayments;
27         int noOfusers;
28     public:
29         admin();
30         void blocking();
31         void transferamounts();
32         void trackOfpayments();
33
34     };
```

## Files



main.cpp



main.cpp

```
34     };
35     class user{
36     protected:
37         char fullname[20];
38         char address[20];
39         char email[20];
40         char user_id[20];
41         int contact;
42         char loginuserName[20];
43         char loginpassword[20];
44         admin *ad;
45         bid*pbid;
46         auction*auc;
47         lot*lot[100];
48         payment*pment[100];
49         int noOfpayments;
50         int noOfbid;
51         int noOfauc;
52         item*itm;
53     public:
54         user(){}
55
56         user(int c)
57         {
58             contact=c;
59         }
60         void displaycon();
61         void setname(char *n);
62         void displayname()
63         {
64             cout<<fullname;
65         }
66         void setaddress(char *a);
67         void displayaddress()
68         {
69             cout<<address;
70         }
```

## Files



main.cpp



main.cpp

```
69     cout<<address,
70 }
71 void setemail(char *e);
72 void displayemail()
73 {
74     cout<<email;
75 }
76 void setuid(char *id);
77 void login(char *username, char *password);
78 void logout();
79 void searchAuctiondetails();
80 void displaysampledata()
81 {
82     cout<<"SAMPLE DATA"<<endl;
83     cout<<"--ADMIN INPUT DATA--"<<endl;
84     cout<<"USERNAME    :admin"<<endl;
85     cout<<"PASSWORD    :password"<<endl<<endl;
86     cout<<"--SELLER INPUT DATA--"<<endl;
87     cout<<"USERNAME    :seller"<<endl;
88     cout<<"PASSWORD    :password"<<endl<<endl;;
89     cout<<"--BUYER INPUT DATA--"<<endl;
90     cout<<"USERNAME    :buyer"<<endl;
91     cout<<"PASSWORD    :password"<<endl;
92 }
93
94 };
95 void user::displaycon()
96 {
97     cout<<contact;
98 }
99 //derived class1(user)
100 class buyer:public user{
101 private:
102     char b_username[20];
103     char b_password[20];
104     int quantity;
105     float totalsum;
106     char category[10];
107     char itemname[10];
```



```
108 public:
109     buyer(){}
110     buyer(char b_username[],char b_upass[])
111     {
112         strcpy(b_username,b_username);
113         strcpy(b_password,b_upass);
114     }
115
116     void buyerprocess();
117
118 };
119 string balert;
120 string salert;
121 int sum;
122 string code;
123 float qtty;
124 char categoryname[10];
125 void buyer::buyerprocess()
126 {
127     int cat;
128
129
130
131     float pc[2] = { 5.00,10.00 };
132     float pt[2] = { 5.60,27.00 };
133     float pe[2] = { 10.00,40.00 };
134     float pf[2] = { 23.00,49.00 };
135     cout<<"SIGNED AS A BUYER"<<endl<<endl;
136     cout<<balert<<endl<<endl;
137     cout<<"-----STORE CATEGORIES-----"<<endl;
138     cout<<"1.  CLOTHES"<<endl;
139     cout<<"2.  TOYS"<<endl;
140     cout<<"3.  ELECTRONICS"<<endl;
141     cout<<"4.  FURNITHURE"<<endl<<endl;
142     cout<<"ENTER CATEGORY NUMBER  :";cin>>cat;
143     cout<<endl<<endl;
144     switch(cat){
```

