P.G.D.A.V. College (M), University Of Delhi

B. Sc. (H) Computer Science (II Year) SEMESTER IV
Software Engineering Project
‘Vintage Auction System’

SUPERVISOR:
Dr. Aparna Datt

SUBMITTED BY:
Dhananjay Arora (20053570011)
Rahul Kumar (20053570049)

CERTIFICATE

This is to certify that the project entitled, "**VINTAGE AUCTION SYSTEM**" has been done by: **DHANANJAY ARORA** and **RAHUL KUMAR** of Bachelor of Science in Computer Science during semester IV from P.G.D.A.V.(M) College ,University of Delhi under the supervision of **Dr. APARNA DATT.**

Signature

(Aparna Datt)

(Supervisor)

DECLARATION

We hereby declare that this Project Report titled “VINTAGE AUCTION SYSTEM” submitted to the Department of Computer Science, P.G.D.A.V.(M) College, University of Delhi is a record of original work done by the team under the guidance of **Dr. Aparna Datt**.

The information and data given in the report is authentic to the best of the team’s knowledge.

This Project Report is not submitted to any other university or institution for
the award of any degree, diploma or fellowship or published any time before.

ACKNOWLEDGEMENT

We would like to take this opportunity to express our profound gratitude and deep regards to our teacher Dr. Aparna Datt for her exemplary guidance, monitoring and constant encouragement throughout the course of this project.

Our primary thanks to her, who poured over every inch of our project with painstaking attention and helped us throughout the working of the project.

It’s our privilege to acknowledge our deepest sense of gratitude to her for her inspiration which has helped us immensely. We are extremely grateful to her for unstilted support and encouragement in the preparation of this project.

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Problem Statement

India is a country with great and affluent cultural history. Its history is something that must be preserved. *Artifacts* and *antiquity* are the heirloom of a country's legacy. It is necessary that these items must be recognised.

During the time of pandemic we have realized how necessary online systems are for us. In India most of the auctions are held physically which received quite a setback during this period. Hence it is progressive and efficient if we are able to move on an online platform. Such systems would help us to *save time, effort and money*. Besides that it can be made available widely to larger groups of people increasing the options for the seller.

Moreover, many of these artifacts are under personal possession which are not even recognised by the government hence are not properly evaluated. Hence the proprietor of the article suffers significant loss. These types of systems can help them to *certify*, *evaluate* and sell their product in a much easier and more profitable way. The conventional way of holding such auctions requires a lot of money i.e. for venue, hosting etc which was not affordable to all but with the introduction of online auction system these costs will be reduced to null. For small sellers with not enough money to hold such types of auctions it would be a boon. This will also change the way of our advertisement and availability of the events.

Software Development Model

RAD Model (Rapid Prototyping):

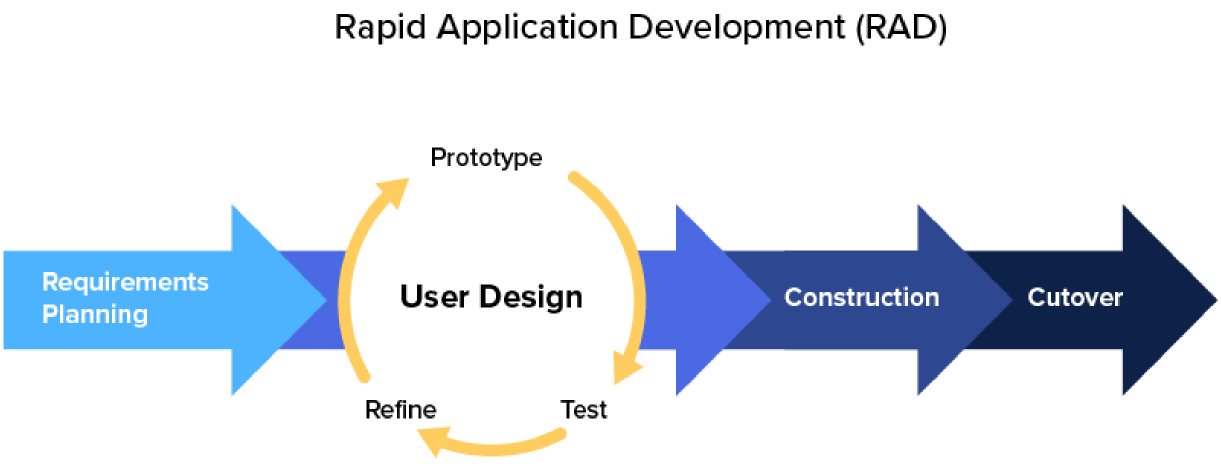
Rapid Application Development model or evolutionary prototyping is the best suited process model to implement the problem.

Definition:

Rapid prototyping is an iterative approach to the design stage of an app or website. The objective is to quickly improve the design and its functionality using regularly updated prototypes and multiple short cycles. This saves time and money by solving common design issues before product development begins, helps businesses to reach market quicker, and puts the focus of development on the needs of the end-user.

Why RAD?

The software can have changing requirements with time which are needed to be taken care of. So, it is best suited to get regular progress and also helps in early marketing. The clients here are mostly non technical so, it is quite necessary for the developer to continuously coordinate with the client to meet the changing requirements. These types of coordination will help the development team to get the grasp of the minute details of the application.



System Requirements Specification

Software Requirement Specification (SRS) is a complete specification and description of requirements of software that needs to be fulfilled for successful development of a software system. These requirements can be functional as well as non-functional.

Software Overview:

This software is built to bridge the communication gap between the artifacts collectors and those who have some artifacts which were inherited by their ancestors. The potential seller needs to get their artifact registered on our portal to sell it. Then an auction is organized on the software after verifying the authenticity of the artifact.
The potential buyers or the bidders need to get themselves registered and verified on a different portal on the software before they can bid for an artifact.

Functional Requirements:

There are a range of different features that this software provides for sellers and buyers. The major objectives of this software are:

1) A person can get their artifact certified through our software service.
2) A person can sell their artifact at a better price than market by applying to “sell on auction”.
3) The collectors can use the software to bid to buy the artifacts and expand their collection.

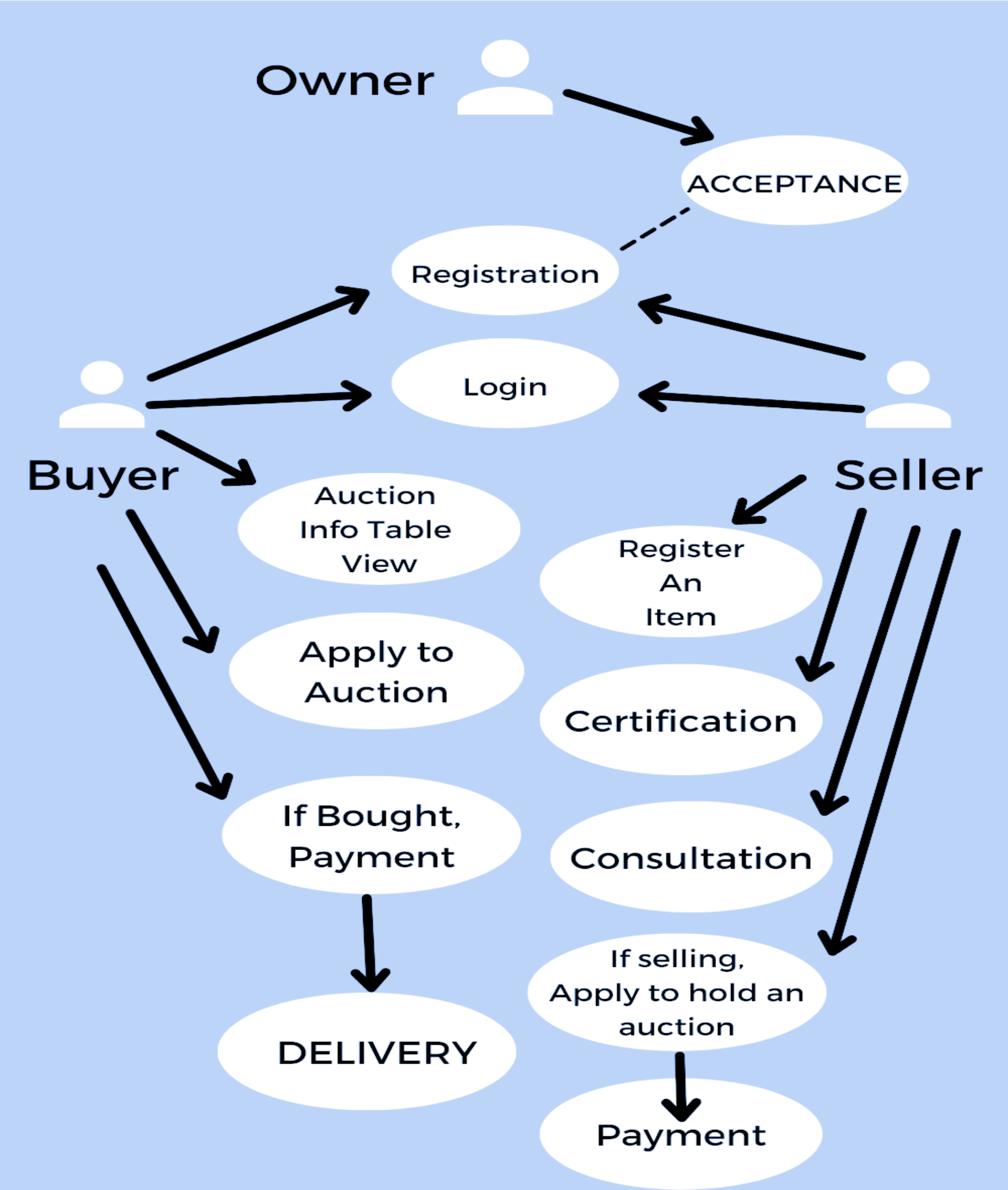
Features for Artifact Owners/Seller:

- ❖ Registration of the artifact
- ❖ Certification of the artifacts
- ❖ Consultation about the artifact
- ❖ Application for organizing auction of the artifact.

Features for buyers:

- ❖ Buyers registration on the portal.
- ❖ Exploring the artifacts list which are going to be auctioned.
- ❖ Application for participating in an auction.
- ❖ Getting the artifact delivered at home if bought in the auction.

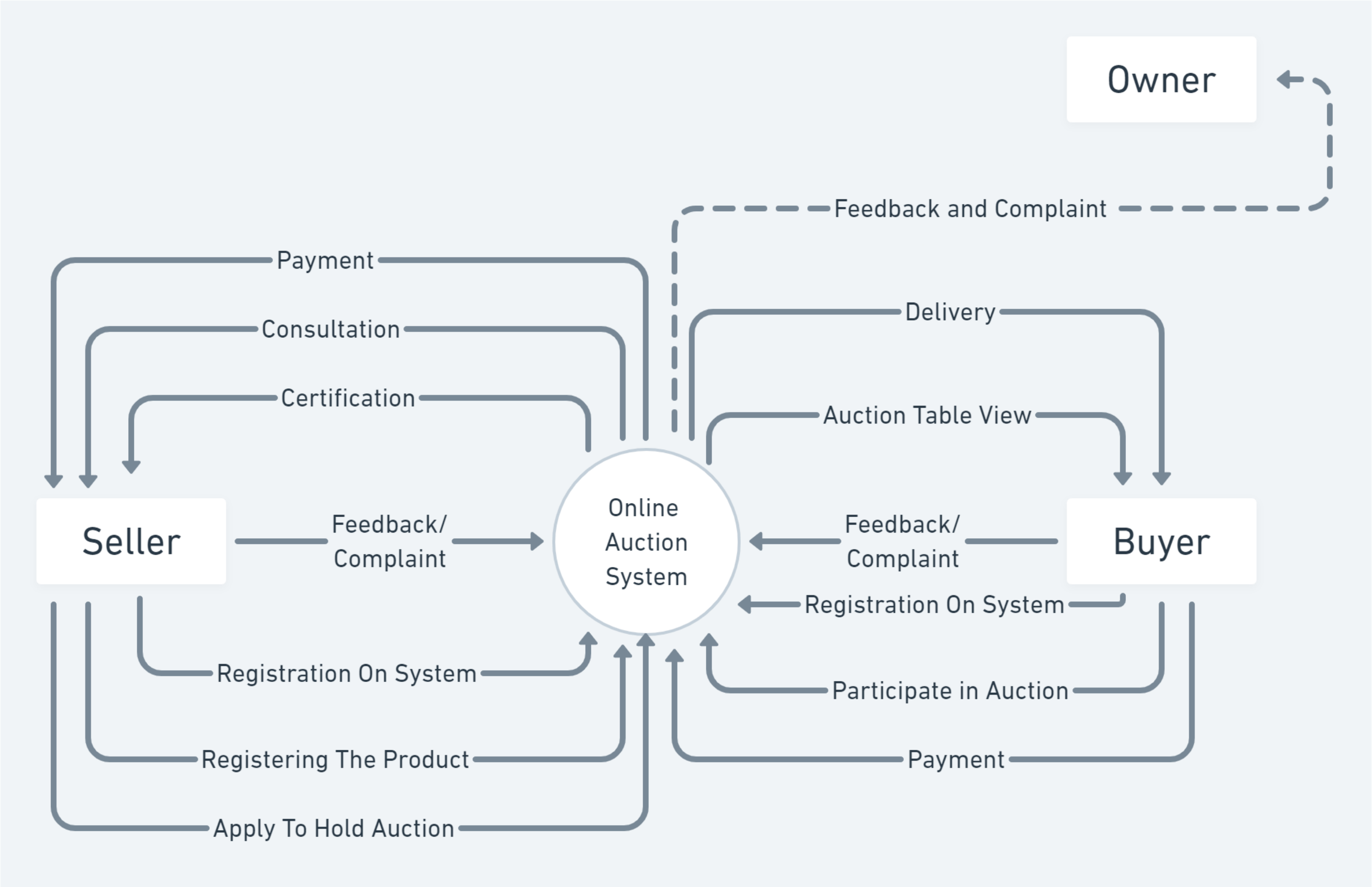
Use Case


Owner
ACCEPTANCE
Registration
Login
Buyer
Seller
Auction
Info Table
View
Register
An
Item
Apply to
Auction
Certification
If Bought,
Payment
Consultation
If selling,
Apply to hold an
auction
DELIVERY
Payment

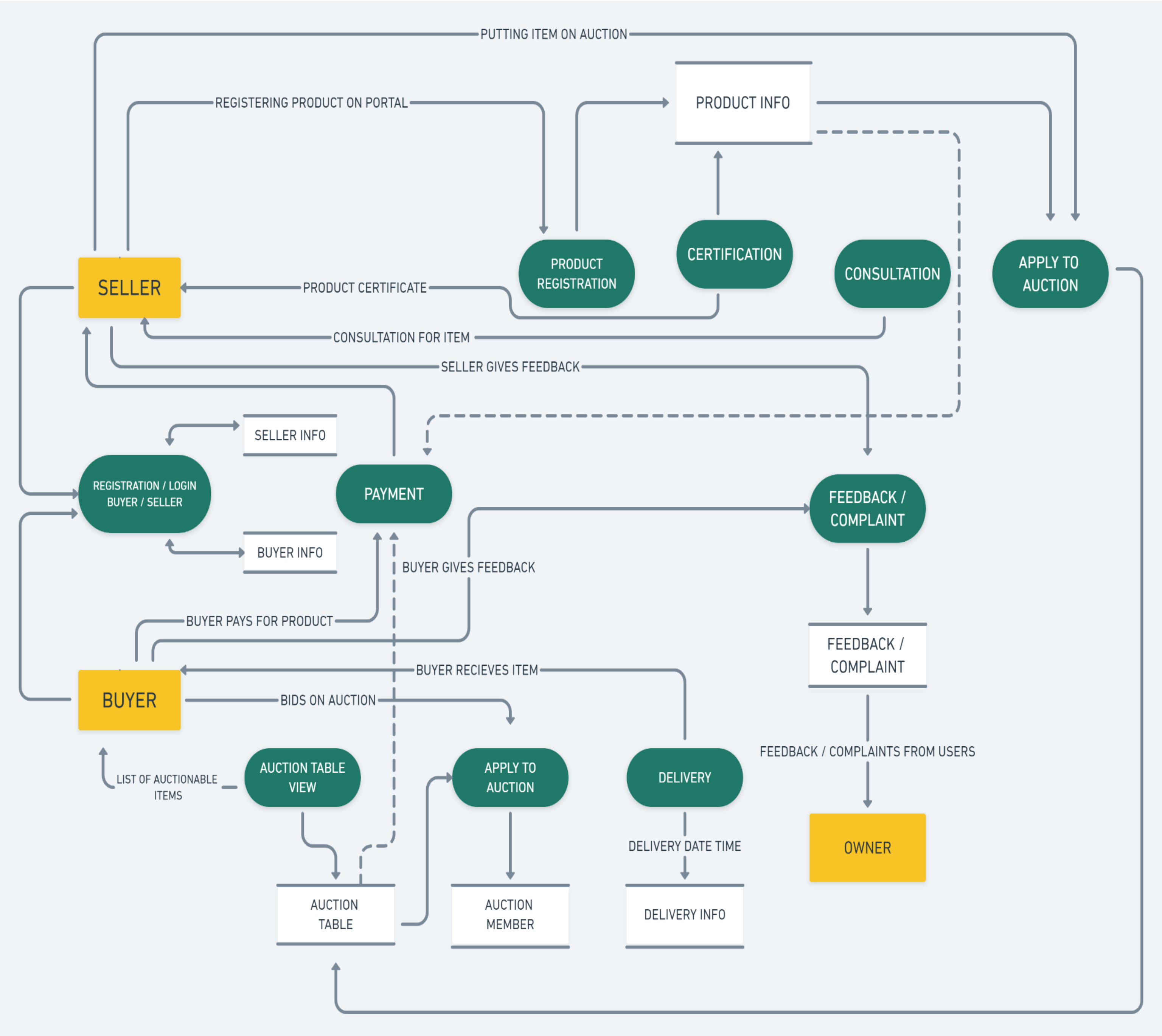
Data FLow Diagram (DFD)

Data Flow Diagram depicts the flow of information for any process or software. Defined symbols like rectangles, circles, and arrows with text labels are used to represent data inputs, outputs, and routes between different modules and actors.

