Database class project 2019/2020

Student Name	Student Name in Arabic	Student ID	Section	Work percentage
Abdelrahman Baba'	عبد الرحمن "محمد مؤيد" بعباع	11819683	10.30-12	**70%**
Roaa Arafat	رؤى يحيى أمين عرفات	**11819584**	**10.30-12**	**30%**

6th.Aug.2020/11.59pm

Topic	Mark
Project Requirements and Modeling	
Correctness of Database mapping	
Functional Dependency and Normalization	
Project Tools	
Project Discussion	
Project Completeness	
Project Output Results or reporting (JasperReport, charts, graphs, etc.)	
Project Administration and Management	
Project Report	
Project Idea	
Project Complexity	

Table Of Contents:

Abstart:

This report will talk in briefly about our application project and how it had been made from A to Z.

We started searching for an idea that we would work for achieving it with passion, we both have always admired art, especially paintings! And we have a thought about how much art is not being appreciated in our country, so we believe that we will make it easier for art to spread, by building an application that is very easy to use and gets the painting every art lover desire to his door.

Then we started collecting the requirements for such an application, we made the UML diagram and the tables that are important for the database management.

We choose to code in JavaFX for its extra components and options, so we had one or two weeks just for learning the language especially the part where its connected to the GUI applications.

After finishing the theoretical part of the project, we divided the concepts we thought of between us two and started to design them using JavaFX and Intellij IDE.

We completed the scenes' designing then started to connect them together through buttons and so on to the database.

We had a lot of issues and low times but we were determined to finish what we started in the way we decided at first.

Introduction:

Artix is an artwork database management software,

which is developed for art gallery managers and art collectors.

People can buy paintings,

know their history and be educated about their artists.

The application has two parts:

The administrators' part and the customers' one.

The system offers inventory management for the administrators,

so they could keep track of the paintings which are added and sold continuously.

They can also monitor the customers with their movements,

reviews, and of course their orders.

It also offers a unique account for every customer

which will include their personal info.

A customer could buy a painting,

like a picture of any painting or

get to know the artists through their profiles.

Project Requirements:

Entity	Attributes
Customer	Username, Email, Pass, PhoneNumber, BDate, FirstName, LastName, Country, State, City, Street, ProfilePicURL, CCNumber, CCHolderName, CCExpYear, CCExpMonth,CCV.
Employee	Username, Pass, FirstName, LastName, Position, Salary, CVURL, IBAN, BankName, Admin's previlegs.
Artist	ArtistID, ArtistName, History, PicURL
Painting	Barcode, Name, Genre, ArtistID, Height, Width, Unit, PurchaseDate, CreatedDate, Adddate, Price, Description, ImageURL.
ShopCart	CartID, Customer Username.
CartDetail	ShopCart CartID, Painting Barcode.
Orders	OrderID, CustomerName, Status, TotalPrice, PDate.
OrderDetail	Orders OrderID, Painting Barcode.
Likes	Customer Username, Painting Barcode.

Every "Customer" can like a painting, Add a painting to his ShopCart, or Order a painting.

An "Employee" can Add Artist to database, Add or delete paintings and check the revenues of the company.

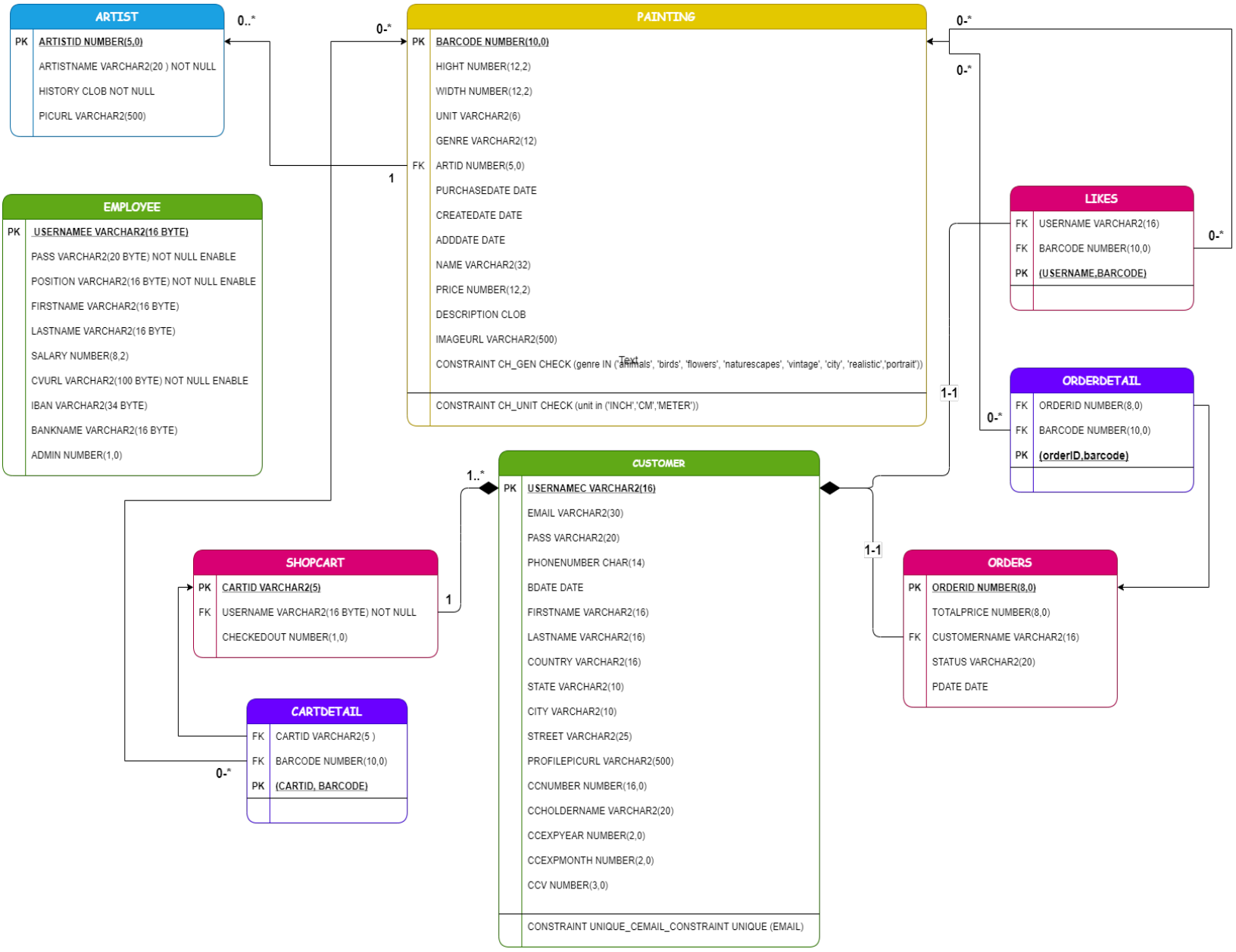
"CartDetail" includes the ShopCart ID that is connected to customer by his username, and the paintings' Barcode which were added to the ShopCart by the same customer.

"OrderDetail" includes the Orders OrderID, which is also connected to the customer, and the paintings' Barcode.

"Orders" displays the Customer username, the Date of and order, the Status of the payment and the Total Price of it.

" Likes" includes the Paintings which the customer had added to it.