```

145 case 1:
146     cout<<"CLOTHES CATEGORY SELECTED"<<endl<<endl;
147     strcpy(categoryname,"CLOTHES");
148     cout<<"        CHOOSE PRODUCT BELOW        "<<endl;
149     cout<<"            T SHIRT [C1] \t"<<"U$."<<pc[0]<<endl;
150     cout<<"            JEANS   [C2] \t"<<"U$."<<pc[1]<< endl;
151     cout<<endl;
152     cout<<endl<<endl;
153     cout << "ENTER CODE    :";cin >> code;
154     if (code == "C1") {
155
156         cout << "T SHIRT => \t" << "U$." << pc[0] << endl;
157         cout << "QUANTITY: ";cin>>qty;
158         sum = pc[0]*qty;
159         cout << "TOTAL    :U$" << sum << endl;
160
161     }
162     else if (code == "C2") {
163
164         cout << "JEANS  => \t" << "U$." << pc[1] << endl;
165         cout << "QUANTITY: ";cin>>qty;
166         sum = pc[1]*qty;
167         cout << "TOTAL    :U$" << sum << endl;
168
169     }
170
171
172
173     break;
174 case 2:
175     cout<<"toys category selected"<<endl<<endl;
176     strcpy(categoryname,"TOYS");
177     cout<<"choose product in below"<<endl;
178     cout<<"TEDDY BEAR   [T1] \t"<<"U$."<<pt[0]<<endl;
179     cout<<"REMOTE CAR    [T2] \t"<<"U$."<<pt[1]<< endl;
180     cout<<endl;

```

```

181 cout<<endl<<endl;
182 cout << "enter code: "; cin >> code;
183 if (code == "T1") {
184
185     cout << "TEDDY BEAR => \t" << "U$." << pt[0] << endl;
186     cout << "quantity: "; cin >> qty;
187     sum = pc[0]*qty;
188     cout << "total :U$" << sum << endl;
189 }
190 else if (code == "T2") {
191
192     cout << "DOLL => \t" << "U$." << pc[1] << endl;
193     cout << "quantity: "; cin >> qty;
194     sum = pt[1]*qty;
195     cout << "total :U$" << sum << endl;
196 }
197 break;
198 case 3:
199     cout<<"electronic category selected"<<endl<<endl;
200     strcpy(categoryname,"ELECTRONICS");
201     cout<<"choose product in below"<<endl;
202     cout<<"PHONE    [E1] \t"<<"U$."<<pe[0]<<endl;
203     cout<<"LAPTOP    [E2] \t"<<"U$."<<pe[1]<< endl;
204     cout<<endl;
205     cout<<endl<<endl;
206     cout << "enter code: "; cin >> code;
207     if (code == "E1") {
208
209         cout << "PHONE => \t" << "U$." << pe[0] << endl;
210         cout << "quantity: "; cin >> qty;
211         sum = pe[0]*qty;
212         cout << "total :U$" << sum << endl;
213     }
214     else if (code == "E2") {
215
216         cout << "LAPTOP => \t" << "U$." << pe[1] << endl;

```

```

217     cout << "quantity: ";cin>>qty;
218     sum = pe[1]*qty;
219     cout << "total :U$" << sum << endl;
220 }
221 break;
222 case 4:
223     cout<<"furniture category selected"<<endl<<endl;
224     strcpy(categoryname,"FURNITHURE");
225     cout<<"choose product in below"<<endl;
226     cout<<"CHAIR   [F1] \t"<<"U$."<<pf[0]<<endl;
227     cout<<"DESK    [F2] \t"<<"U$."<<pf[1]<< endl;
228     cout<<endl;
229     cout<<endl<<endl;
230     cout << "enter code:";cin >> code;
231     if (code == "F1") {
232
233         cout << "CHAIR => \t" << "U$." << pf[0] << endl;
234         cout << "quantity: ";cin>>qty;
235         sum = pf[0]*qty;
236         cout << "total :U$" << sum << endl;
237     }
238     else if (code == "F2") {
239
240         cout << "DESK  => \t" << "U$." << pf[1] << endl;
241         cout << "quantity: ";cin>>qty;
242         sum = pf[1]*qty;
243         cout << "total :U$" << sum << endl;
244     }
245     break;
246 default:
247     cout<<"unavailable category"<<endl;
248
249 }
250
251
252 }
253 //derived class2(user)
254 class seller:public user{
255 private:

```

```

256     char s_username[20];
257     char s_password[20];
258 public:
259     seller(){}
260     seller(char s_uname[],char s_upass[])
261     {
262         strcpy(s_username,s_uname);
263         strcpy(s_password,s_upass);
264     }
265 };
266 //user methods
267 void user::setname(char *n)
268 {
269     strcpy(fullname,n);
270 }
271 void user::setaddress(char *a)
272 {
273     strcpy(address,a);
274 }
275 void user::setemail(char *e)
276 {
277     strcpy(email,e);
278 }
279 void user::setuid(char *id)
280 {
281     strcpy(user_id,id);
282 }
283 class reports{
284     protected:
285         int reportIndex;
286         admin*ad;
287     public:
288         void generateReport();
289         void samplereport();
290 };
291 class daily:public reports{

```