DFD LEVEL 0 (Context Diagram):



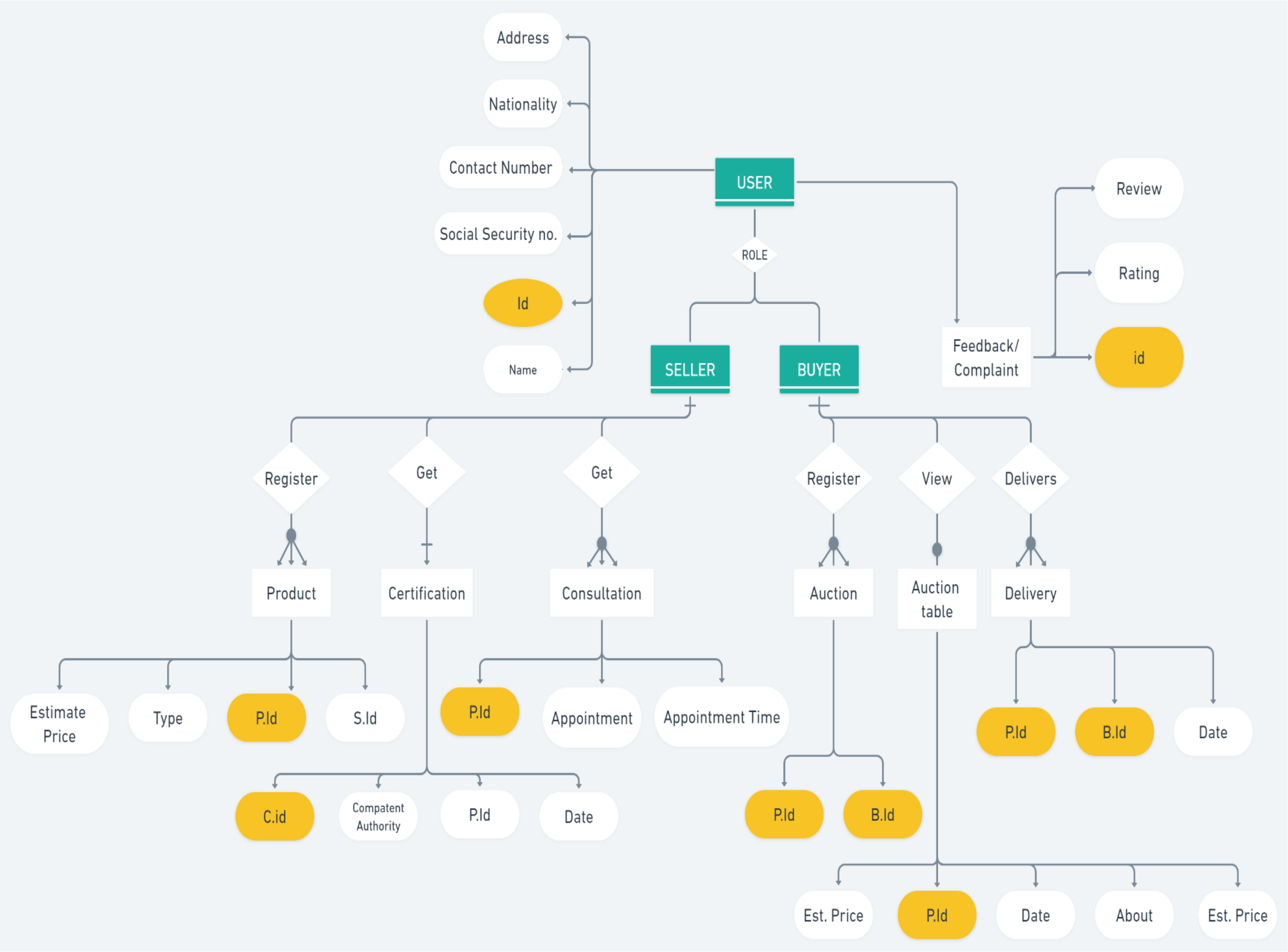
DFD LEVEL 1:


PUTTING ITEM ON AUCTION
REGISTERING PRODUCT ON PORTAL
PRODUCT INFO
PRODUCT REGISTRATION
CERTIFICATION
CONSULTATION
APPLY TO AUCTION
SELLER
PRODUCT CERTIFICATE
CONSULTATION FOR ITEM
SELLER GIVES FEEDBACK
SELLER INFO
REGISTRATION / LOGIN BUYER / SELLER
PAYMENT
FEEDBACK / COMPLAINT
BUYER INFO
BUYER GIVES FEEDBACK
BUYER PAYS FOR PRODUCT
FEEDBACK / COMPLAINT
BUYER RECIEVES ITEM
BUYER
BIDS ON AUCTION
FEEDBACK / COMPLAINTS FROM USERS
LIST OF AUCTIONABLE ITEMS
AUCTION TABLE VIEW
APPLY TO AUCTION
DELIVERY
OWNER
DELIVERY DATE TIME
AUCTION TABLE
AUCTION MEMBER
DELIVERY INFO
]

Entity Relationship Diagram (ERD):

Entity Relationship Diagram, also known as ERD, ER Diagram or ER model, is a type of structural diagram for use in database design. An ERD contains different symbols and connectors that visualize two important information:

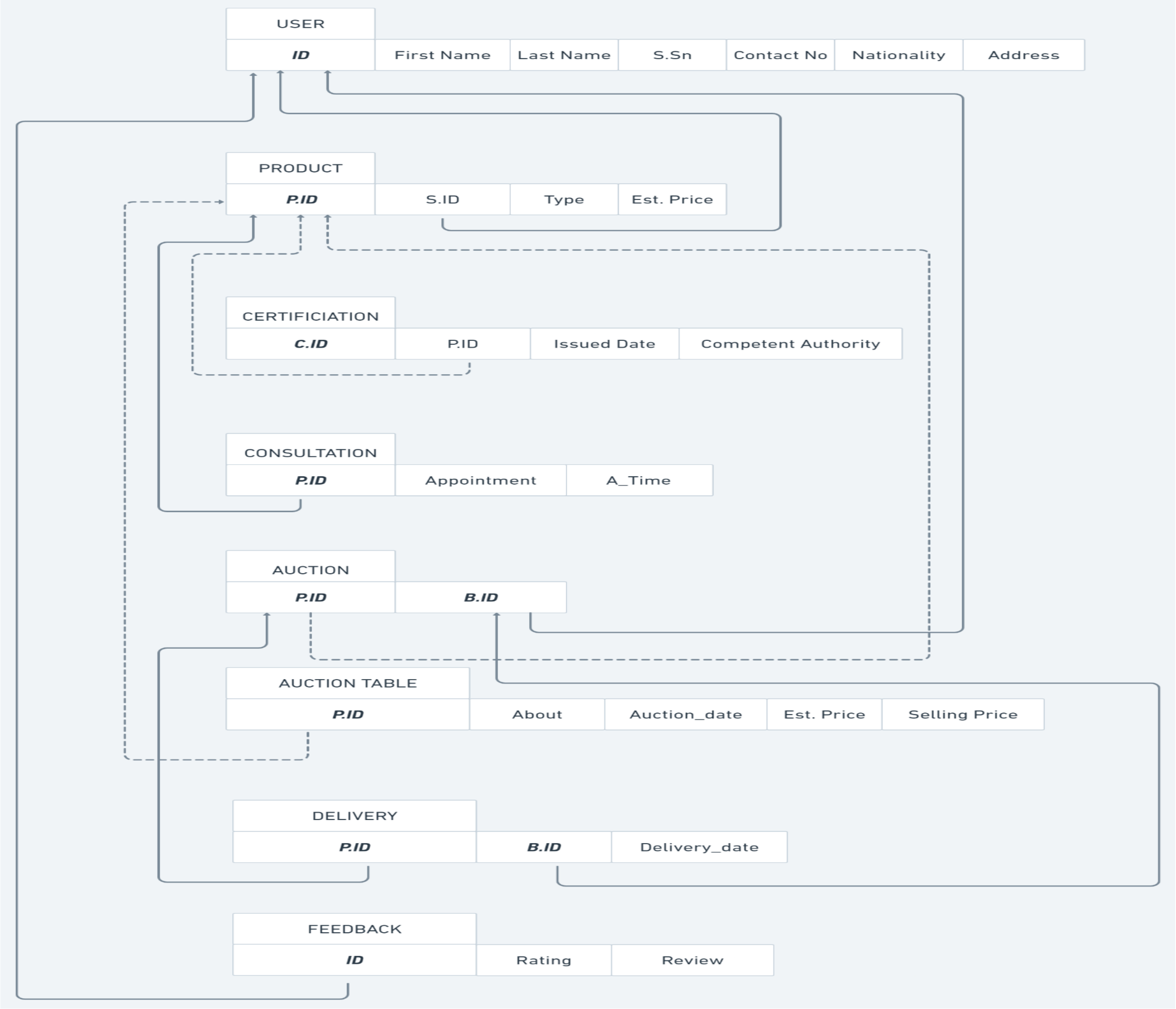
- The major entities within the system scope
- Inter-relationships among these entities.



Yellow attribute:- Primary Key

Relational Schema :

A relational schema is **a set of relational tables and associated items that are related to one another**.
Foreign keys are defined in the schema.



USER

ID	First Name	Last Name	S.Sn	Contact No	Nationality	Address

PRODUCT

P.ID	S.ID	Type	Est. Price

CERTIFICIATION

C.ID	P.ID	Issued Date	Competent Authority

CONSULTATION

P.ID	Appointment	A_Time

AUCTION

P.ID	***B.ID***

AUCTION TABLE

P.ID	About	Auction_date	Est. Price	Selling Price

DELIVERY

P.ID	***B.ID***	Delivery_date

FEEDBACK

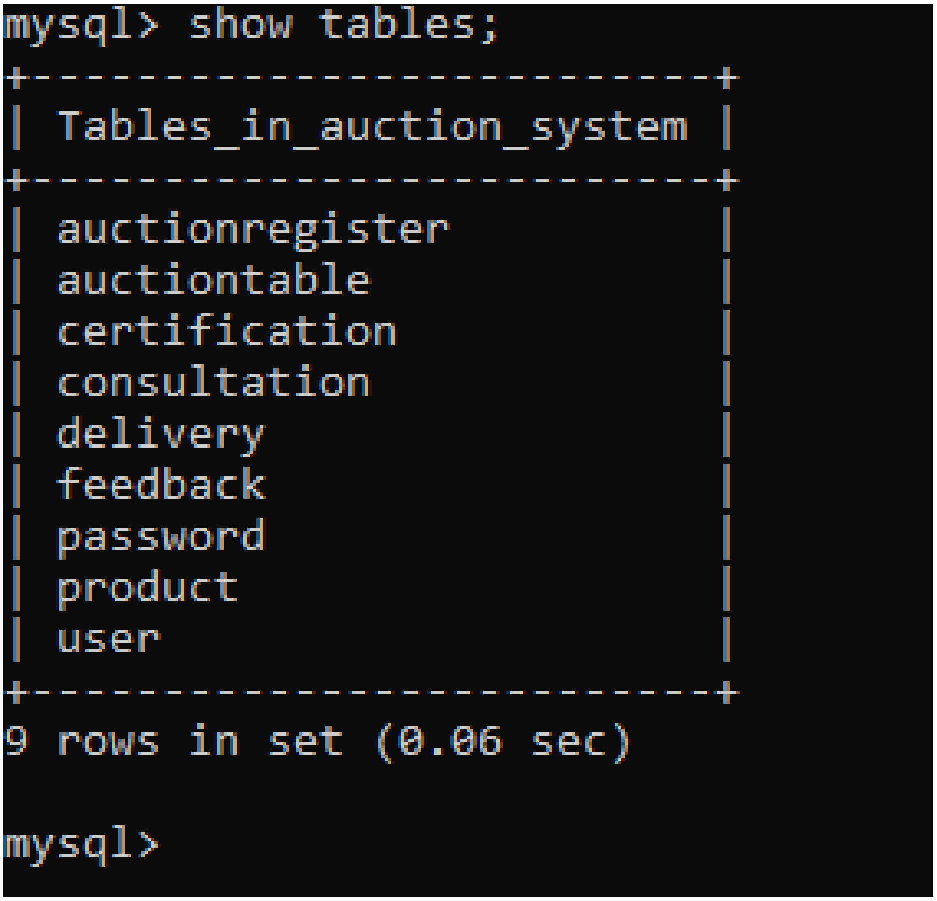
ID	Rating	Review

Relational Database :

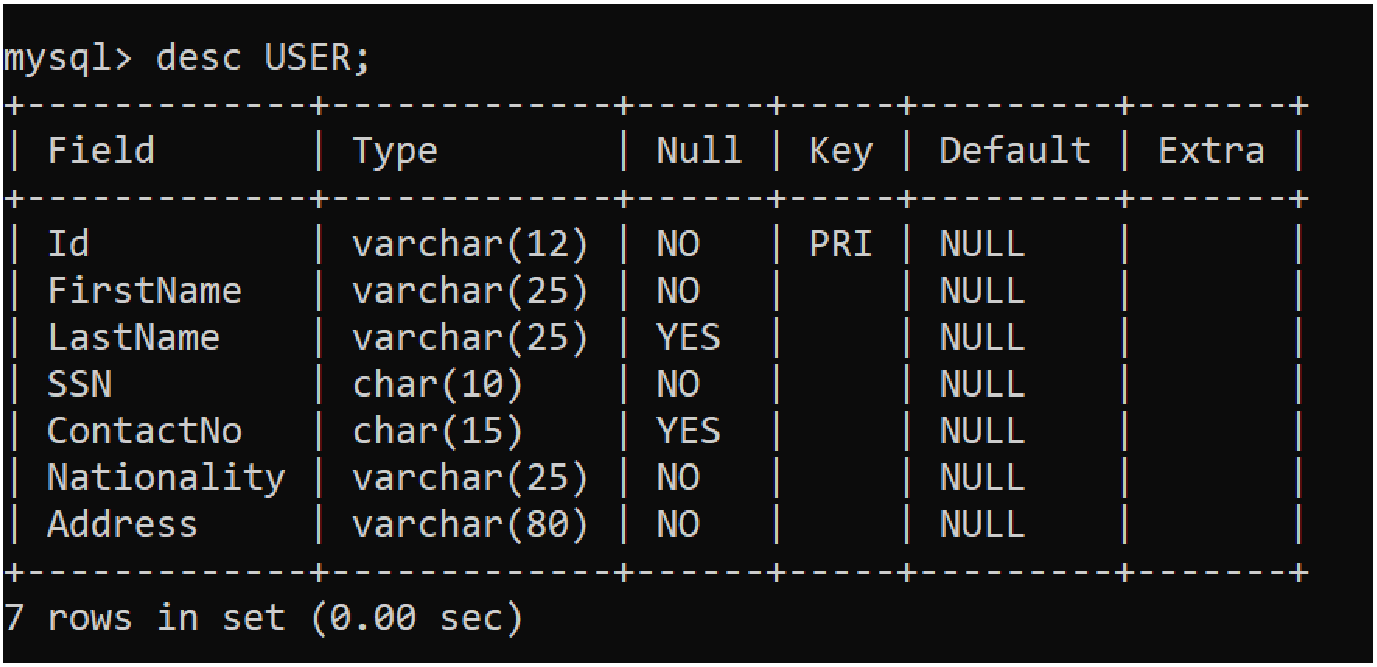
A database is information that is set up for easy access, management and updating.