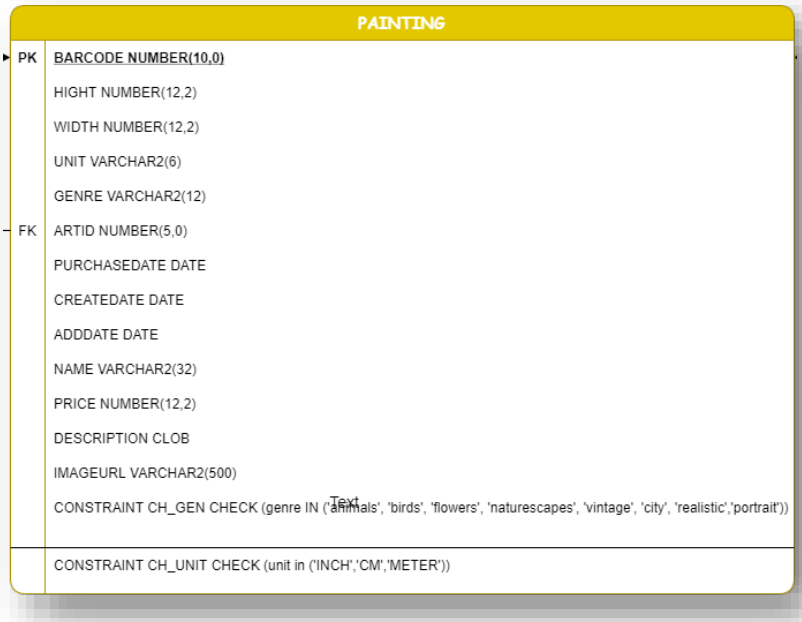
UML Diagram of Artix:



Functional Dependencies & Normalization:

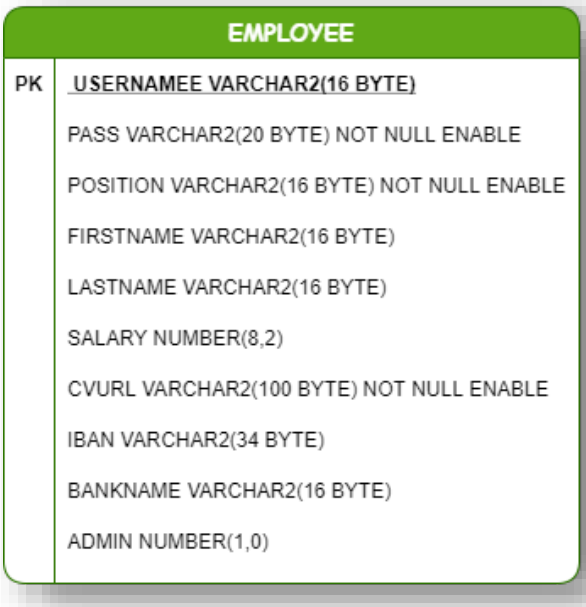
We have designed 9 tables out of the conceptual design.

1) "Painting" table:



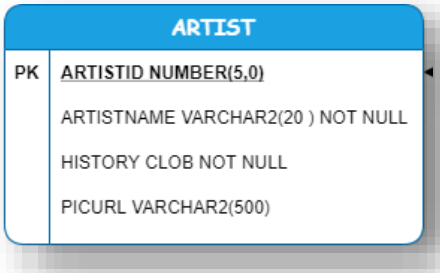
- Already in **1NF** (No multivalued attributes).
- Already in **2NF** no composite PK).
- **3NF** (13 Attributes which all depend on single PK barcode).

2) "Employee" table:



- Already in **1NF** (No multivalued attributes).
- Already in **2NF** (no composite PK).
- **3NF** (10 Attributes which all depend on single PK UsernameE).

3) "Artist" table:



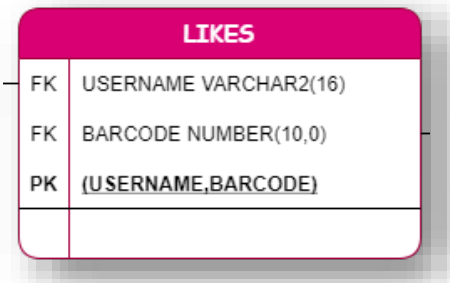
- Already in **1NF** (no multivalued attributes).
- Already in **2NF** (no composite PK).
- **3NF** (3 Attributes which all depend on single PK ArtistID).

4) "Customer" table:

- Already in **1NF** (No multivalued attributes).
- Already **2NF** (No composite PK).
- **3NF** (16 attribute All depend on single PK UsernameC).

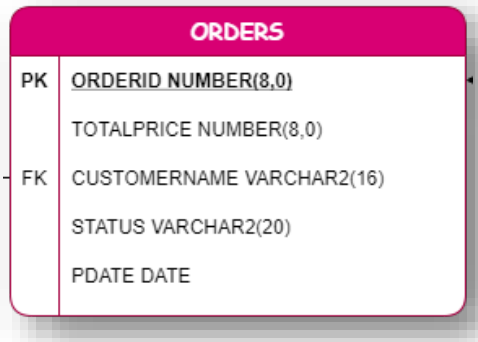
This table represents a "many customers can like many paintings" relation.

5) "Likes" table:



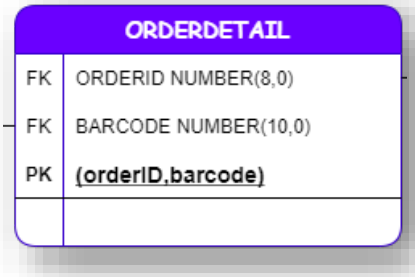
- Already in **1NF** (no multivalued attributes).
- **2NF** (has a composite PK that can't be simplified more).
- **3NF** (no other attributes in the table).

6) "Orders" table:



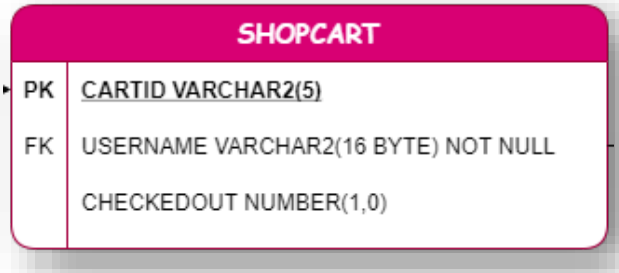
- Already in **1NF** (no multivalued attributes).
- Already **2NF** (no composite PK).
- **3NF** (5 attribute All depend on single PK OrderID).

7) "OrderDetail" table:



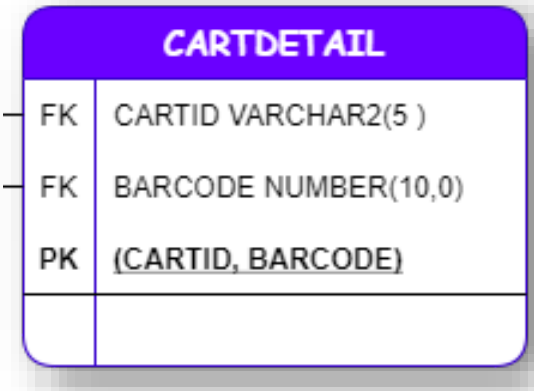
- Already in **1NF** (no multivalued attributes).
- **2NF** (has a composite PK that can't be simplified more).
- **3NF** (no other attributes in the table).

8) "ShopCart" table:



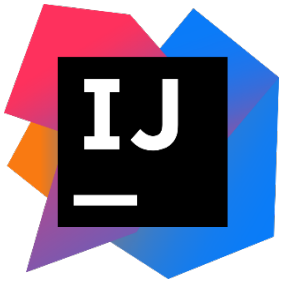
- Already in **1NF** (no multivalued attributes).
- Already **2NF** (no composite PK).
- **3NF** (one attribute depends on single PK CartID).

9) "CartDetail" table:



- Already in **1NF** (no multivalued attributes).
- **2NF** (has a composite PK that can't be simplified more).
- **3NF** (no other attributes in the table).