```

292 | char description[];
293 | };
294 | class monthly:public reports{
295 |     char description[];
296 | };
297 | class sales:public reports{
298 |     char description[];
299 | };
300 | void reports::samplereport()
301 | {
302 |     string rep[10] = {"buyer1","no72/25 colombo","0778899123","buyer12@gmail.com","credit card payment","CLOTHES","C1","3","$10.00","09/05/2020"};
303 |
304 |
305 |         cout<<"-----"<<rep[9]<<"-----"<<endl<<endl;
306 |         cout<<"BUYER NAME      "<<rep[0]<<endl;
307 |         cout<<"ADDRESS        "<<rep[1]<<endl;
308 |         cout<<"CONTACT NO     "<<rep[2]<<endl;
309 |         cout<<"EMAIL          "<<rep[3]<<endl;
310 |         cout<<"PAYMENT METHOD "<<rep[4]<<endl;
311 |         cout<<"CATEGORY       "<<rep[5]<<endl;
312 |         cout<<"ITEM CODE      "<<rep[6]<<endl;
313 |         cout<<"QUANTITY      "<<rep[7]<<endl;
314 |         cout<<"TOTAL        "<<rep[8]<<endl<<endl<<endl;
315 |     }
316 | class bid{
317 |     private:
318 |         int auctionID;
319 |         int buyerID;
320 |         float bidPrice;

```

```
321     float currentbid;
322     char biddingdate;
323     admin*ad;
324     user*us;
325     auction*auc;
326
327 public:
328     bid(int auctionID,admin*ad){}
329     void bidding();
330     void setwinningbid();
331     void check_bid();
332     void set_bid();
333
334 };
335 class auction{
336     private:
337         int auctionid;
338         char stringdate[20];
339         float reservedprice;
340         int lotNo;
341         char duration[10];
342         int sellerID;
343         bid*bid[100];
344         lot*lot[100];
345         user*u;
346     public:
347         void add_auction();
348         void calcamount();
349         void extend_duration();
350         void add_lot();
351         void searchAuction();
352         void viewdetails();
353
```

---

```
354 };
355 class lot{
356     private:
357         int lotno();
358         char type[20];
359         char description[100];
360         char status[10];
361         user*u;
362         auction*auc;
363     public:
364         void update_lot_status();
365         void add_lot_details();
366 };
367
368 class category{
369     private:
370         int categoryno;
371         char categoryname[10];
372     public:
373         category();
374         ~category();
375 };
376 class item{
377     private:
378         category *cate[100];
379         int itemID;
380         float initialPrice;
381         char name[10];
382         char description[100];
383         char available[10];
384         char category[10];
385
386     public:
387         item();
388         ~item();
389 };
390 class payment{
391     protected:
392         float amount;
```



```

393     admin*ad;
394     user*u;
395     public:
396     payment(){};
397     void setamount(float a);
398     float getamount();
399     void paymentprocess();
400
401 };
402 string pmethod;
403 void payment::paymentprocess()
404 {
405     cout<<endl<<endl;
406     cout<<"choose your payment method in below"<<endl;
407     cout<<"credit card  [c]"<<endl;
408     cout<<"debit card   [d]"<<endl;
409     cout<<"paypal       [p]"<<endl;
410     cout<<"enter payment method  : ";cin>>pmethod;
411     cout<<endl<<endl;
412
413 }
414 void payment::setamount(float a)
415 {
416     amount=a;
417 }
418
419 class credit_card:public payment{
420     private:
421     char number[20];
422     char type[10];
423     int month,year;
424     public:
425
426     void settype(char ty);
427     void setdate(int mm,int yy);
428     void displavcrdno():

```