The database of the auction table include seven tables

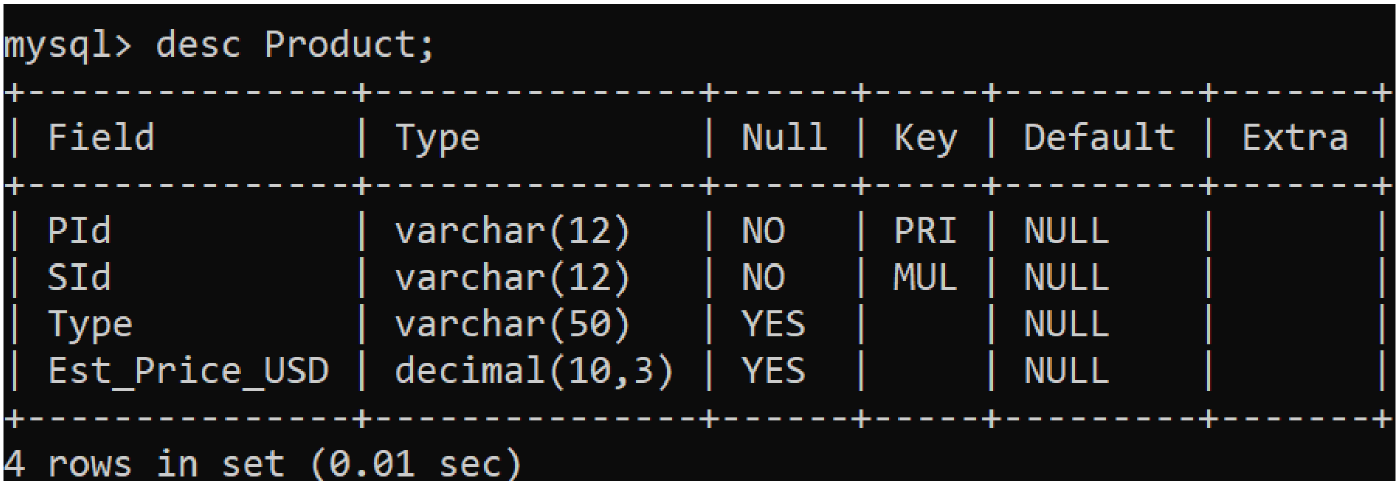
- User
- Product
- Certification
- Consultation
- AuctionRegister
- AuctionTable
- Delivery
- Feedback
- Password



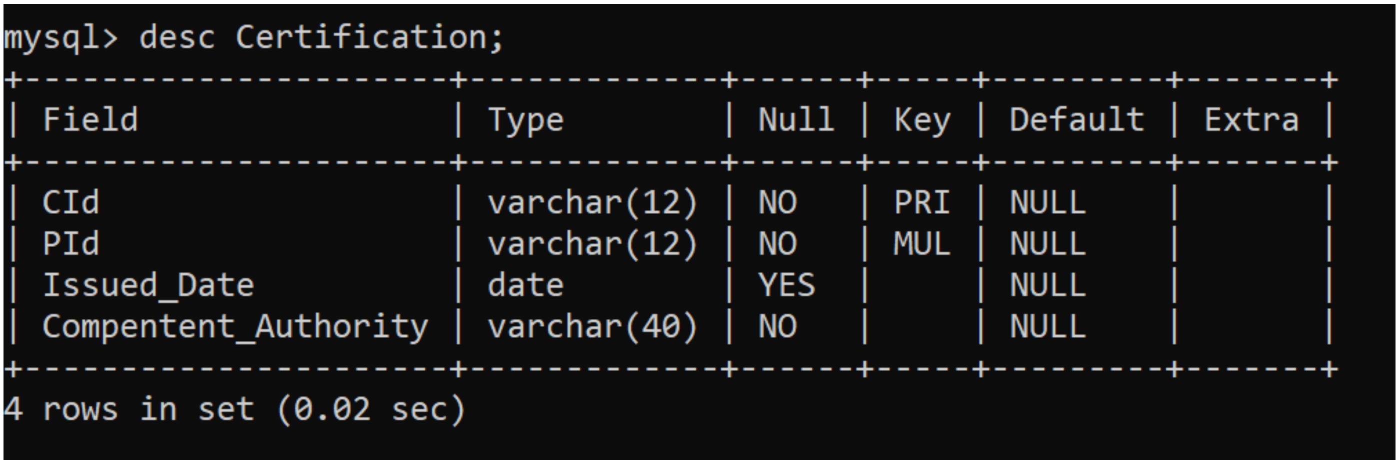
```
mysql> show tables;
+--------------------------+
| Tables_in_auction_system |
+--------------------------+
| auctionregister          |
| auctiontable             |
| certification            |
| consultation             |
| delivery                 |
| feedback                 |
| password                 |
| product                  |
| user                     |
+--------------------------+
9 rows in set (0.06 sec)

mysql>
```



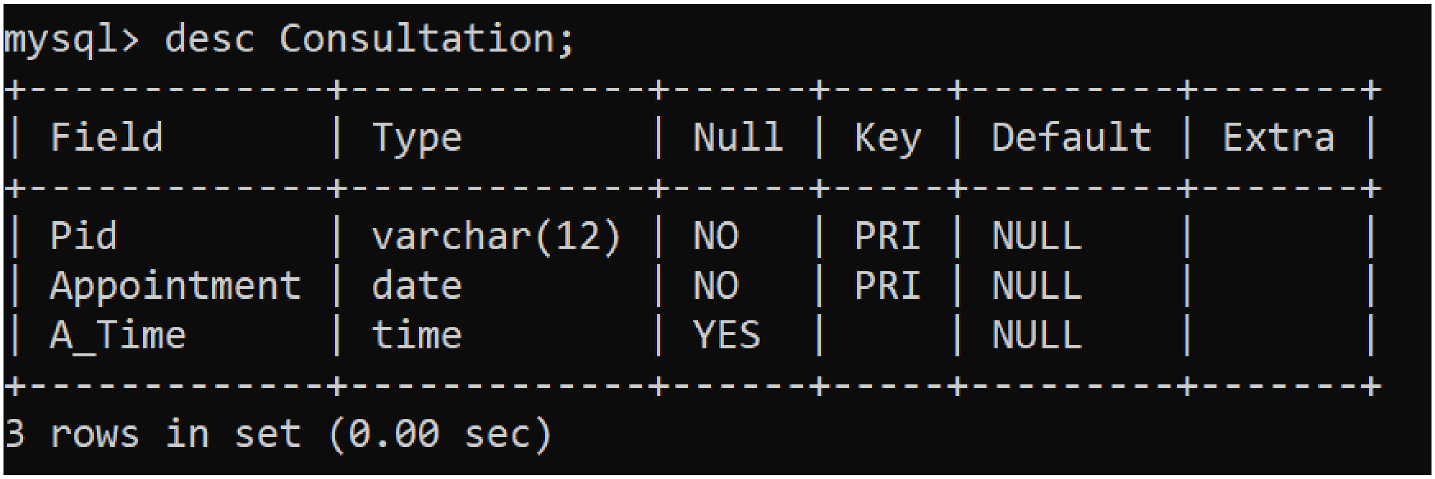
```
mysql> desc USER;
+-------------+-------------+------+-----+---------+-------+
| Field       | Type        | Null | Key | Default | Extra |
+-------------+-------------+------+-----+---------+-------+
| Id          | varchar(12) | NO   | PRI | NULL    |       |
| FirstName   | varchar(25) | NO   |     | NULL    |       |
| LastName    | varchar(25) | YES  |     | NULL    |       |
| SSN         | char(10)    | NO   |     | NULL    |       |
| ContactNo   | char(15)    | YES  |     | NULL    |       |
| Nationality | varchar(25) | NO   |     | NULL    |       |
| Address     | varchar(80) | NO   |     | NULL    |       |
+-------------+-------------+------+-----+---------+-------+
7 rows in set (0.00 sec)
```



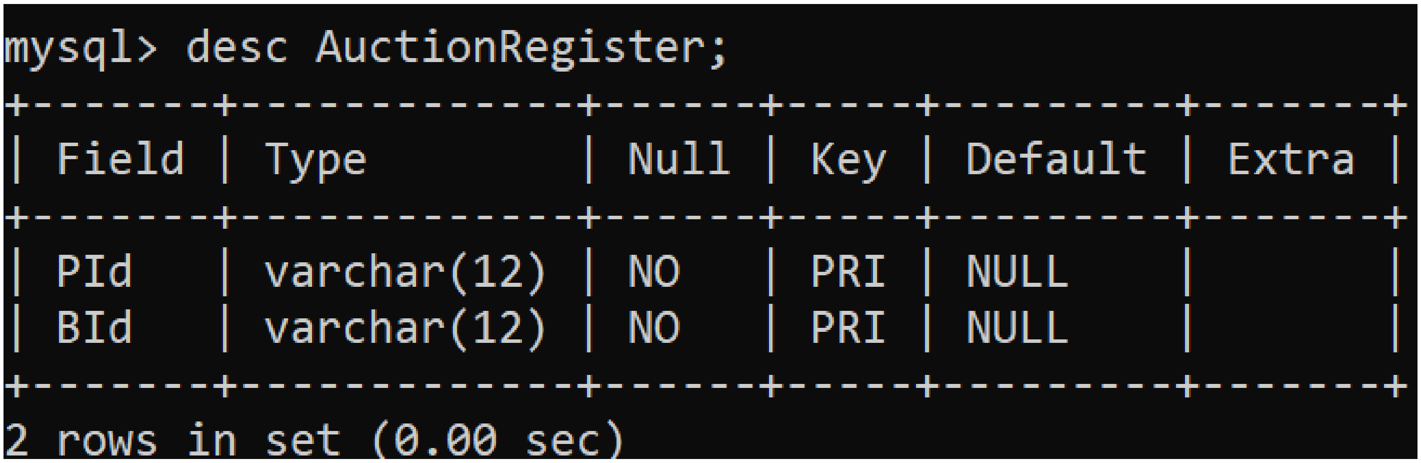
```
mysql> desc Product;
+---------------+---------------+------+-----+---------+-------+
| Field         | Type          | Null | Key | Default | Extra |
+---------------+---------------+------+-----+---------+-------+
| PId           | varchar(12)   | NO   | PRI | NULL    |       |
| SId           | varchar(12)   | NO   | MUL | NULL    |       |
| Type          | varchar(50)   | YES  |     | NULL    |       |
| Est_Price_USD | decimal(10,3) | YES  |     | NULL    |       |
+---------------+---------------+------+-----+---------+-------+
4 rows in set (0.01 sec)
```



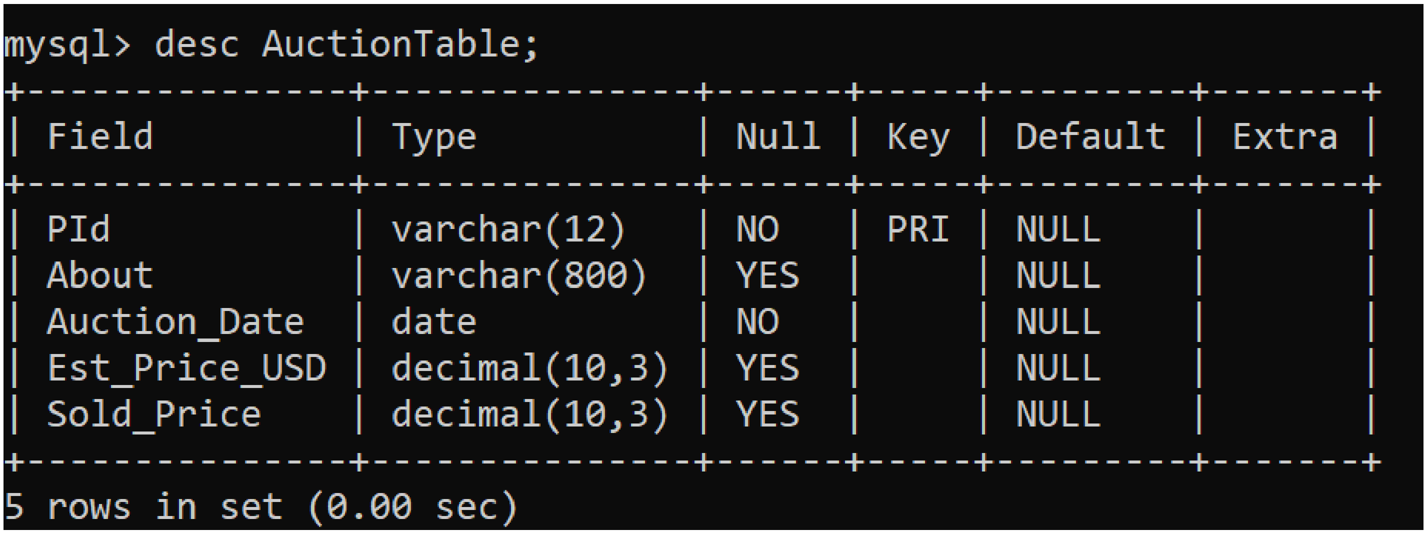
```
mysql> desc Certification;
+----------------------+-------------+------+-----+---------+-------+
| Field                | Type        | Null | Key | Default | Extra |
+----------------------+-------------+------+-----+---------+-------+
| CId                  | varchar(12) | NO   | PRI | NULL    |       |
| PId                  | varchar(12) | NO   | MUL | NULL    |       |
| Issued_Date          | date        | YES  |     | NULL    |       |
| Compentent_Authority | varchar(40) | NO   |     | NULL    |       |
+----------------------+-------------+------+-----+---------+-------+
4 rows in set (0.02 sec)
```



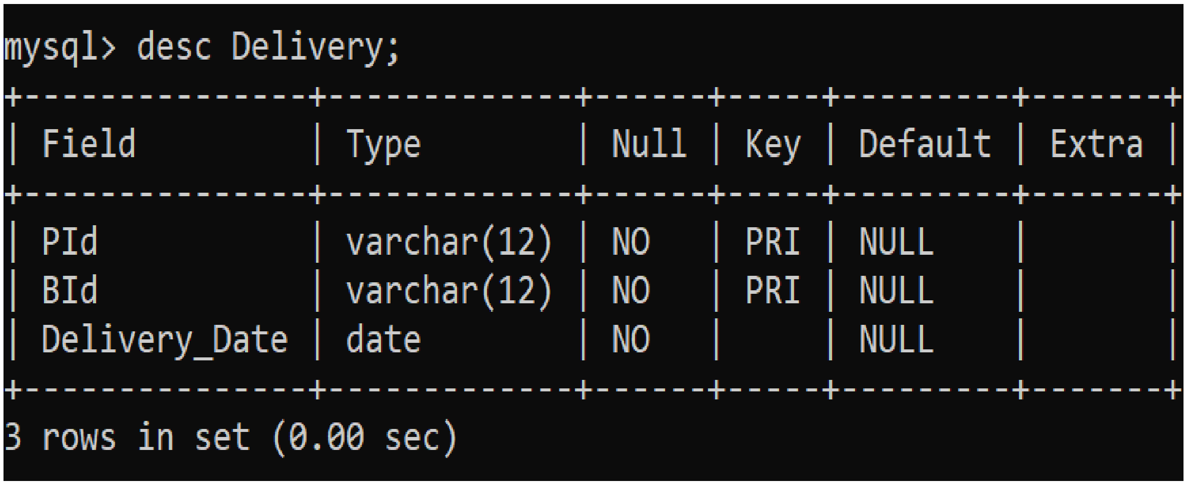
```
mysql> desc Consultation;
+-------------+-------------+------+-----+---------+-------+
| Field       | Type        | Null | Key | Default | Extra |
+-------------+-------------+------+-----+---------+-------+
| Pid         | varchar(12) | NO   | PRI | NULL    |       |
| Appointment | date        | NO   | PRI | NULL    |       |
| A_Time      | time        | YES  |     | NULL    |       |
+-------------+-------------+------+-----+---------+-------+
3 rows in set (0.00 sec)
```