Tools Used:



IntelliJ IDEA

Scene Builder

Draw io

Oracle SQL Developer

JasperSoft Studio

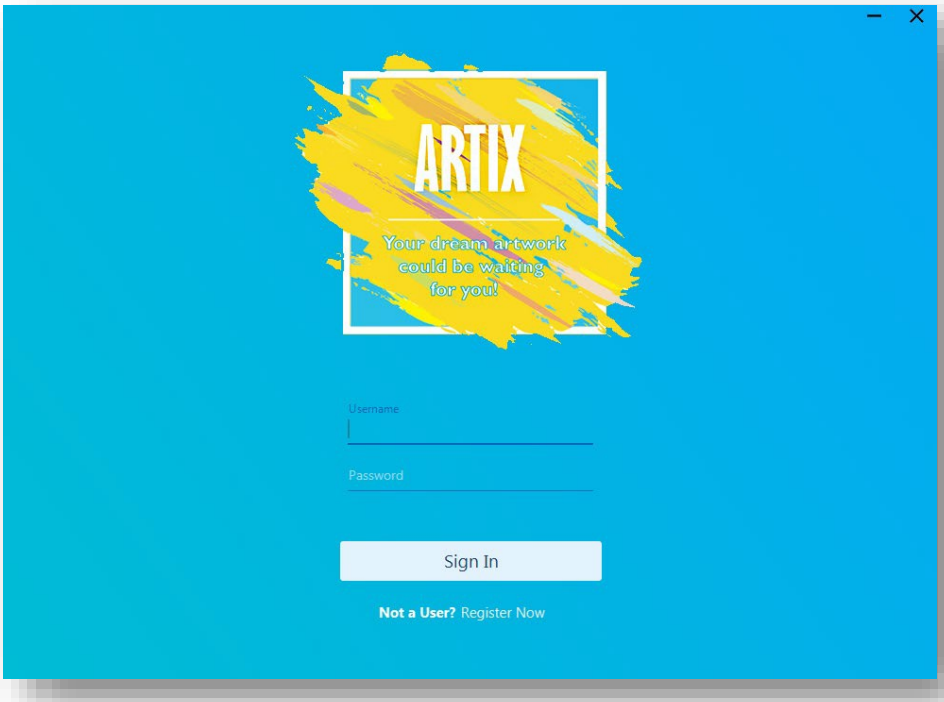
Adobe Photoshop

Adobe Illustrator

GUI Discussion

Sign In & Sign Up:

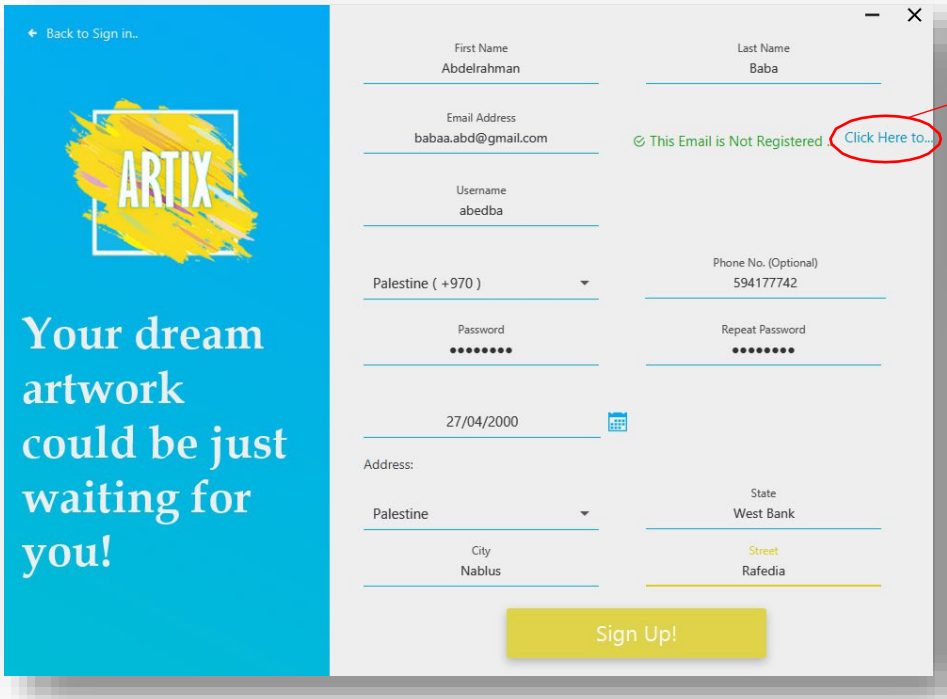
Already a User or an Admin? GET IN!

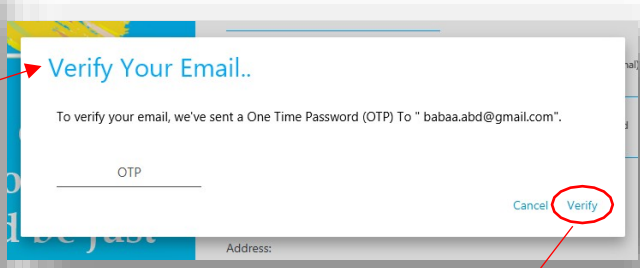


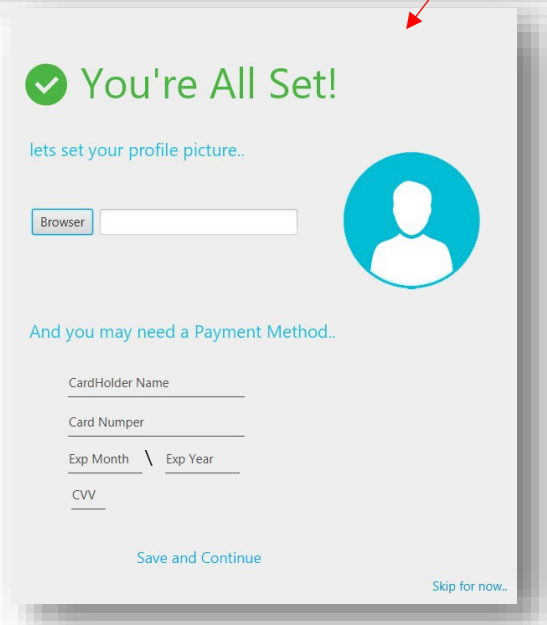
Just put your Username & Password!

1)Don't have an account?

2) Check your email to verify it!