```

429         int getmonth();
430         int getyear();
431
432     };
433
434
435     void credit_card::setdate(int mm, int yy)
436     {
437         if(mm>=1&&mm<=12)
438             month=mm;
439         else
440             month=0;
441         if(yy>=2020)
442             year=yy;
443         else
444             year=0;
445     }
446     int credit_card::getmonth()
447     {
448         return month;
449     }
450
451     int credit_card::getyear()
452     {
453
454         return year;
455     }
456
457     class debit_card:public payment{
458     private:
459         char number[20];
460         char type[10];

```

```

461         int month,year;
462     public:
463         void setcardno(char no);
464         void settype(char ty);
465         void setdate(int mm,int yy);
466         int getmonth();
467         int getyear();
468
469 };
470
471
472 class paypal:public payment{
473     private:
474         char pemail[20];
475 };
476
477
478 int main()
479 {
480     user u1;
481
482
483
484     int c,cat;
485     payment p1;
486     buyer b1;
487     reports r1;
488     char holdname[10];
489     char payemail[20];
490     char cno[30];
491     float m,y;
492     int cost;
493     int refu;
494     char n[30],a[100],e[30],i[30];
495     credit_card c1;
496     string ptype="";

```

```

497     string username;
498     string password;
499     cout<<"-----WELCOME TO THE ONLINE AUCTION SYSTEM-----"<<endl<<endl;
500     u1.displaysampledata();
501
502     cout<<endl<<endl;
503     int count=0;
504     while(count<=0)
505     {
506         cout<<"          PLEASE ENTER YOUR DETAIL FOR SIGN UP          "<<endl<<endl;
507         cout<<"ENTER USER NAME   :";cin>>username;
508         cout<<"ENTER PASSWORD   :";cin>>password;
509         string choose;
510         if(username=="admin"&&password=="password"){
511             int option;
512             cout<<"SIGNED AS A ADMIN"<<endl<<endl;
513             cout<<"admin options"<<endl;
514             cout<<"1.transaction reports"<<endl;
515             cout<<"2.restrict buyers"<<endl;
516             cout<<"3.restrict sellers"<<endl<<endl;
517             cout<<"ENTER OPTION   :";
518             cin>>option;
519             if(option==1){
520                 cout<<"-----TRANSACTION REPORTS-----"<<endl<<endl;
521                 cout<<"-----SAMPLE REPORT-----"<<endl<<endl;
522                 r1.samplerreport();
523             }
524         }
525         else if(option==2){

```



main.cpp

```
526     string c;
527     cout<<endl<<endl;
528     cout<<"Do you want restrict default buyer y/n:"<<cin>>c;
529     if(c=="y")
530     {
531         balert="-----Warning! account restricted-----";
532         cout<<"BUYER ACCOUNT RESTRICTRD";
533     }
534
535
536     }
537     else if(option==3){
538         string c;
539         cout<<endl<<endl;
540         cout<<"Do you want restrict default seller y/n:"<<cin>>c;
541         if(c=="y")
542         {
543             salert="-----Warning! account restricted-----";
544             cout<<"SELLER ACCOUNT RESTRICTRD";
545         }
546
547
548     }
549
550     cout<<endl<<endl;
551     cout<<"Do you want sign with other account y/n :";
552     cin>>choise;
553
554     if(choise=="n")
555     {
556         count++;
557     }
558
559
560
561 }
562 else if(username=="seller"&&password=="password"){
563     cout<<"SIGNED AS A SELLER"<<endl<<endl;
564     cout<<salert<<endl<<endl;
565     cout<<"do you want sign with other account v/n :";
```

```

566     cin>>choise;
567
568     if(choise=="n")
569     {
570         count++;
571     }
572 }
573 else if(username=="buyer"&&password=="password"){
574     b1.buyerprocess();
575     p1.paymentprocess();
576     if(pmethod=="c"){
577         ptype="CREDIT CARD PAYMENT";
578         cout<<"YOU SELECTED CREDIT CARD PAYMENT"<<endl<<endl;
579         cout<<"PLEASE ENTER YOUR CARD INFORMATION"<<endl<<endl;
580         cout<<"CARD HOLDER NAME          :";cin>>holdname;
581         cout<<"CARD NUMBER              :";cin>>cno;
582         cout<<endl<<endl;
583         cout<<"----expire date---"<<endl;
584         cout<<"month :";cin>>m;
585
586         cout<<"year  :";cin>>y;
587         c1.setdate(m, y);
588         cout<<endl<<endl;
589     }
590 }
591 else if(pmethod=="d"){
592     ptype="DEBIT CARD PAYMENT";
593     cout<<"YOU SELECTED DEBIT CAR PAYMENT"<<endl<<endl;
594     cout<<"PLEASE ENTER YOUR CARD INFORMATION"<<endl<<endl;
595     cout<<"CARD HOLDER NAME          :";cin>>holdname;
596     cout<<"CARD NUMBER              :";cin>>cno;
597     cout<<endl<<endl;
598
599     cout<<"----expire date---"<<endl;
600     cout<<"month :";cin>>m;

```