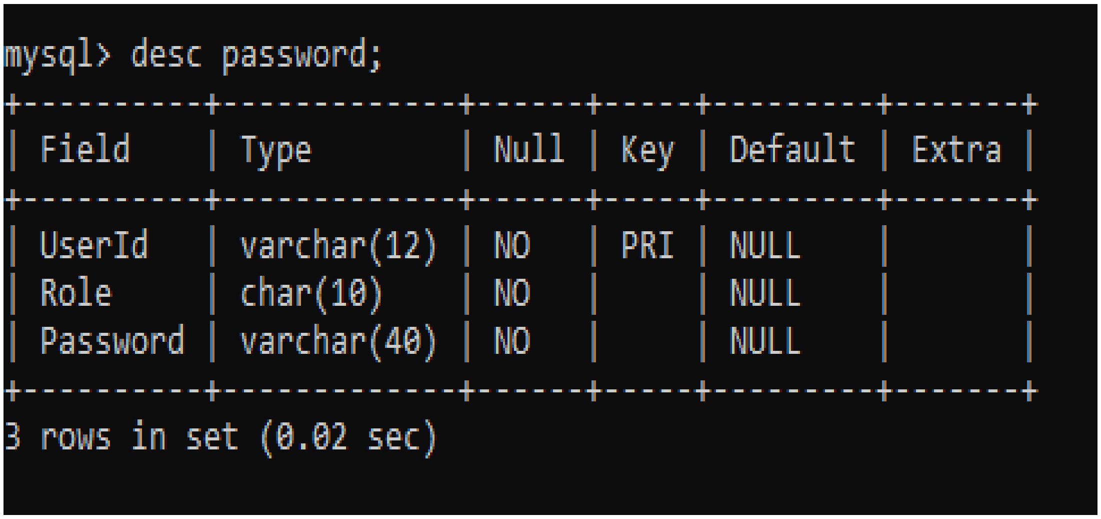
```
mysql> desc AuctionRegister;
+-------+-------------+------+-----+---------+-------+
| Field | Type        | Null | Key | Default | Extra |
+-------+-------------+------+-----+---------+-------+
| PId   | varchar(12) | NO   | PRI | NULL    |       |
| BId   | varchar(12) | NO   | PRI | NULL    |       |
+-------+-------------+------+-----+---------+-------+
2 rows in set (0.00 sec)
```



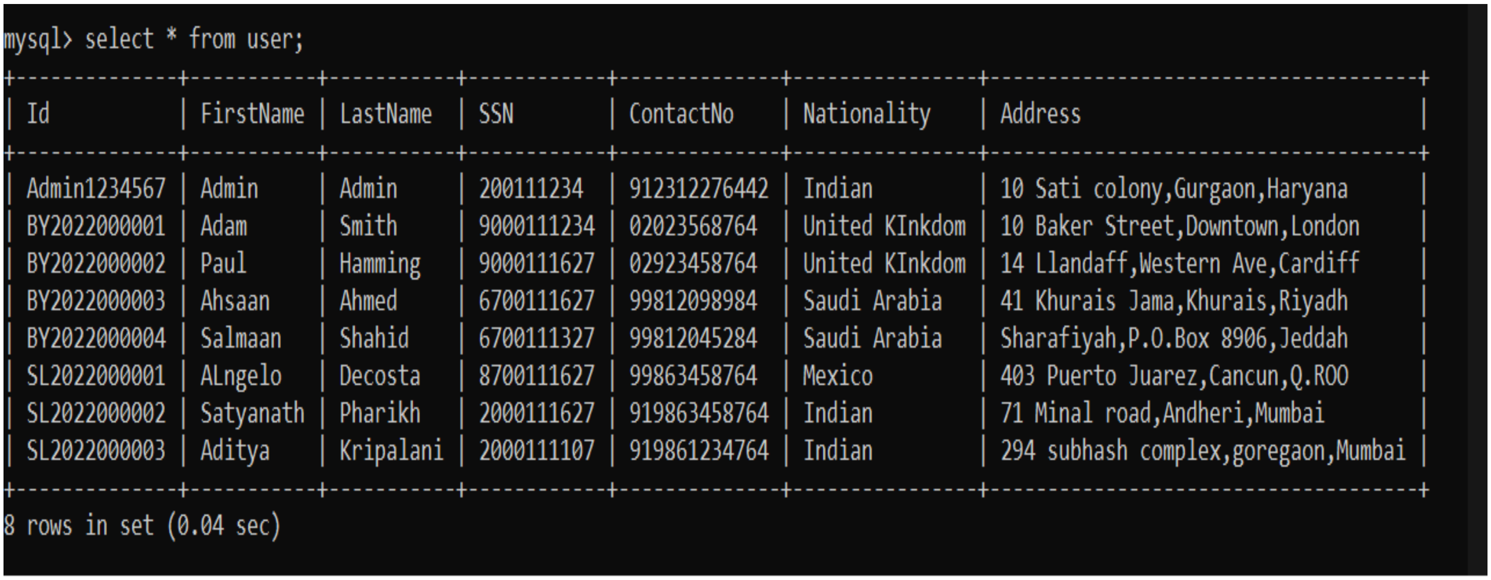
```
mysql> desc AuctionTable;
+---------------+---------------+------+-----+---------+-------+
| Field         | Type          | Null | Key | Default | Extra |
+---------------+---------------+------+-----+---------+-------+
| PId           | varchar(12)   | NO   | PRI | NULL    |       |
| About         | varchar(800)  | YES  |     | NULL    |       |
| Auction_Date  | date          | NO   |     | NULL    |       |
| Est_Price_USD | decimal(10,3) | YES  |     | NULL    |       |
| Sold_Price    | decimal(10,3) | YES  |     | NULL    |       |
+---------------+---------------+------+-----+---------+-------+
5 rows in set (0.00 sec)
```



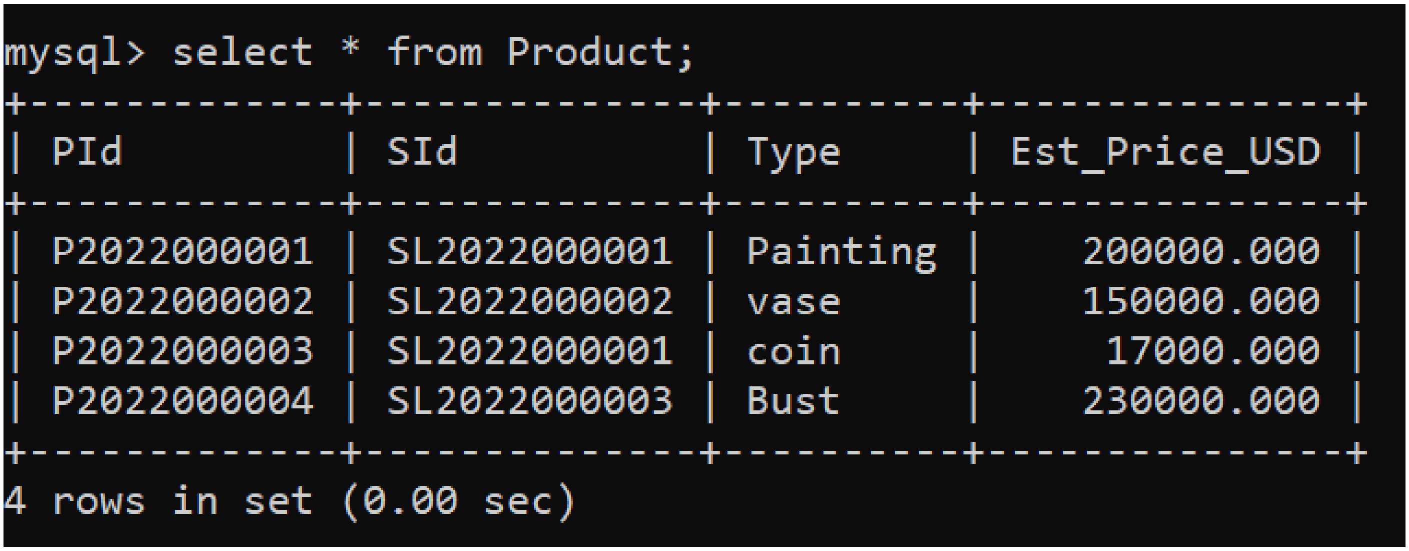
```
mysql> desc Delivery;
+---------------+-------------+------+-----+---------+-------+
| Field         | Type        | Null | Key | Default | Extra |
+---------------+-------------+------+-----+---------+-------+
| PId           | varchar(12) | NO   | PRI | NULL    |       |
| BId           | varchar(12) | NO   | PRI | NULL    |       |
| Delivery_Date | date        | NO   |     | NULL    |       |
+---------------+-------------+------+-----+---------+-------+
3 rows in set (0.00 sec)
```



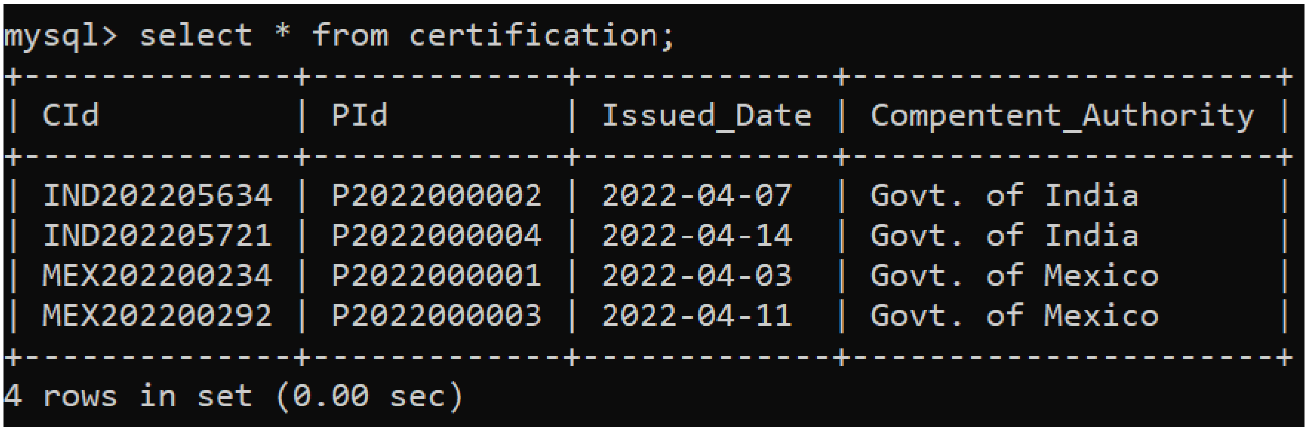
```
mysql> desc password;
+----------+-------------+------+-----+---------+-------+
| Field    | Type        | Null | Key | Default | Extra |
+----------+-------------+------+-----+---------+-------+
| UserId   | varchar(12) | NO   | PRI | NULL    |       |
| Role     | char(10)    | NO   |     | NULL    |       |
| Password | varchar(40) | NO   |     | NULL    |       |
+----------+-------------+------+-----+---------+-------+
3 rows in set (0.02 sec)
```



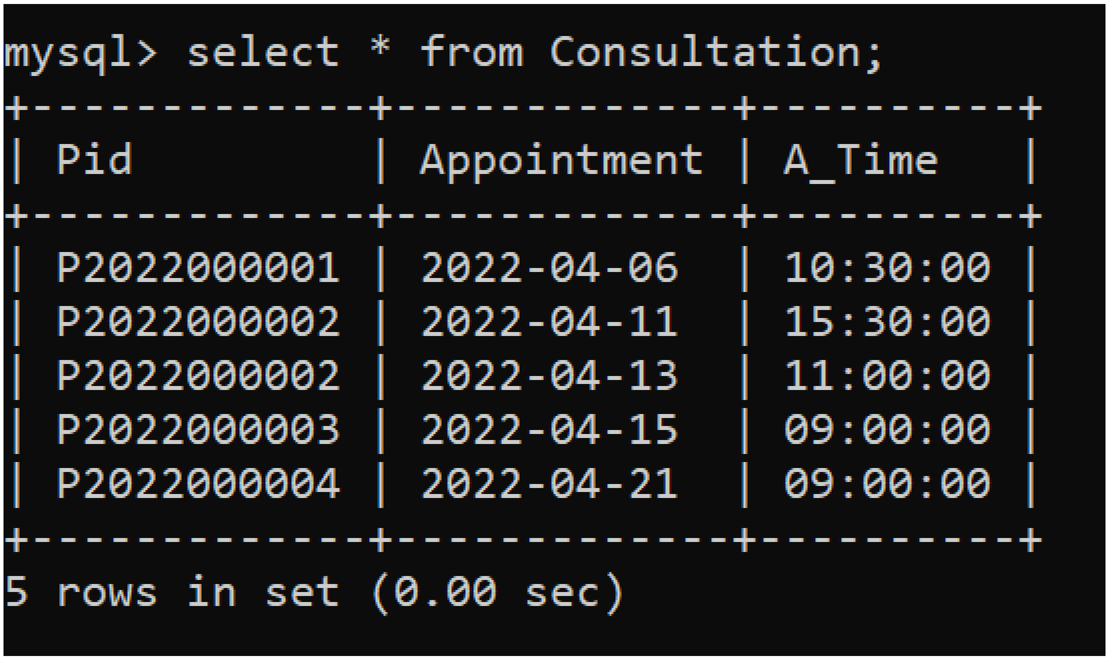
```
mysql> select * from user;
+--------------+-----------+-----------+------------+--------------+----------------+-------------------------------------+
| Id           | FirstName | LastName  | SSN        | ContactNo    | Nationality    | Address                             |
+--------------+-----------+-----------+------------+--------------+----------------+-------------------------------------+
| Admin1234567 | Admin     | Admin     | 200111234  | 912312276442 | Indian         | 10 Sati colony,Gurgaon,Haryana      |
| BY2022000001 | Adam      | Smith     | 9000111234 | 02023568764  | United KInkdom | 10 Baker Street,Downtown,London     |
| BY2022000002 | Paul      | Hamming   | 9000111627 | 02923458764  | United KInkdom | 14 Llandaff,Western Ave,Cardiff     |
| BY2022000003 | Ahsaan    | Ahmed     | 6700111627 | 99812098984  | Saudi Arabia   | 41 Khurais Jama,Khurais,Riyadh      |
| BY2022000004 | Salmaan   | Shahid    | 6700111327 | 99812045284  | Saudi Arabia   | Sharafiyah,P.O.Box 8906,Jeddah      |
| SL2022000001 | ALngelo   | Decosta   | 8700111627 | 99863458764  | Mexico         | 403 Puerto Juarez,Cancun,Q.ROO      |
| SL2022000002 | Satyanath | Pharikh   | 2000111627 | 919863458764 | Indian         | 71 Minal road,Andheri,Mumbai        |
| SL2022000003 | Aditya    | Kripalani | 2000111107 | 919861234764 | Indian         | 294 subhash complex,goregaon,Mumbai |
+--------------+-----------+-----------+------------+--------------+----------------+-------------------------------------+
8 rows in set (0.04 sec)
```



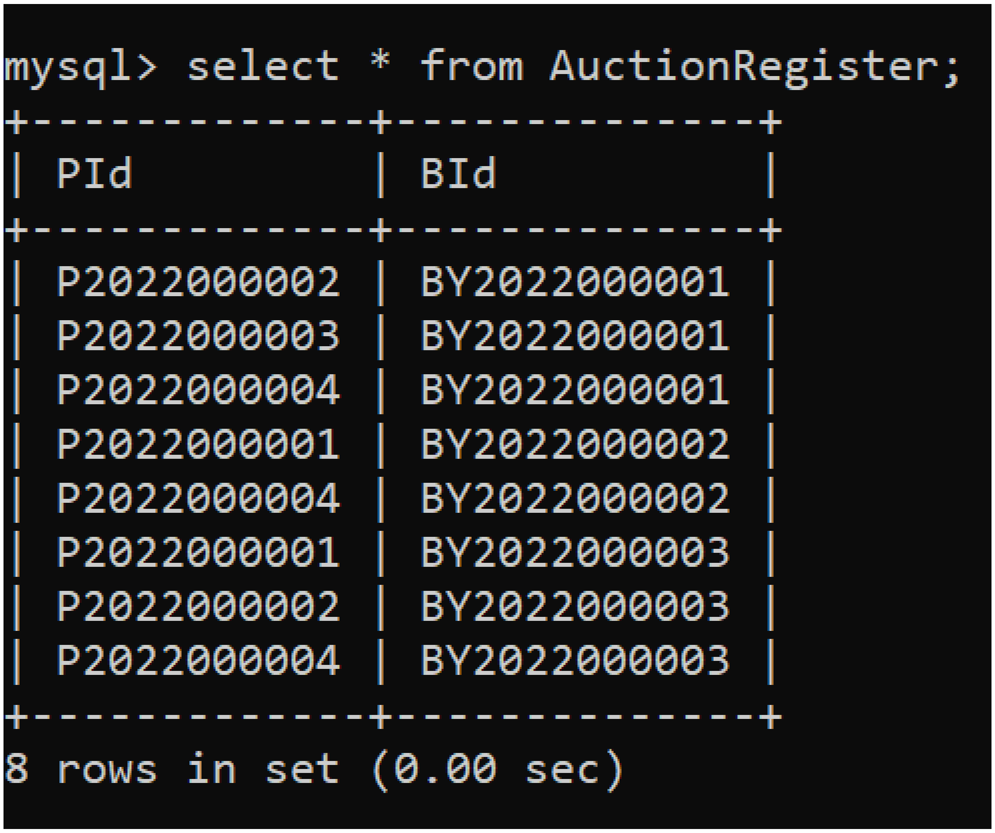
```
mysql> select * from Product;
+-------------+--------------+----------+---------------+
| PId         | SId          | Type     | Est_Price_USD |
+-------------+--------------+----------+---------------+
| P2022000001 | SL2022000001 | Painting |    200000.000 |
| P2022000002 | SL2022000002 | vase     |    150000.000 |
| P2022000003 | SL2022000001 | coin     |     17000.000 |
| P2022000004 | SL2022000003 | Bust     |    230000.000 |
+-------------+--------------+----------+---------------+
4 rows in set (0.00 sec)
```