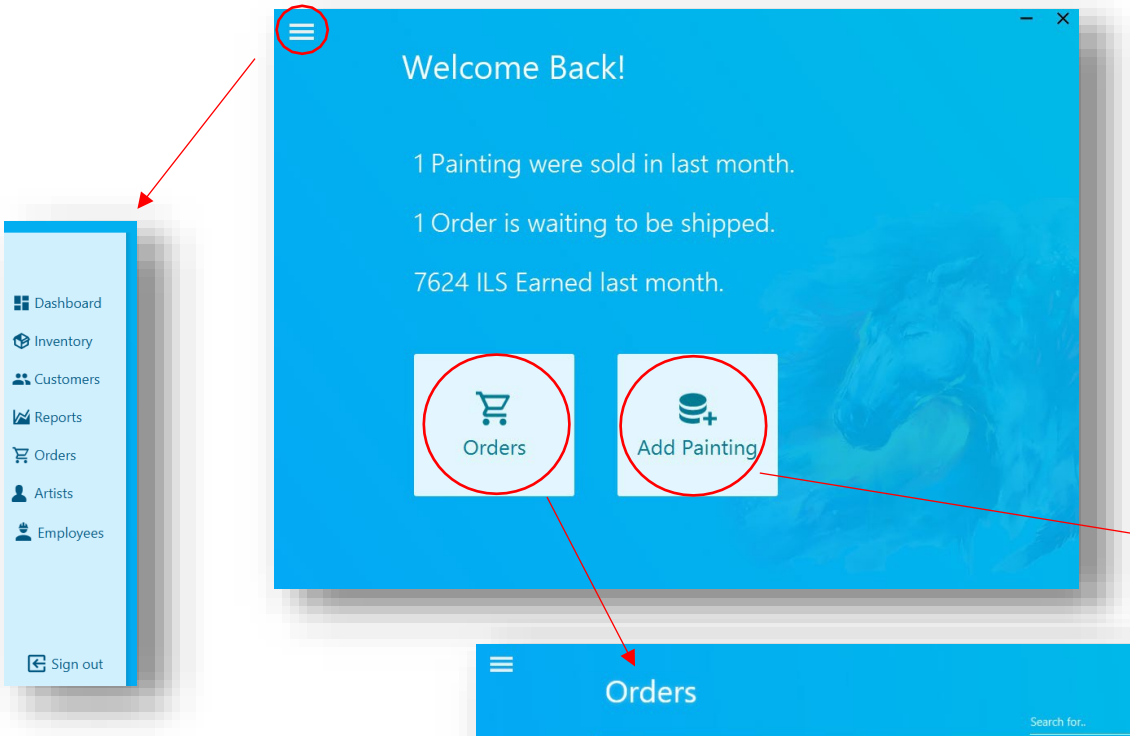






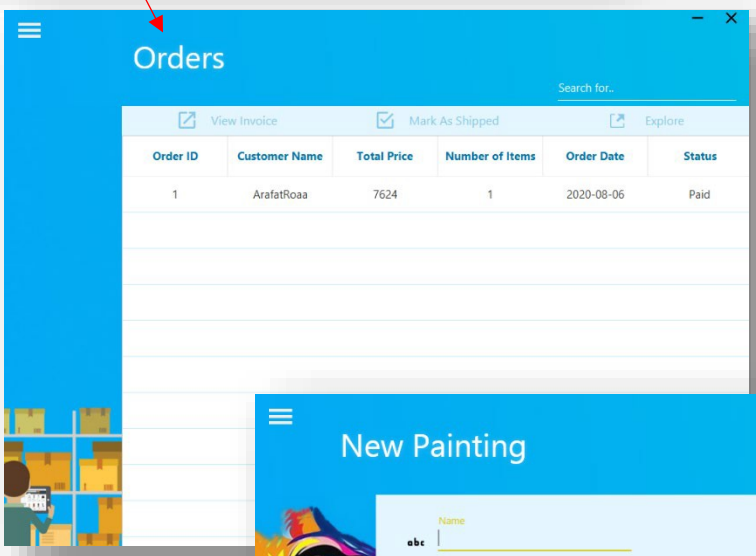
3) Add some more information please!

Admin's:



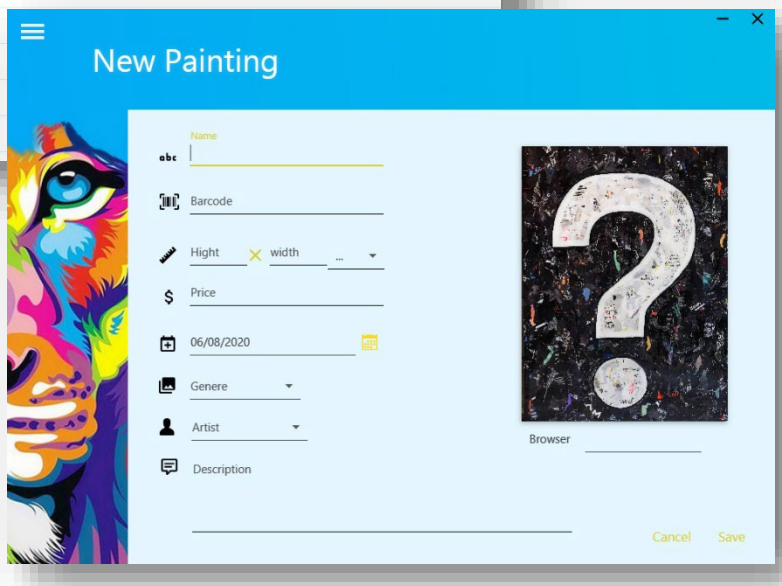
Orders:

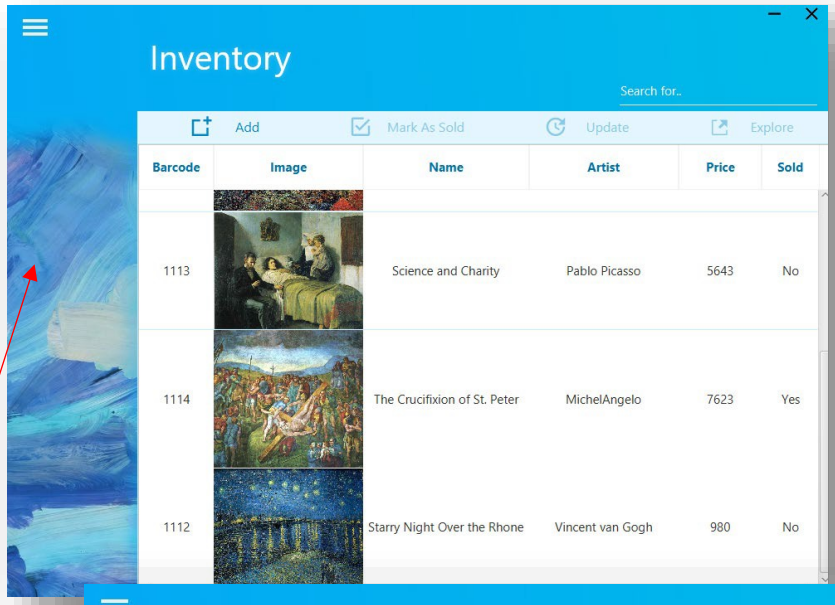
Displays all orders with their basic info from all customers registered.



New Painting:

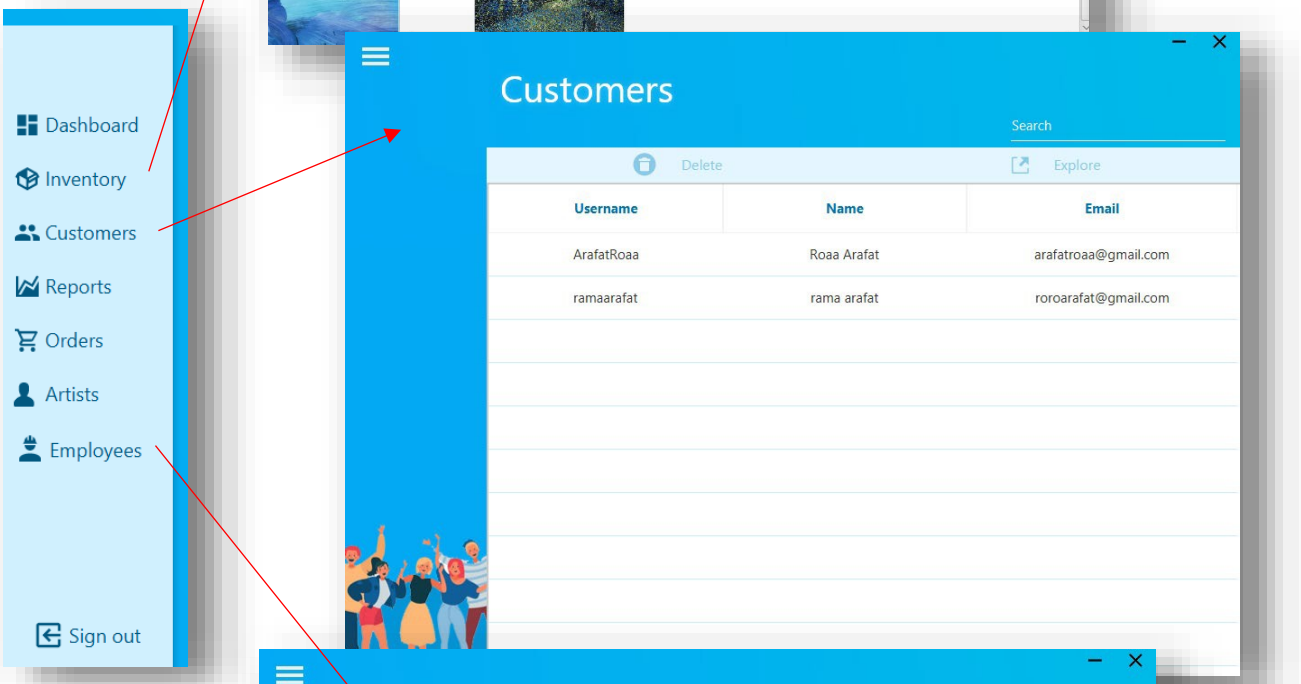
A shortcut to help the admin add a painting to the store.