```

601
602     cout<<"year  :";cin>>y;
603     c1.setdate(m, y);
604     cout<<endl<<endl;
605 }
606 else if(pmethod=="p"){
607     ptype="PAYPAL PAYMENT";
608     cout<<"YOU SELECTED PAYPAL PAYMENT"<<endl<<endl;
609     cout<<"PLEASE ENTER YOUR PAYPAL INFORMATION"<<endl<<endl;
610     cout<<"PAYPAL EMAIL      :";cin>>payemail;
611     cout<<endl<<endl;
612 }
613 else{
614     cout<<"wrong method";
615 }
616 cout<<"--WE NEED SOME DETAILS ABOUT YOU--"<<endl<<endl;
617 cout<<"INPUT NAME      :";cin>>n;cout<<endl;
618 cout<<"INPUT ADDRESS    :";cin>>a;cout<<endl;
619 cout<<"INPUT EMAIL       :";cin>>e;cout<<endl;
620 cout<<"INPUT ID          :";cin>>i;cout<<endl;
621 cout<<"INPUT CONTACT     :";cin>>c;cout<<endl;
622 u1.setname(n);
623 u1.setaddress(a);
624 u1.setemail(e);
625 u1.setuid(i);
626 cout<<"-----ORDER DETAILS-----"<<endl;
627 if(pmethod=="c" || pmethod=="d")
628 {
629
630     cout<<"BUYER NAME      :";u1.displayname();cout<<endl;
631     cout<<"ADDRESS          :";u1.displayaddress();cout<<endl;
632     cout<<"CONTACT NO        :";u1.displaycon();cout<<endl;
633     cout<<"EMAIL              :";u1.displayemail();cout<<endl;
634     cout<<"PAYMENT METHOD      :"<<ptype<<endl;
635     cout<<"CARD NO            :"<<cno<<endl;
636     cout<<"CATEGORY           :"<<categoryname<<endl;

```

```

637         cout<<"ITEM CODE      : "<<code<<endl;
638         cout<<"QUANTITY      : "<<qtty<<endl;
639         cout<<"TOTAL        : "<<sum;cout<<endl;
640     }
641     else if(pmethod=="p")
642     {
643         cout<<"BUYER NAME      : ";u1.displayname();cout<<endl;
644         cout<<"ADDRESS          : ";u1.displayaddress();cout<<endl;
645         cout<<"CONTACT NO       : ";u1.displaycon();cout<<endl;
646         cout<<"EMAIL            : ";u1.displayemail();cout<<endl;
647         cout<<"PAYMENT METHOD    : "<<ptype<<endl;
648         cout<<"PAYPAL EMAIL      : "<<payemail<<endl;
649         cout<<"CATEGORY          : "<<categoryname<<endl;
650         cout<<"ITEM CODE      : "<<code<<endl;
651         cout<<"QUANTITY      : "<<qtty<<endl;
652         cout<<"TOTAL        : "<<sum;cout<<endl;
653     }
654     cout<<"do you want sign with other account y/n :";
655     cin>>choise;
656
657     if(choise=="n")
658     {
659         count++;
660     }
661
662
663
664
665
666 }
667 else
668 {
669     cout<<"wrong user name or password"<<endl<<endl;

```



```
670     cout<<"do you want try again y/n :";
671     cin>>choise;
672
673     if(choise=="y")
674     {
675         count=0;
676     }else
677     {
678         count++;
679     }
680
681 }
682 }
683     cout << "\n\n-----thank you-----";
684     cout << "-----thank you-----";
685     return 0;
686 }
```