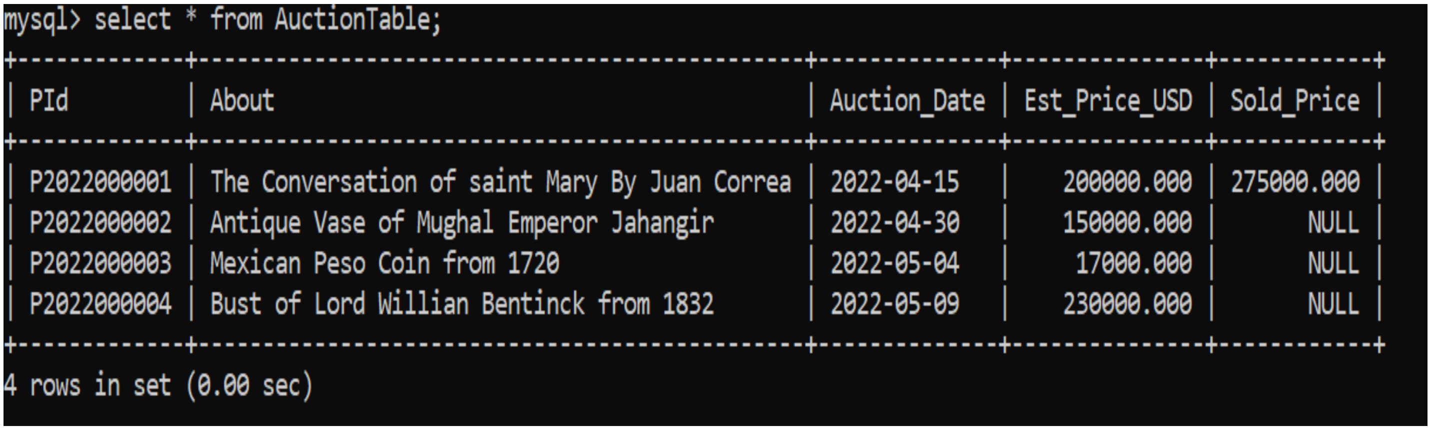
```
mysql> select * from certification;
+-------------+-------------+-------------+---------------------+
| CId         | PId         | Issued_Date | Compentent_Authority |
+-------------+-------------+-------------+---------------------+
| IND202205634 | P2022000002 | 2022-04-07  | Govt. of India      |
| IND202205721 | P2022000004 | 2022-04-14  | Govt. of India      |
| MEX202200234 | P2022000001 | 2022-04-03  | Govt. of Mexico     |
| MEX202200292 | P2022000003 | 2022-04-11  | Govt. of Mexico     |
+-------------+-------------+-------------+---------------------+
4 rows in set (0.00 sec)
```



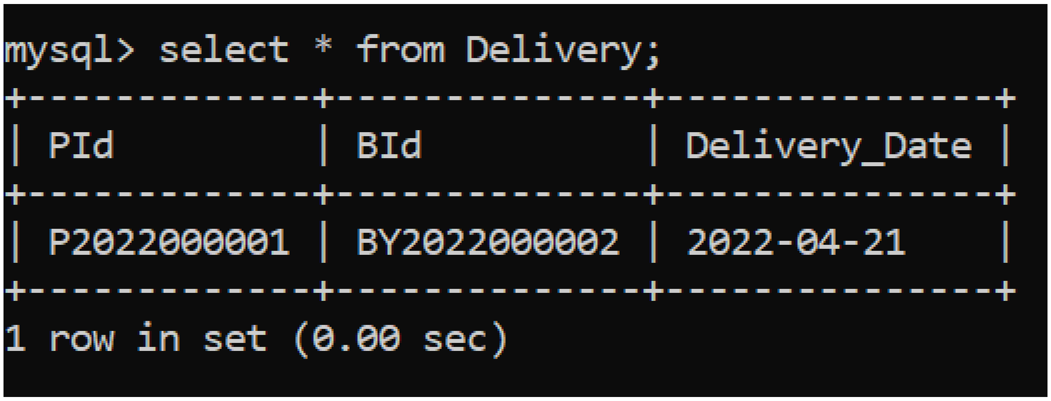
```
mysql> select * from Consultation;
+------------+-------------+----------+
| Pid        | Appointment | A_Time   |
+------------+-------------+----------+
| P2022000001 | 2022-04-06  | 10:30:00 |
| P2022000002 | 2022-04-11  | 15:30:00 |
| P2022000002 | 2022-04-13  | 11:00:00 |
| P2022000003 | 2022-04-15  | 09:00:00 |
| P2022000004 | 2022-04-21  | 09:00:00 |
+------------+-------------+----------+
5 rows in set (0.00 sec)
```



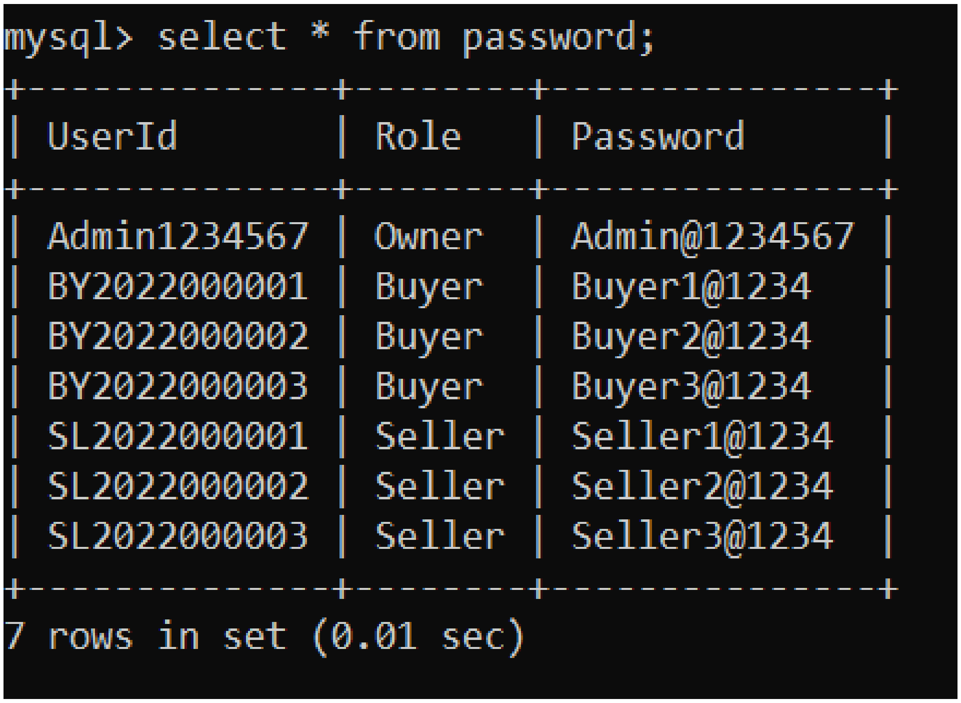
```
mysql> select * from AuctionRegister;
+------------+--------------+
| PId        | BId          |
+------------+--------------+
| P2022000002 | BY2022000001 |
| P2022000003 | BY2022000001 |
| P2022000004 | BY2022000001 |
| P2022000001 | BY2022000002 |
| P2022000004 | BY2022000002 |
| P2022000001 | BY2022000003 |
| P2022000002 | BY2022000003 |
| P2022000004 | BY2022000003 |
+------------+--------------+
8 rows in set (0.00 sec)
```



```
mysql> select * from AuctionTable;
+-------------+-----------------------------------------------+--------------+---------------+------------+
| PId         | About                                         | Auction_Date | Est_Price_USD | Sold_Price |
+-------------+-----------------------------------------------+--------------+---------------+------------+
| P2022000001 | The Conversation of saint Mary By Juan Correa | 2022-04-15   |    200000.000 | 275000.000 |
| P2022000002 | Antique Vase of Mughal Emperor Jahangir       | 2022-04-30   |    150000.000 |       NULL |
| P2022000003 | Mexican Peso Coin from 1720                   | 2022-05-04   |     17000.000 |       NULL |
| P2022000004 | Bust of Lord Willian Bentinck from 1832       | 2022-05-09   |    230000.000 |       NULL |
+-------------+-----------------------------------------------+--------------+---------------+------------+
4 rows in set (0.00 sec)
```



```
mysql> select * from Delivery;
+-------------+--------------+---------------+
| PId         | BId          | Delivery_Date |
+-------------+--------------+---------------+
| P2022000001 | BY2022000002 | 2022-04-21    |
+-------------+--------------+---------------+
1 row in set (0.00 sec)
```



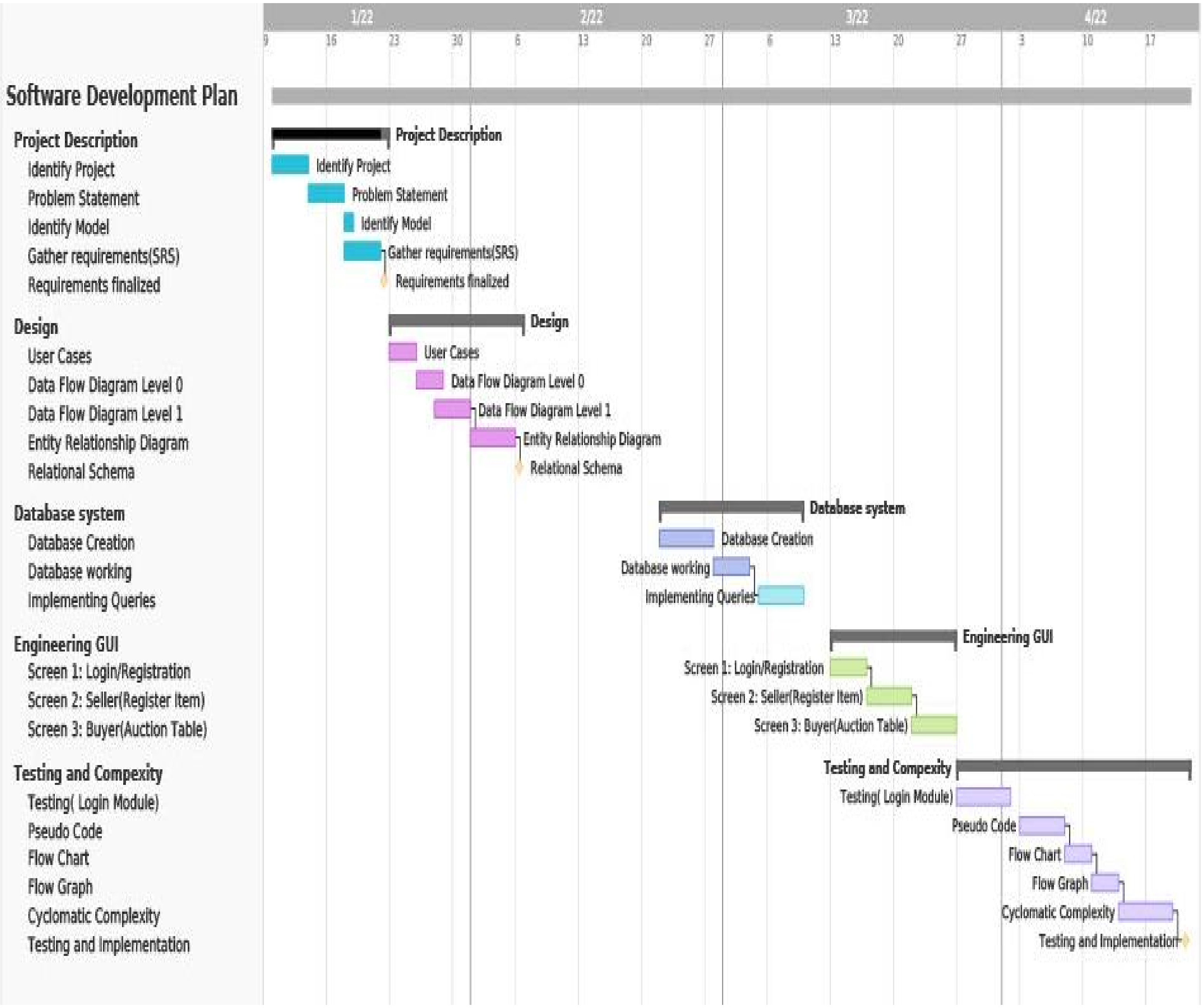
```
mysql> select * from password;
+--------------+--------+---------------+
| UserId       | Role   | Password      |
+--------------+--------+---------------+
| Admin1234567 | Owner  | Admin@1234567 |
| BY2022000001 | Buyer  | Buyer1@1234   |
| BY2022000002 | Buyer  | Buyer2@1234   |
| BY2022000003 | Buyer  | Buyer3@1234   |
| SL2022000001 | Seller | Seller1@1234  |
| SL2022000002 | Seller | Seller2@1234  |
| SL2022000003 | Seller | Seller3@1234  |
+--------------+--------+---------------+
7 rows in set (0.01 sec)
```

Timeline :

A timeline is the presentation of a chronological sequence of events along a drawn line that enables a viewer to understand temporal relationships quickly.
It Helps to Track the progress of the projects and the delays associated with it.

Here Timeline is divided into five phases:

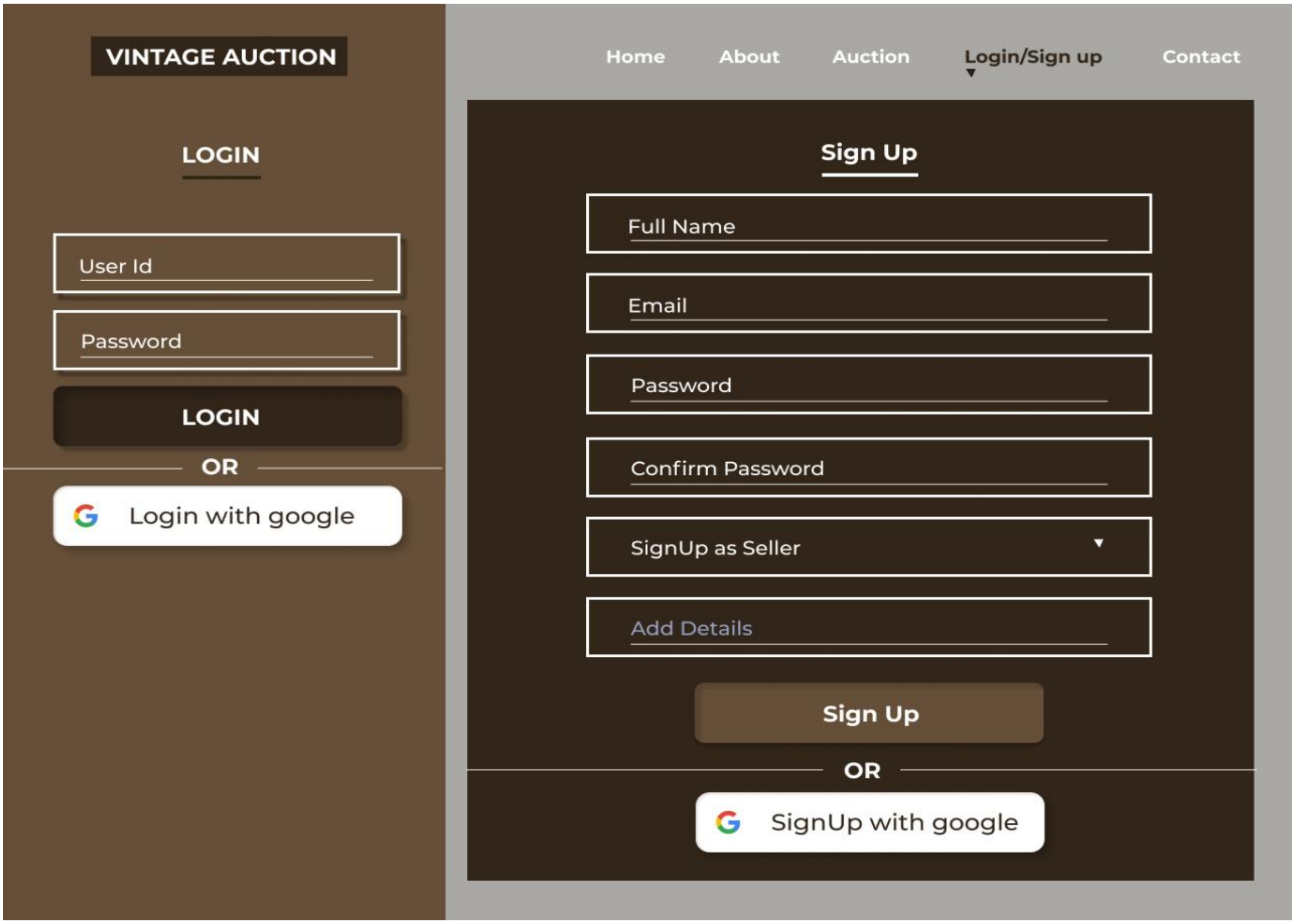
- Project description
- Design
- Database System
- Engineering GUI
- Testing and Complexity