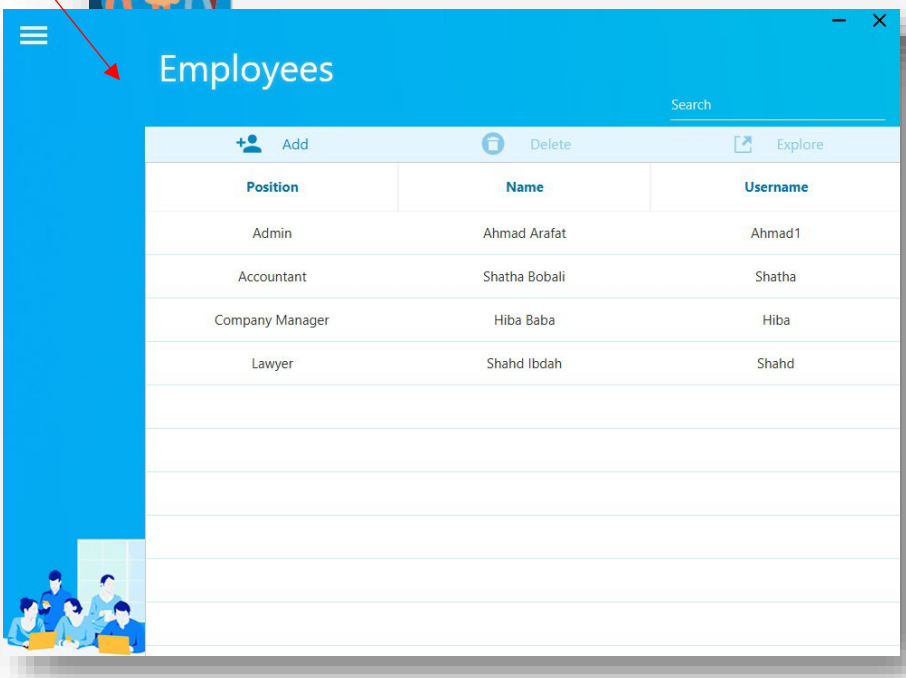
Inventory:

Displays all paintings that have been added, with the most important Info & If it's have been sold or not.



Customers:

Displays all Registered users as Customers

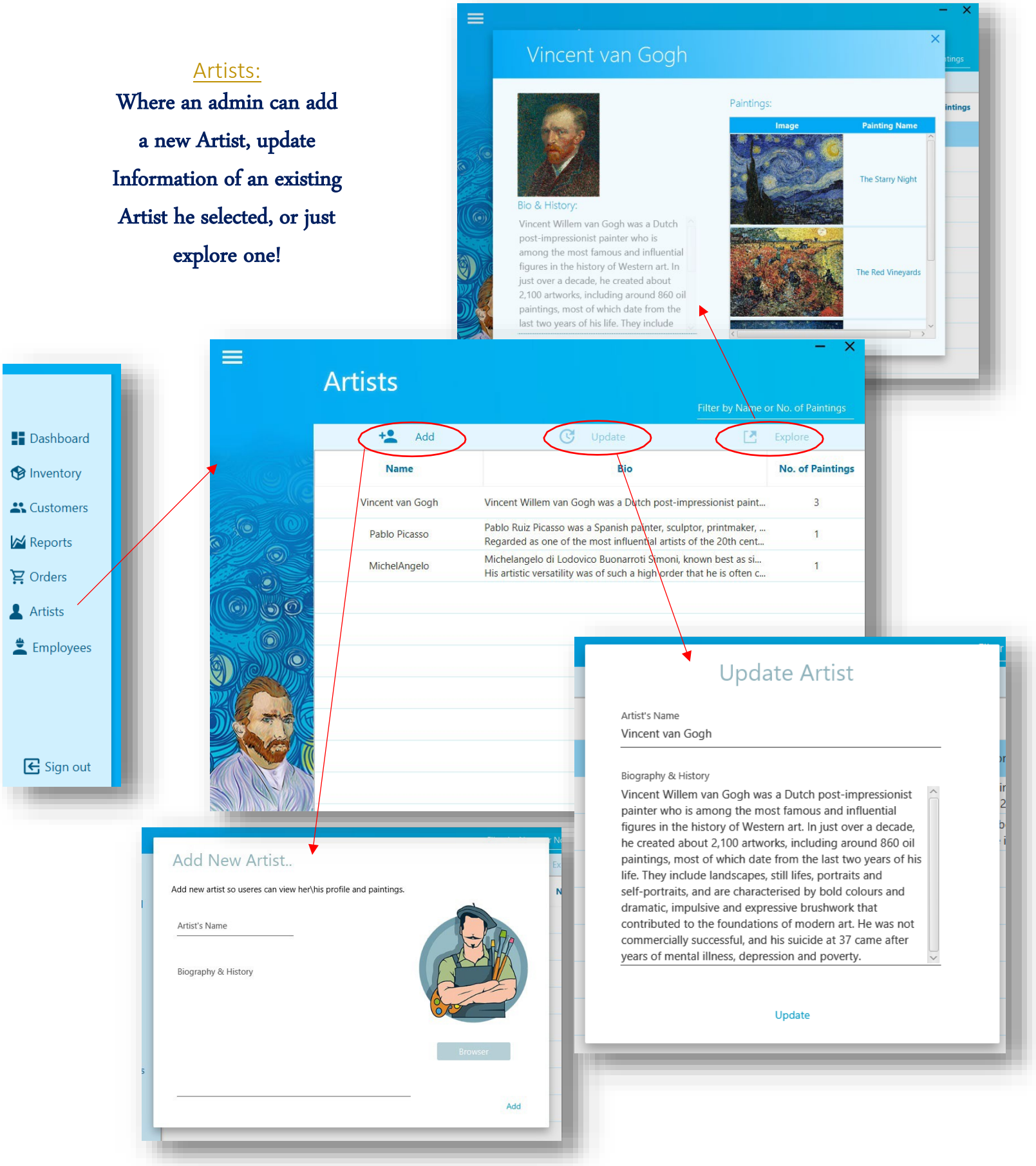


Employees:

Displays all Employees of the original company.