1/22
2/22
3/22
4/22
9
16
23
30
6
13
20
27
6
13
20
27
3
10
17
Software Development Plan
Project Description
Identify Project
Problem Statement
Identify Model
Gather requirements(SRS)
Requirements finalized
Design
User Cases
Data Flow Diagram Level 0
Data Flow Diagram Level 1
Entity Relationship Diagram
Relational Schema
Database system
Database Creation
Database working
Implementing Queries
Engineering GUI
Screen 1: Login/Registration
Screen 2: Seller(Register Item)
Screen 3: Buyer(Auction Table)
Testing and Compexity
Testing(Login Module)
Pseudo Code
Flow Chart
Flow Graph
Cyclomatic Complexity
Testing and Implementation

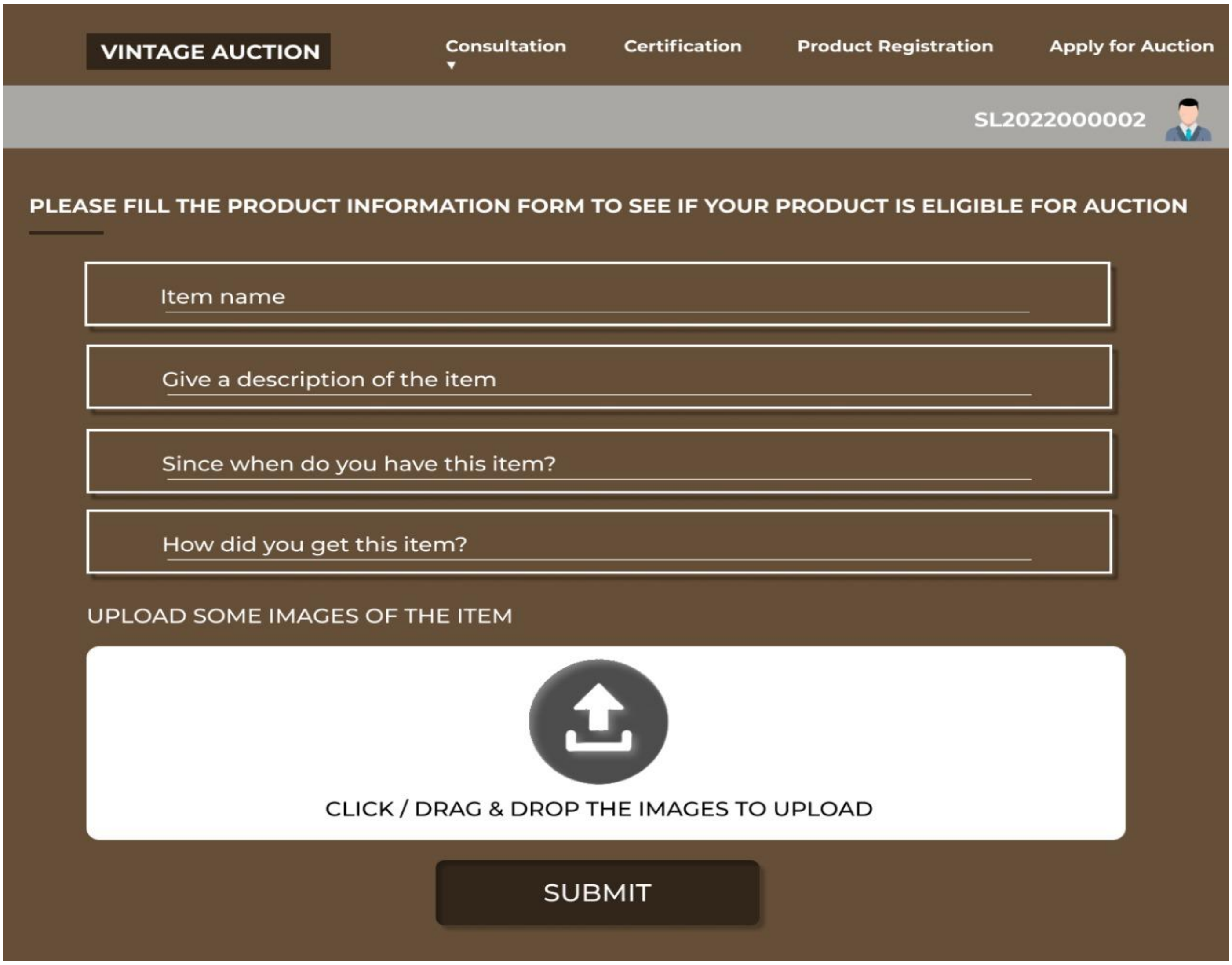
Graphical User Interface :

The three basic screens are designed for the Implementation of the Project

- **Login Module**



- **Register a Product (Seller)**



PLEASE FILL THE PRODUCT INFORMATION FORM TO SEE IF YOUR PRODUCT IS ELIGIBLE FOR AUCTION

Item name

Give a description of the item

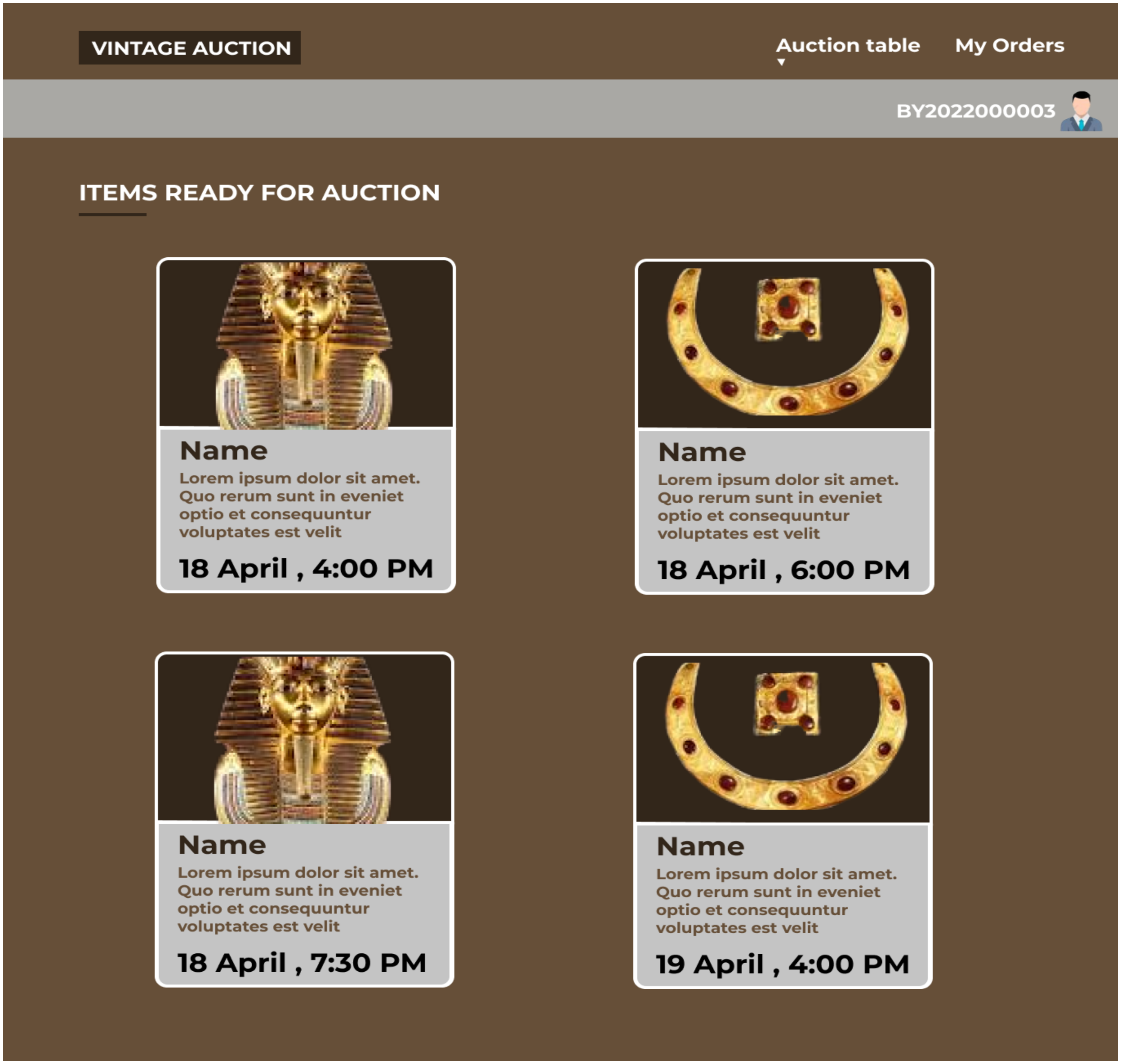
Since when do you have this item?

How did you get this item?

UPLOAD SOME IMAGES OF THE ITEM

CLICK / DRAG & DROP THE IMAGES TO UPLOAD

- **Auction Table (Buyer)**



ITEMS READY FOR AUCTION

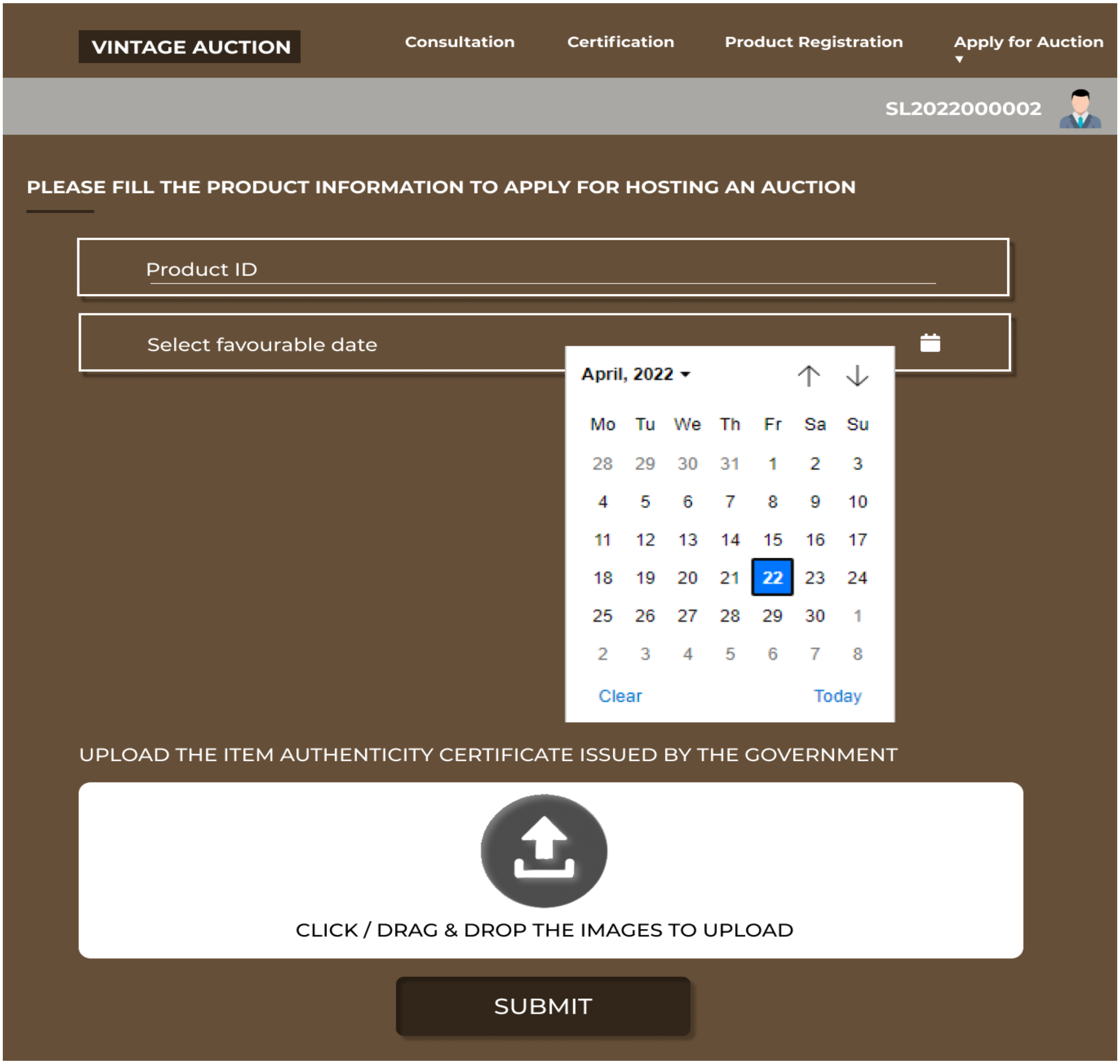
Name
Lorem ipsum dolor sit amet. Quo rerum sunt in eveniet optio et consequuntur voluptates est velit
18 April , 4:00 PM

Name
Lorem ipsum dolor sit amet. Quo rerum sunt in eveniet optio et consequuntur voluptates est velit
18 April , 6:00 PM

Name
Lorem ipsum dolor sit amet. Quo rerum sunt in eveniet optio et consequuntur voluptates est velit
18 April , 7:30 PM

Name
Lorem ipsum dolor sit amet. Quo rerum sunt in eveniet optio et consequuntur voluptates est velit
19 April , 4:00 PM

- **Auction Application (Seller)**



PLEASE FILL THE PRODUCT INFORMATION TO APPLY FOR HOSTING AN AUCTION

Product ID

Select favourable date

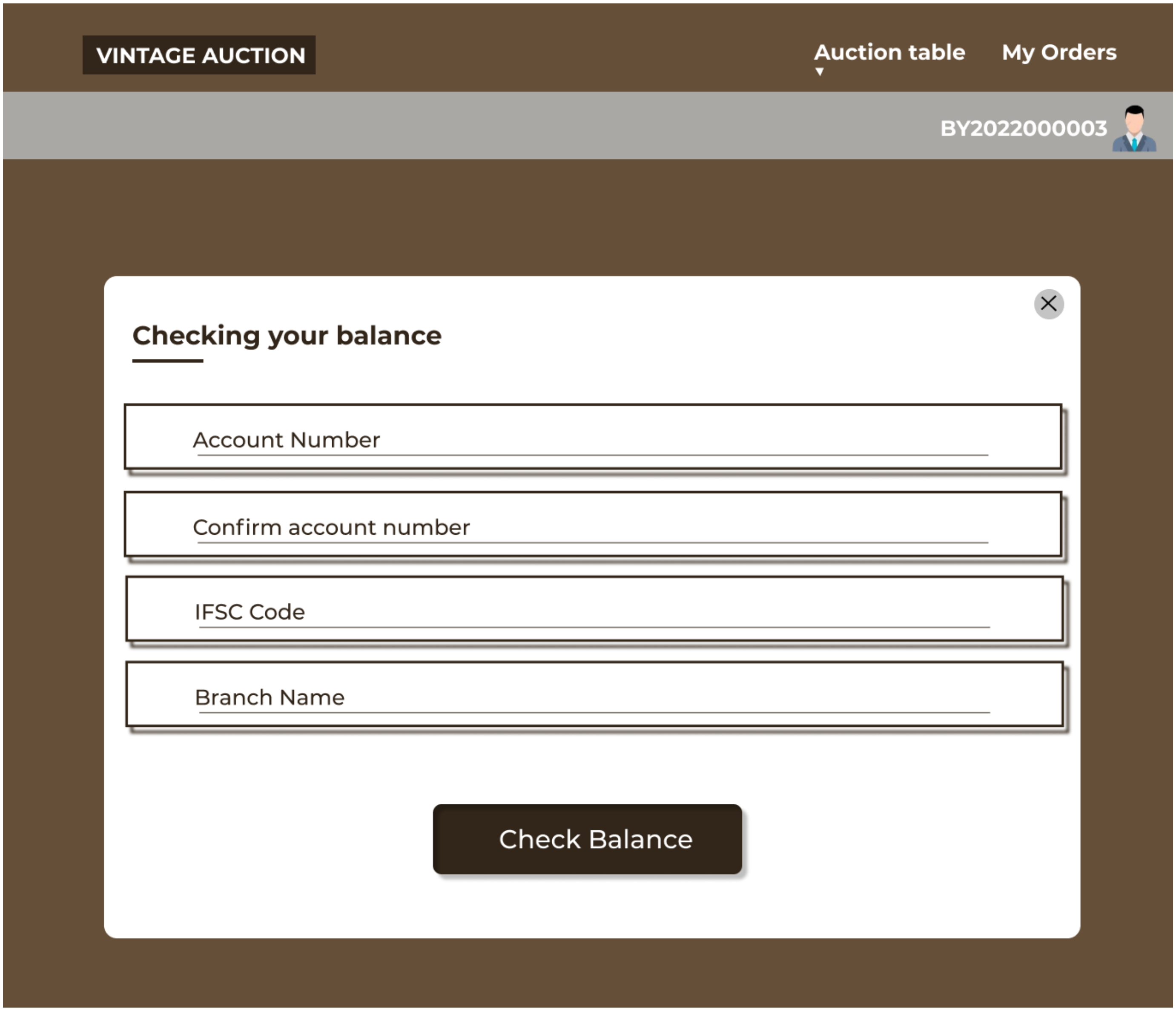
April, 2022

Mo	Tu	We	Th	Fr	Sa	Su
28	29	30	31	1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	1
2	3	4	5	6	7	8

UPLOAD THE ITEM AUTHENTICITY CERTIFICATE ISSUED BY THE GOVERNMENT

CLICK / DRAG & DROP THE IMAGES TO UPLOAD

- **Balance Check (Inside "Apply to participate" in an Auction) (Buyer)**



Pseudocode

Pseudocode is a plain language description of the steps in an algorithm or another system. Pseudocode often uses structural conventions of a normal programming language, but is intended for human reading rather than machine reading. It typically omits details that are essential for machine understanding of the algorithm, such as variable declarations and language-specific code.

SignUp Module

```
while(command!=1){
    Name = Input from user;
    Email = Input from user;
    Password = Input from user;
    Confirm Password = Input from user;
    Social Security No= Input from User
    Phone_No = Input from user;
    Nationality= Input from user;
    Address= Input from user;
    if(Email is valid && Email is unique){
```

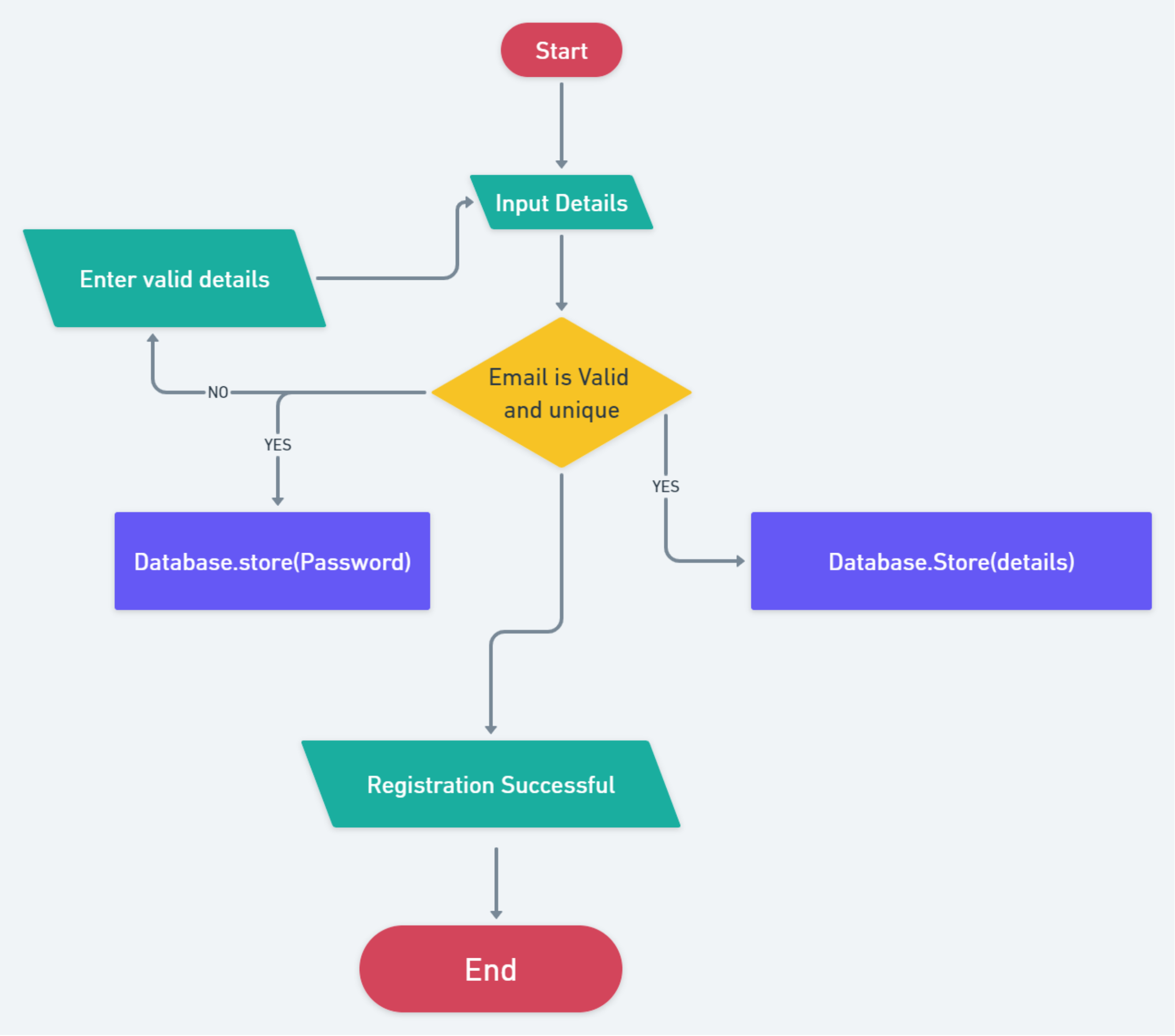
```
                11. database.user.store(Auto_Generated_UniqueID,Name,SSn, Contact
                No,Nationality,Address);

                12. database.password.store(Auto_Generated_UniqueID,Email,Password)

                13. Output("Registration Successful");

                14. return 1;

                }

            else{

                 15. Output("Please enter correct details");

                  }

        }
```

LogIn Module

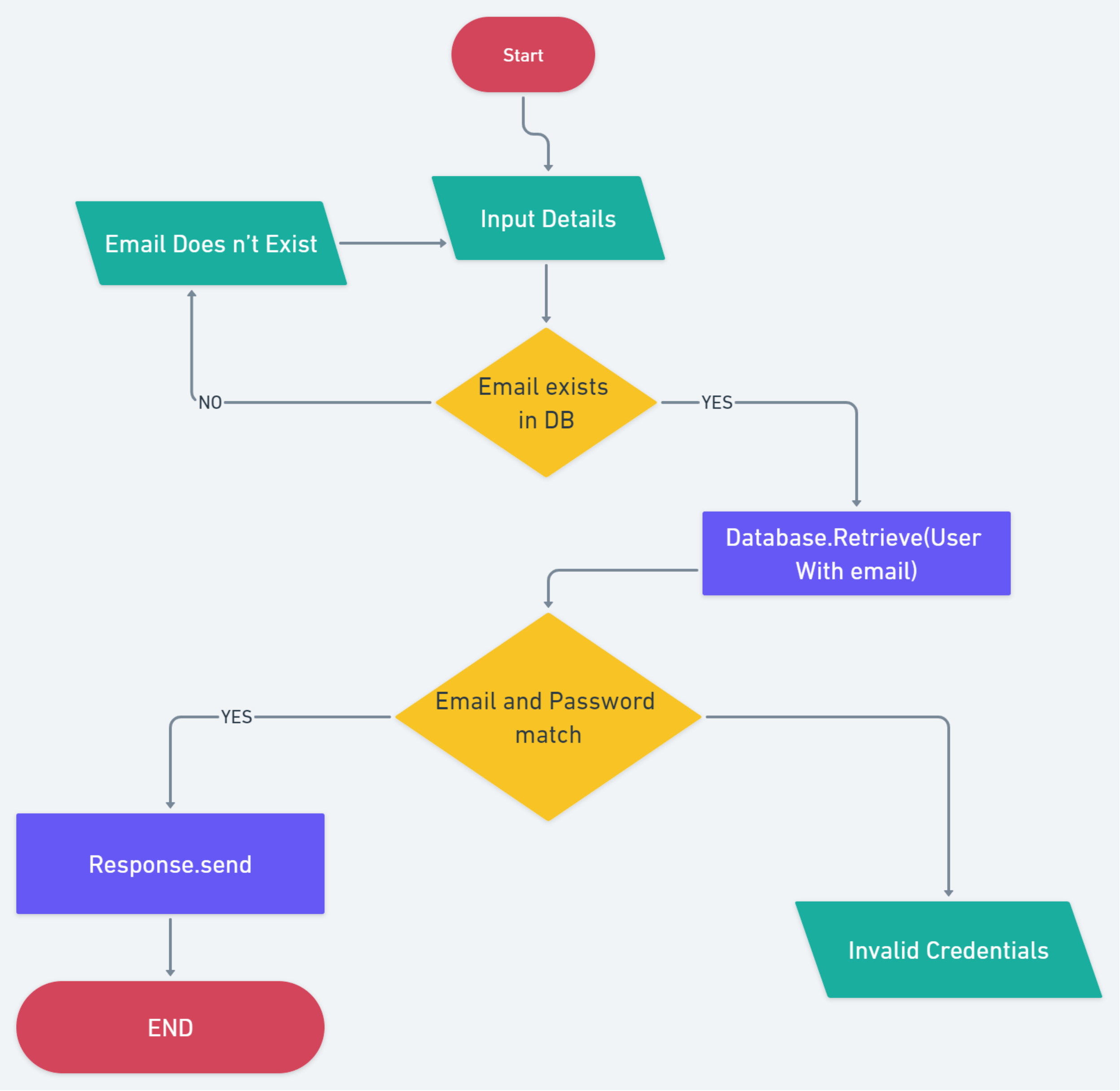
```
1. while(command!=1){

        attempt=0;

        2. UserId = input from user;

        3. Password = input from user;

        4. if (UserId.exists_database()){

                5. Details_database = retrieve_from_database(where User.UserId == UserId);

                6. if(UserId == Details_database.UserId && Password ==
        Details_database.Password){
            7. response.send(auth);
            8. return 1;
            }
         else{
            9. Output(“Invalid Credentials”);
            10. attempt+=1;
            }
         }
    else{
        11. Output(“UserId doesn’t exist”);
        12. attempt+=1;
        }
    if( attempt > 3)
        exit;
}
```

Flow Chart

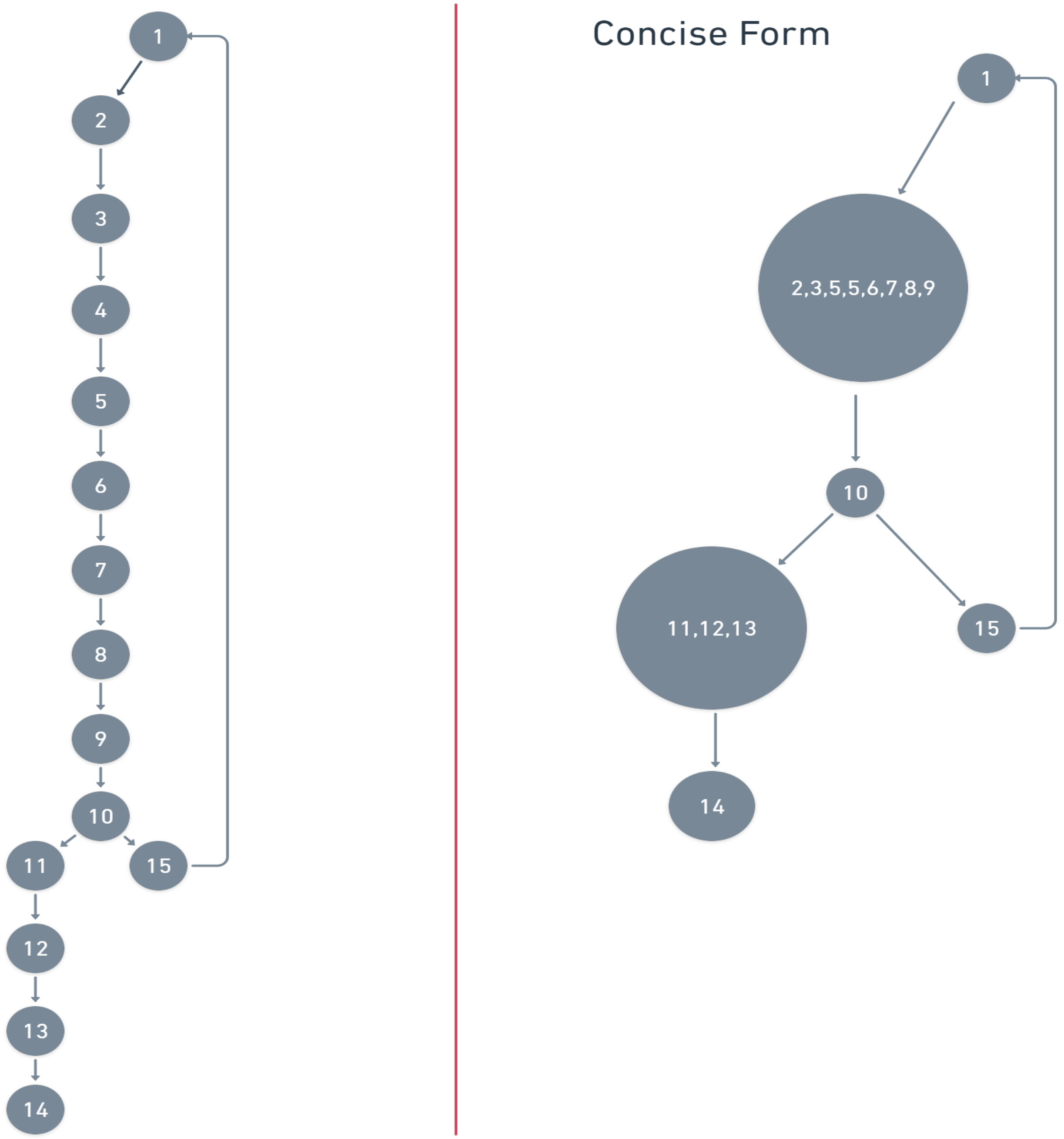
SignUp Module



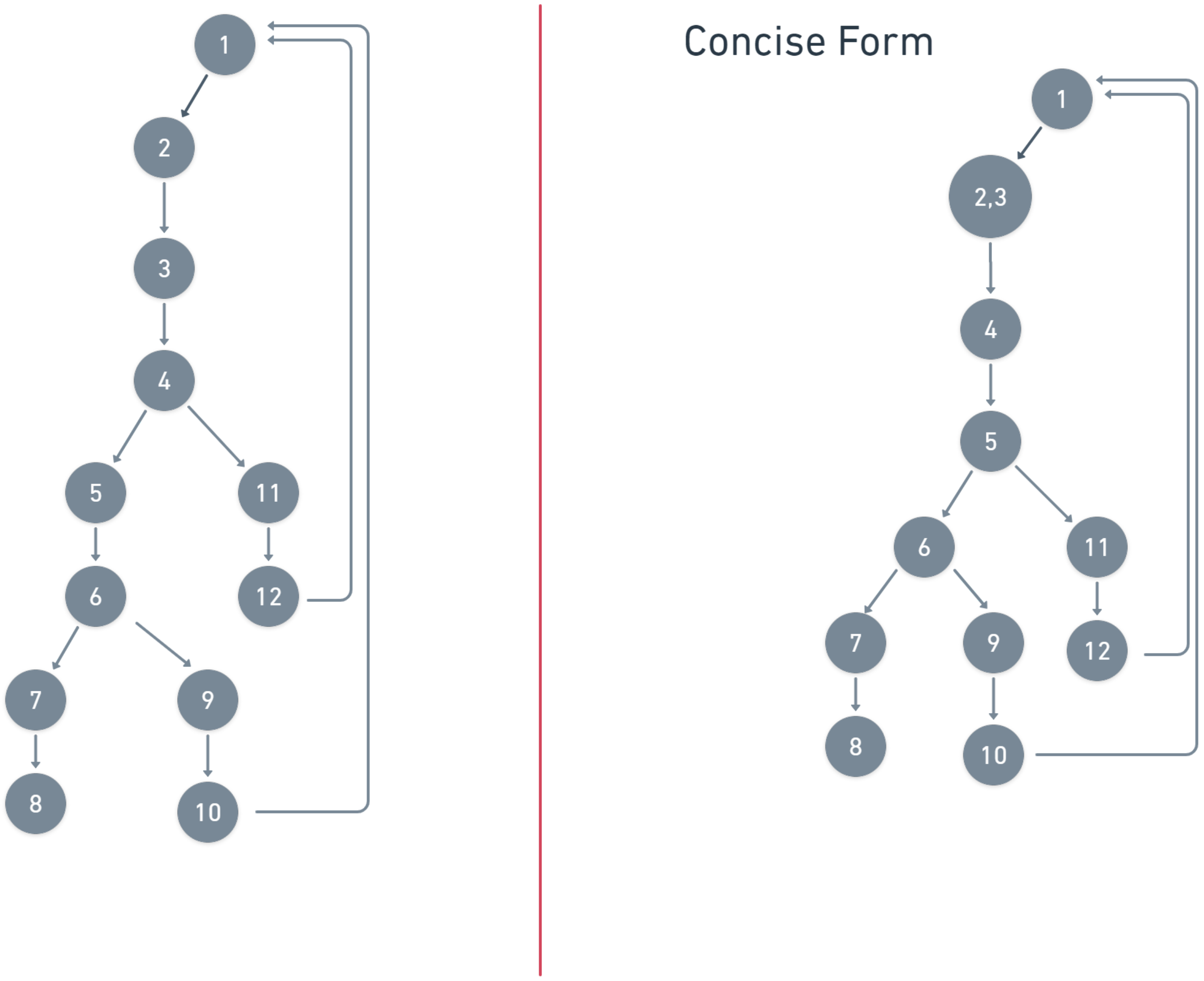
LogIn Module



Control Flow Graph SignUp Module:



Control Flow Graph LogIn Module:



Cyclomatic Complexity

Cyclomatic complexity is a software metric used to indicate the complexity of a program. It is a quantitative measure of the number of linearly independent paths through a program's source code.It is computed using the control-flow graph of the program: the nodes of the graph correspond to indivisible groups of commands of a program, and a directed edge connects two nodes if the second command might be executed immediately after the first command. Cyclomatic complexity may also be applied to individual functions, modules, methods or classes within a program.

There are two ways to calculate it:

Cyclomatic Complexity = Number of Edges - Number of Nodes +2
Cyclomatic Complexity = Number of regions in the Flow graph

Signup Module

Number of Edges = 6
Number of Nodes = 6
Cyclomatic Complexity(SignUp) = 6-6+2 = 2
Number of closed regions = 1
Cyclomatic Complexity(SignUp) = 1+1 (open region) =2

Login Module
Number of Edges = 12
Number of Nodes = 11
Cyclomatic Complexity(LogIn) = 12-11+2 = 3
Number of closed regions = 2
Cyclomatic Complexity(SignUp) = 2+1(open region) = 3

Risk Management

Risk: Hardware Crash

Mitigation

A hardware crash can lead to a series of crucial loss of data of the customer. A hardware crash itself is not crucial, but rather the loss of data. A loss of data will result in not being able to provide required services to our customers which can lead to a huge loss in customers base. This will result in not only data loss but also loss of trust between customers and company.

As a result the organization is taking steps to make multiple backup copies of the software in development and all documentation associated with it, in multiple locations.

Monitoring

When working on the product or documentation, the staff member should always be aware of the stability of the computing environment they're working in. Any changes in the stability of the environment should be recognized and taken seriously.

Management

The lack of a stable-computing environment is extremely hazardous to a software development team. In the event that the computing environment is found unstable, the development team should cease work on that system until the environment is made stable again, or should move to a system that is stable and continue working there.

Risk: Late Delivery

Mitigation

The cost associated with a late delivery is critical. A late delivery will result in late/no acceptance from the customer. Steps have been taken to ensure a timely delivery by gauging the scope of the project based on the delivery deadline.

Monitoring

A schedule has been established to monitor project status. Falling behind schedule would indicate a potential for late delivery. The schedule will be followed closely during all development stages.

Management

Late delivery would be a catastrophic failure in the project development. If the project cannot be delivered on time the development team will not pass the course. If it becomes apparent that the project will not be completed on time, the only course of action available would be to request an extension to the deadline form the customer.

Risk: End Users Resist System

Mitigation

In order to prevent this from happening, the software will be developed with the end user in mind. The user-interface must be designed to be convenient and pleasurable.

Monitoring

The software will be developed with the end user in mind. The development team will ask the opinion of various outside sources throughout the development phases. Specifically the user-interface developer will be sure to get a thorough opinion from Others.

Management

Should the program be resisted by the end user, the program will be thoroughly examined to find the reasons that this is so.

Risk: Poor Quality Documentation

Mitigation

In order to prevent this from happening, members who are in charge of developing the documentation will keep in contact with each developer on the team. Any topic deemed missing by a particular developer will be discussed. In addition, beta testers will be questioned about their opinion of the documentation.

Monitoring

Throughout development or normal in and out of house testing, the development team and or beta testers will need to keep their eyes open for any possible documentation topics that have not been included.

Management

Should this occur, the organization would call a meeting and discuss the addition of new topics, or removal of unnecessary topics into the documentation.

Testing:

Software Testing is a method to check whether the actual software product matches expected requirements and to ensure that software product is Defect free. It involves execution of software/system components using manual or automated tools to evaluate one or more properties of interest. The purpose of software testing is to identify errors, gaps or missing requirements in contrast to actual requirements.

TESTING FOR OUR PROJECT

Black Box Testing:

○ Black Box testing is also called functional testing.

○ Black Box Testing is a test case design method that focuses on the functional requirements of the software that enables the software engineer to derive a set of input conditions that fully exercise all functional requirements for a program

○ We can check the functionality on the basis of the output generated and the input, without looking at the internal coding.

○ It attempts to find errors in the following categories

■ Incorrect or missing functions

■ Interface errors

■ Errors in data structure or External database access

■ Behavior or performance error

■ Initialisation and termination errors

LogIn Module:

S.No.	Test Case	Expected Result
1	Valid Email and Valid Password	LogIn Successful
2	Valid Email and Invalid Password	LogIn Unsuccessful
3	Invalid Email and Valid Password	LogIn Unsuccessful
4	Non Existing Email and Invalid Password	LogIn Unsuccessful

White Box Testing:

○ It is also known as glass box testing.

○ White Box testing is a test case design method that uses the control structure of the procedural design to derive test cases.

○ Using White Box Testing method, the software engineer can derive test cases that

■ Guarantee that all independent paths within a module have been exercised at least once.

● Exercise all logical decisions on their true and false sides.

■ Execute all loops at their boundaries and within their operational bounds.

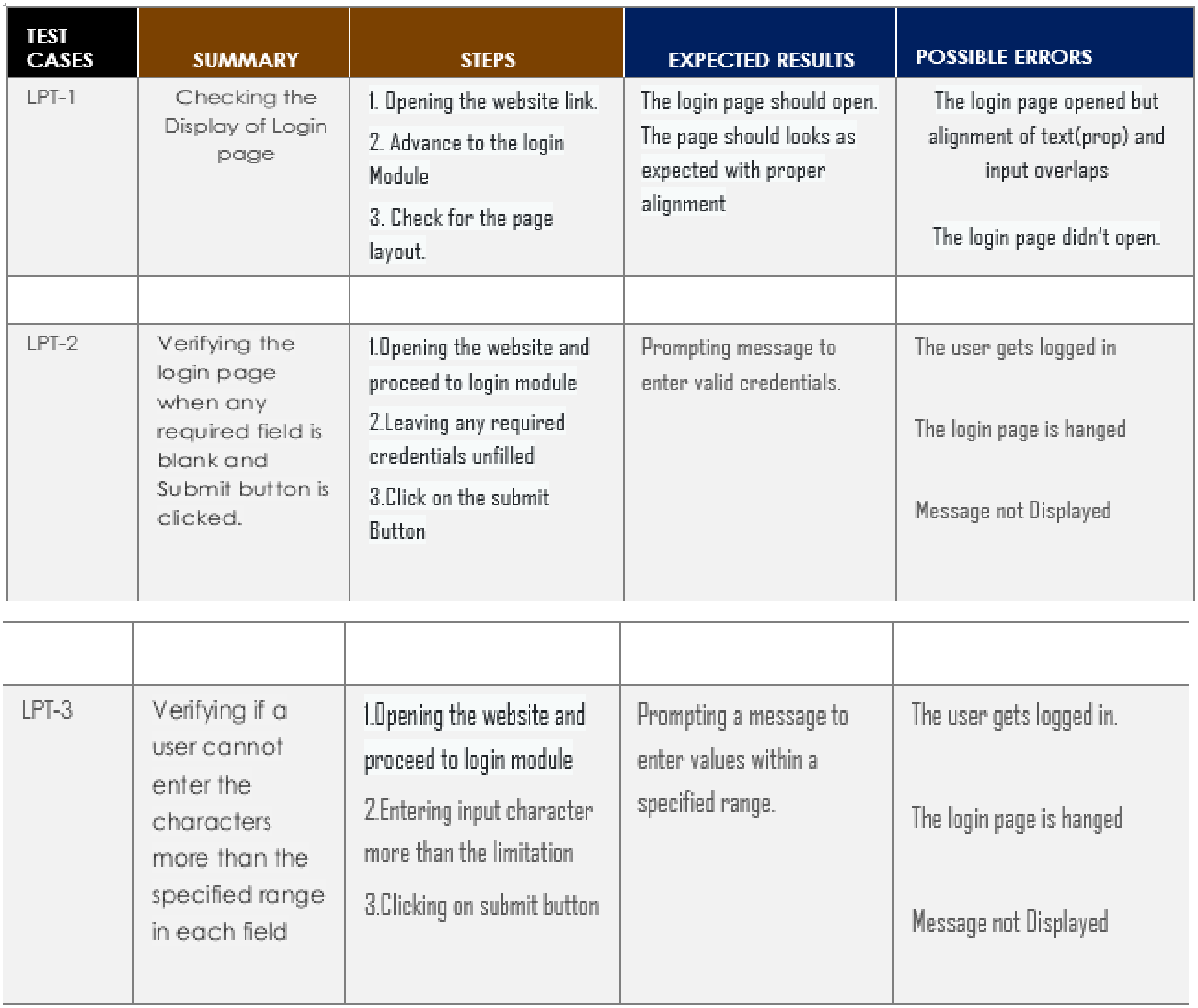
■ Exercise internal data structures ensure their validity.

○ Test the artifacts from the internal point of view.

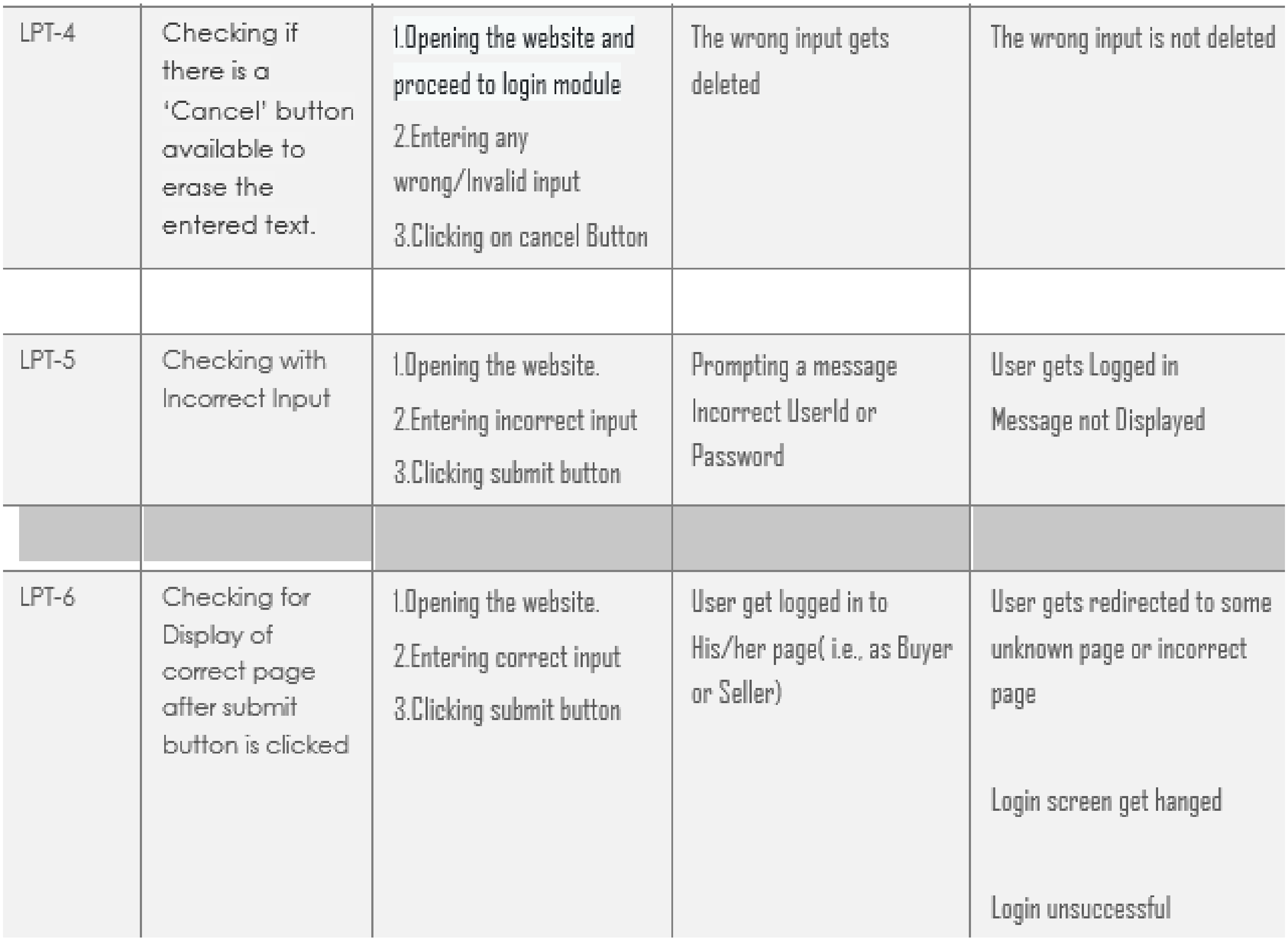
○ It cannot detect absence of features.

○ For security purposes the Email of the user is required in case he/she forgets his/her password and wants to retrieve that.

Here Login Module is Tested Using Various Scenarios and Problems/Error in Each case:



TEST CASES	SUMMARY	STEPS	EXPECTED RESULTS	POSSIBLE ERRORS
LPT-1	Checking the Display of Login page	1. Opening the website link. 2. Advance to the login Module 3. Check for the page layout.	The login page should open. The page should looks as expected with proper alignment	The login page opened but alignment of text(prop) and input overlaps The login page didn't open.
LPT-2	Verifying the login page when any required field is blank and Submit button is clicked.	1.Opening the website and proceed to login module 2.Leaving any required credentials unfilled 3.Click on the submit Button	Prompting message to enter valid credentials.	The user gets logged in The login page is hanged Message not Displayed
LPT-3	Verifying if a user cannot enter the characters more than the specified range in each field	1.Opening the website and proceed to login module 2.Entering input character more than the limitation 3.Clicking on submit button	Prompting a message to enter values within a specified range.	The user gets logged in. The login page is hanged Message not Displayed



LPT-4	Checking if there is a 'Cancel' button available to erase the entered text.	1.Opening the website and proceed to login module 2.Entering any wrong/Invalid input 3.Clicking on cancel Button	The wrong input gets deleted	The wrong input is not deleted
LPT-5	Checking with Incorrect Input	1.Opening the website. 2.Entering incorrect input 3.Clicking submit button	Prompting a message Incorrect UserId or Password	User gets Logged in Message not Displayed
LPT-6	Checking for Display of correct page after submit button is clicked	1.Opening the website. 2.Entering correct input 3.Clicking submit button	User get logged in to His/her page(i.e., as Buyer or Seller)	User gets redirected to some unknown page or incorrect page Login screen get hanged Login unsuccessful

Conclusion:

The project “Vintage auction System gave us great insights about how to implement an abstract idea into reality. It has the captivity to become a software to end the distance barrier between admirers of rare and vintage items. It taught us how online systems are able to make changes in our life in very little yet effective way. It has been able to save the time, money and the effort of organizing Physical auction and opened the collectors to the greater world of “The vintage”.

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