Artists:

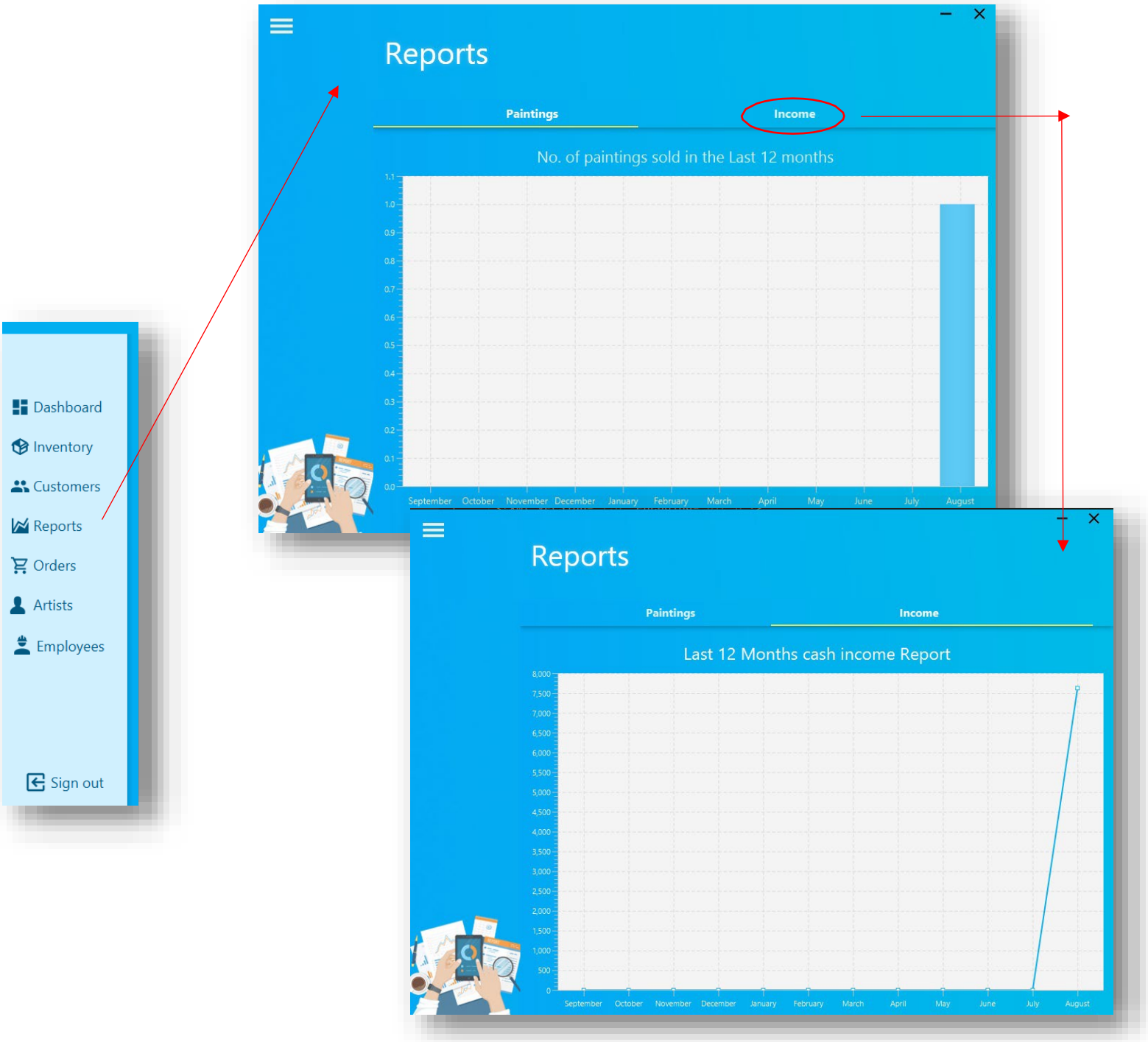
Where an admin can add a new Artist, update Information of an existing Artist he selected, or just explore one!



Reports:

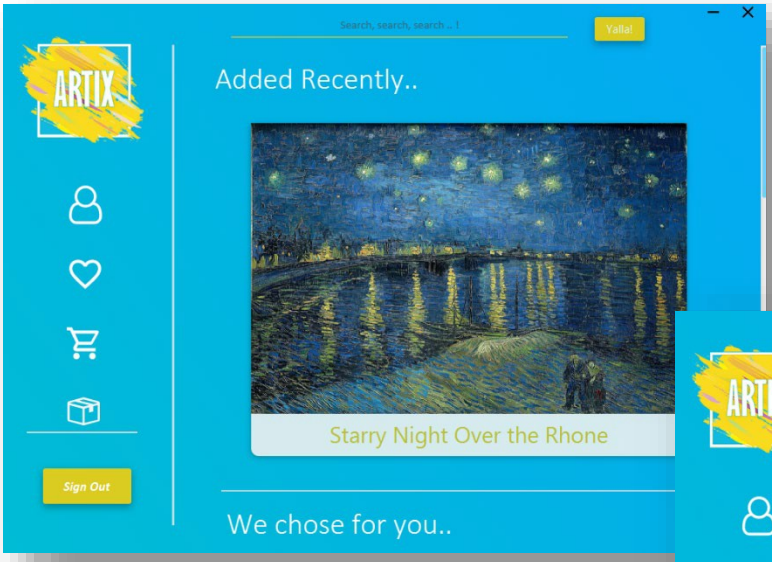
Where an admin can check the

STATISTICS!



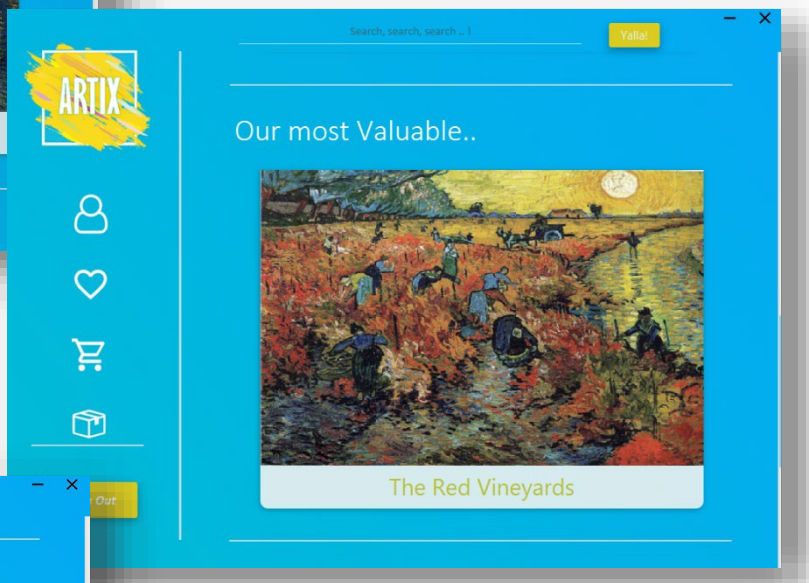

Welcome Back!
1 Painting were sold in last month.
1 Order is waiting to be shipped.
7624 ILS Earned last month.
Dashboard
Inventory
Customers
Reports
Orde rs
Artists
Emp lo yees
Orders
E-+
Add Pa intin g
Orders
Sign out
Search for..
Mark As Shipped
Explore
Order ID
Customer Name
Tota l Price
Number of Items
Order Date
Status
ArafatRoaa
7624
2020-08-06
Paid
Dashboard
Inventory
Customers
Reports
Orde rs
Artists
Emplo yees
83 Sign out
ARTIX
Your dream artwork could be waiting for you!
Username
Password
Sig n In

Customer's Home:



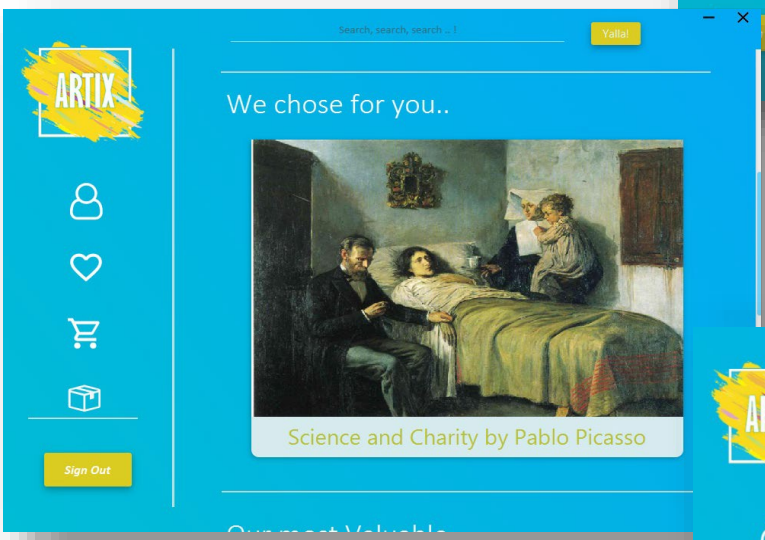
Added Recently:

Shows the latest three Paintings added.



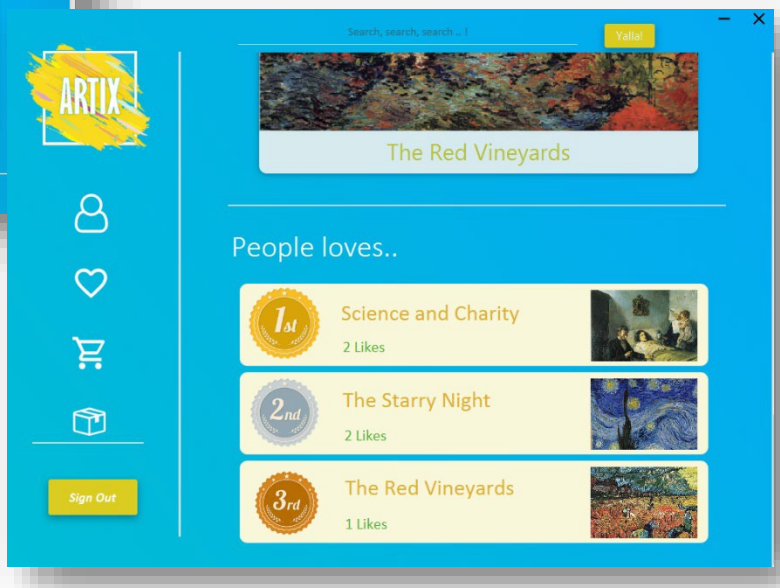
Our Most Valuable:

Shows Most Expensive Painting.



We Chose For you:

Chooses a Random Painting to show.



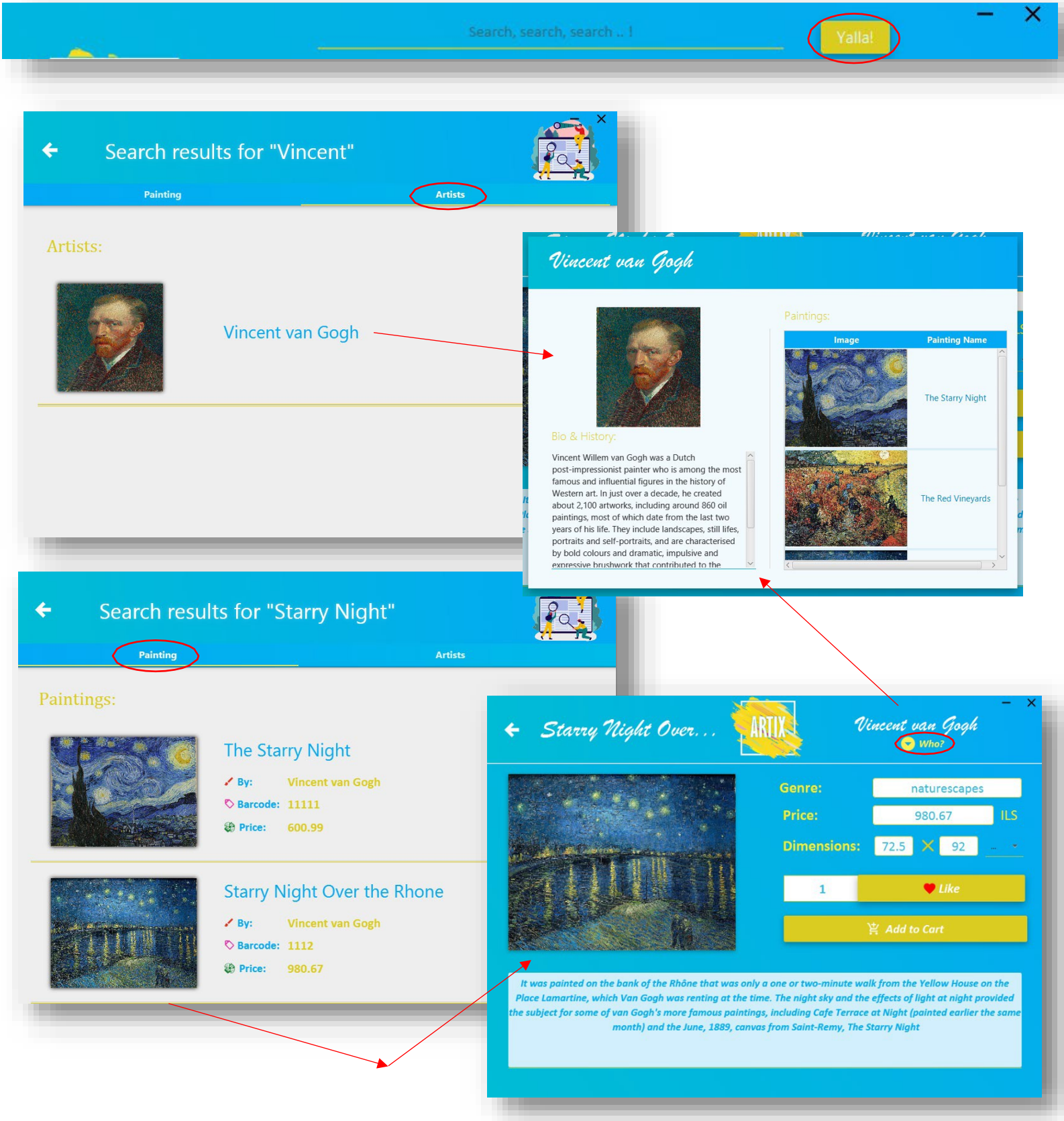
People Love:

Shows Most Liked Three Painting.

Home Search Bar, Artist & Painting:

You can search for Paintings or Artists

by their names.

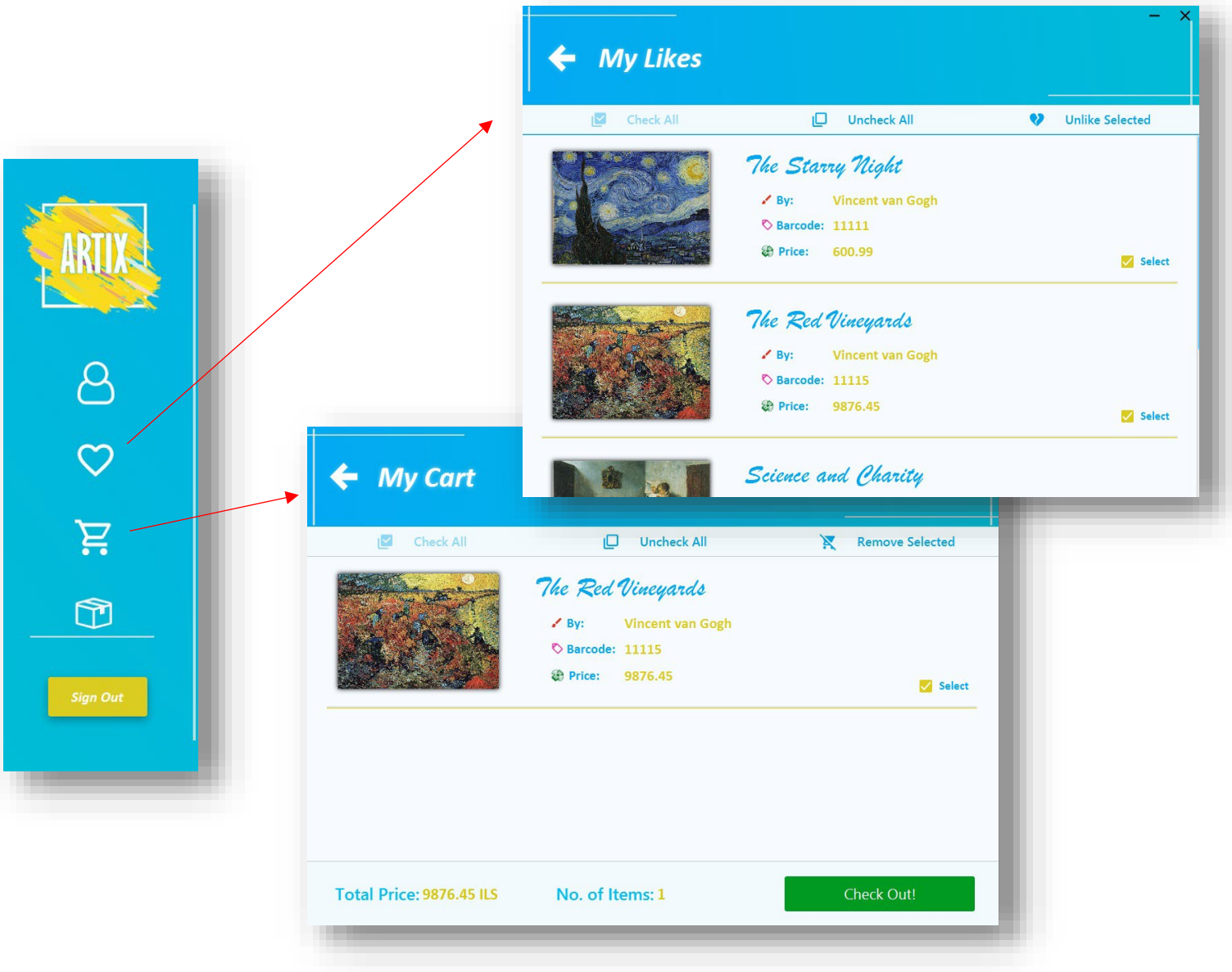


Customer's Profile:

Where the Customer can update his information.

Customer's Likes:

Where the Customer Keeps the paintings, he liked. He can select or unselect one or more to unlike at once.



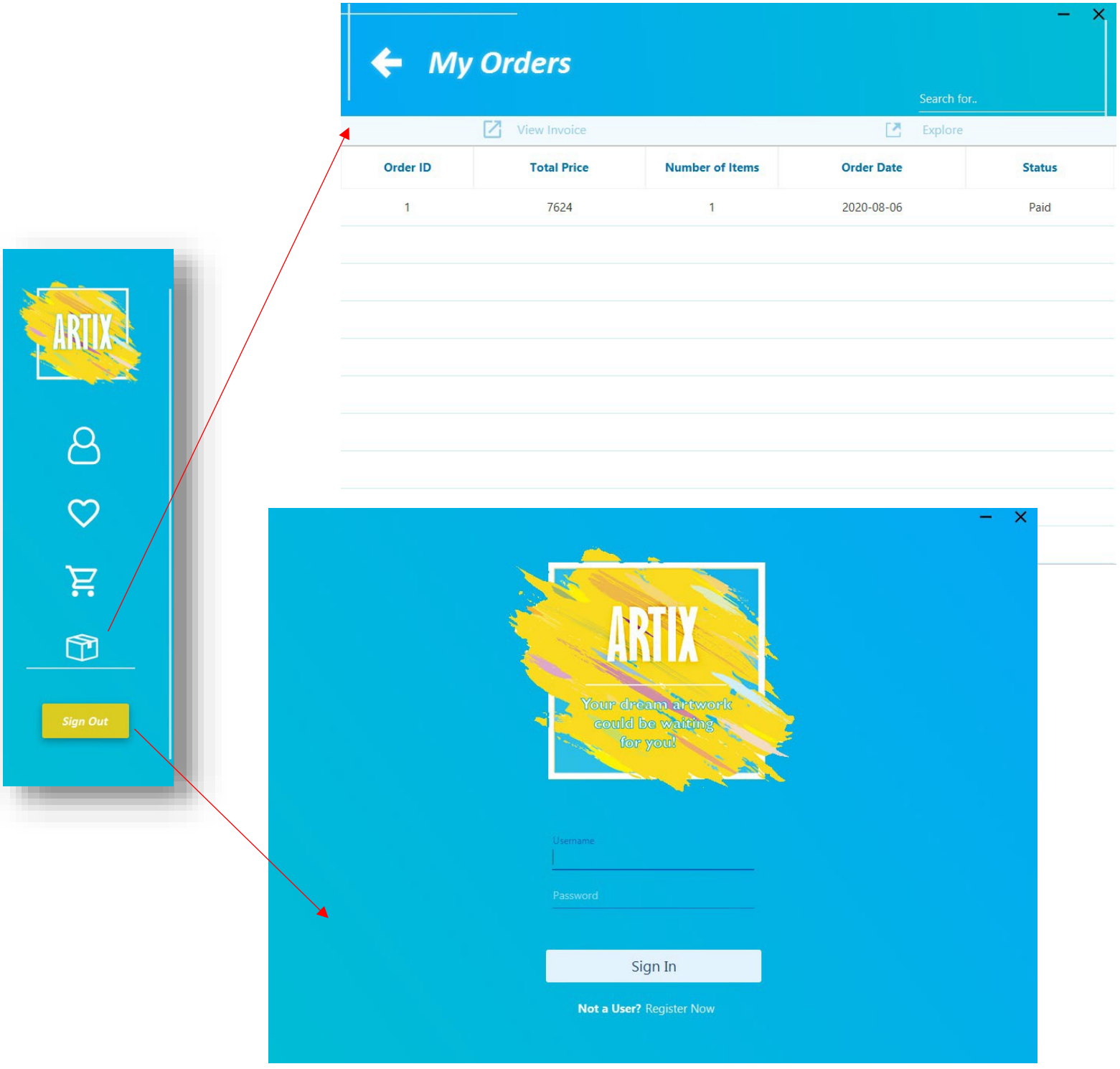
Customer's Cart:

Where the Customer Keeps the paintings he chose before buying. He can select/unselect one or more to remove or to buy at once. Sure about what to buy?

Check Out!

Customer's Orders:

Displays All the orders made by the same Customer.



Conclusion:

After Working on this project within Database course

We realized how to deal with Oracle-SQL-Database ,

how to connect

between User interface and database with two methods [JPA, JDBC]

using Intellij and Sql developer,

and how much it is important to specify

the tables and the relationships between them,

and to be careful while creating

any through a database builder.

References: