

**A detailed report describing our work through Phase1 to Phase3**

In Phase1 we did requirement analysis, E/R diagram, 6 interesting queries.

In Requirement Analysis we answered questions like “What is the purpose of the database? What should it do?”, “Who are the users and what are their information needs?”, “What are the problems that the system should solve?”, “What input data is available to the database?”, “What kind of information should be stored in the database?”. Then, we explained Cardinality, Participation and found the Functional/Non-functional Requirements.

In Queries part our queries were “What is the most used color in manufactured product ?”, ”What is the most used type in manufactured product?”, “Which cities do we sell our product to most?”, “What is the product sales distribution per month in 2020 ?”, “What is the gender ratio for employees?”, “What is the age distribution for employees (from youngest to oldest employee.)?”.

In Phase 2, we recorrected our E/R Diagram part. We also make a relational schema from our E/R Diagram and apply Normalization. Then, we used MySQL to create our database. We created tables and filled them with our datas. We found the database schema from our MySQL.

In Phase3, we used Visual Studio for our application. We designed a Login screen first. We have 3 types of users for this application. First one is the manager and has access to add,delete,search or modify the data. Second one is an engineer, the third one is an accountant and they are only allowed to see and search the data. They use their password to see other pages of application. After the login part, they come across the menu part. In the menu part, we give names to buttons so they can go to the table they want to go. After that they can see, add, delete,search or modify the data (if allowed to do so). And there is one more button for our queries and log out in the menu part . When query button is clicked, it shows you the queries and the result tables of queries but even though we write SQL commands we couldn’t connect the result tables to our application (we didn’t know how to do it and couldn’t find any solution on the web, but our result tables are correct ).When we clicked logout button, page is directed to login page. Also, we mentioned the attributes you have to write to delete the data (primary keys) in our application pages (below the delete buttons).

Usernames and passwords:

USER 1 → username: manager, password: password1

USER 2 → username: engineer, password: password2

USER 3 → username: accountant, password: password3

User Authorization:

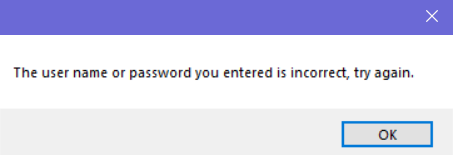
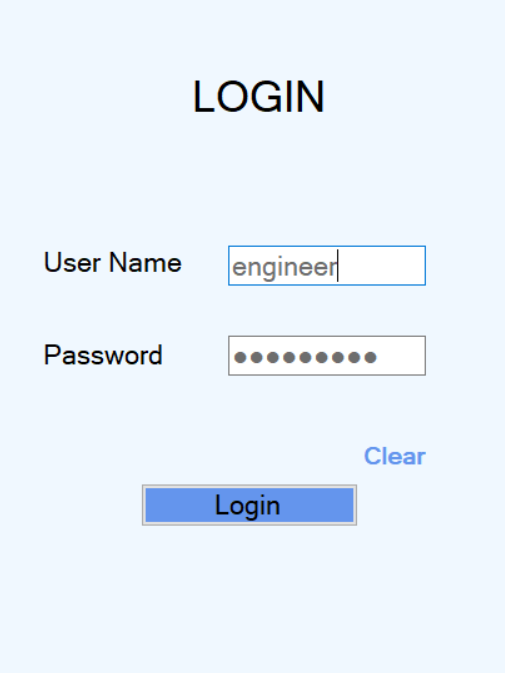
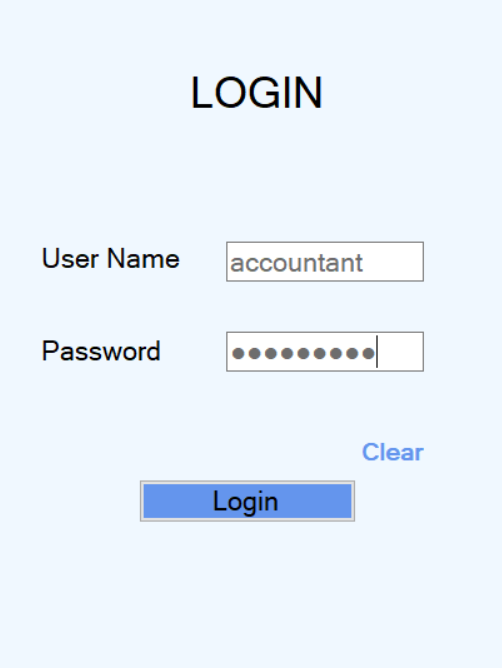
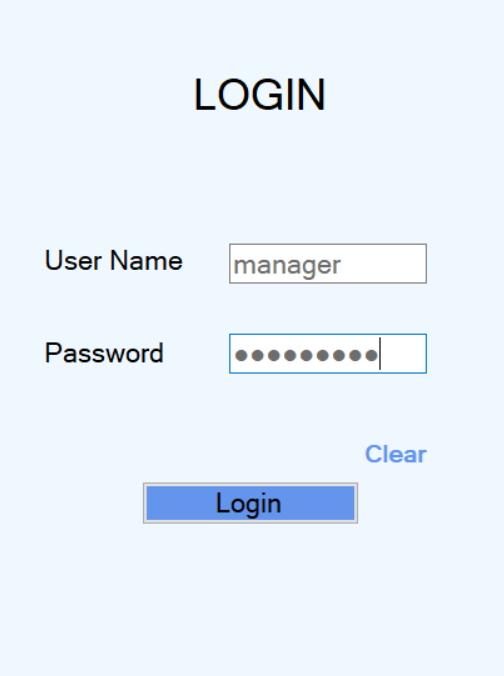
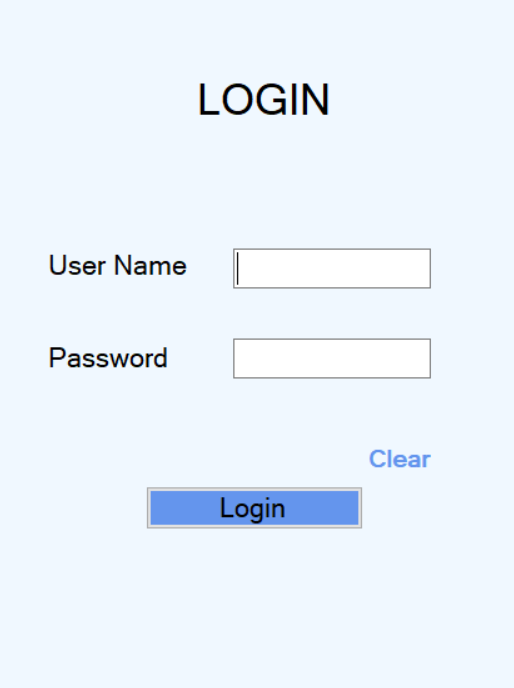
USER 1 → authorized to add, delete and update all data

USER 2 → authorized to see all data

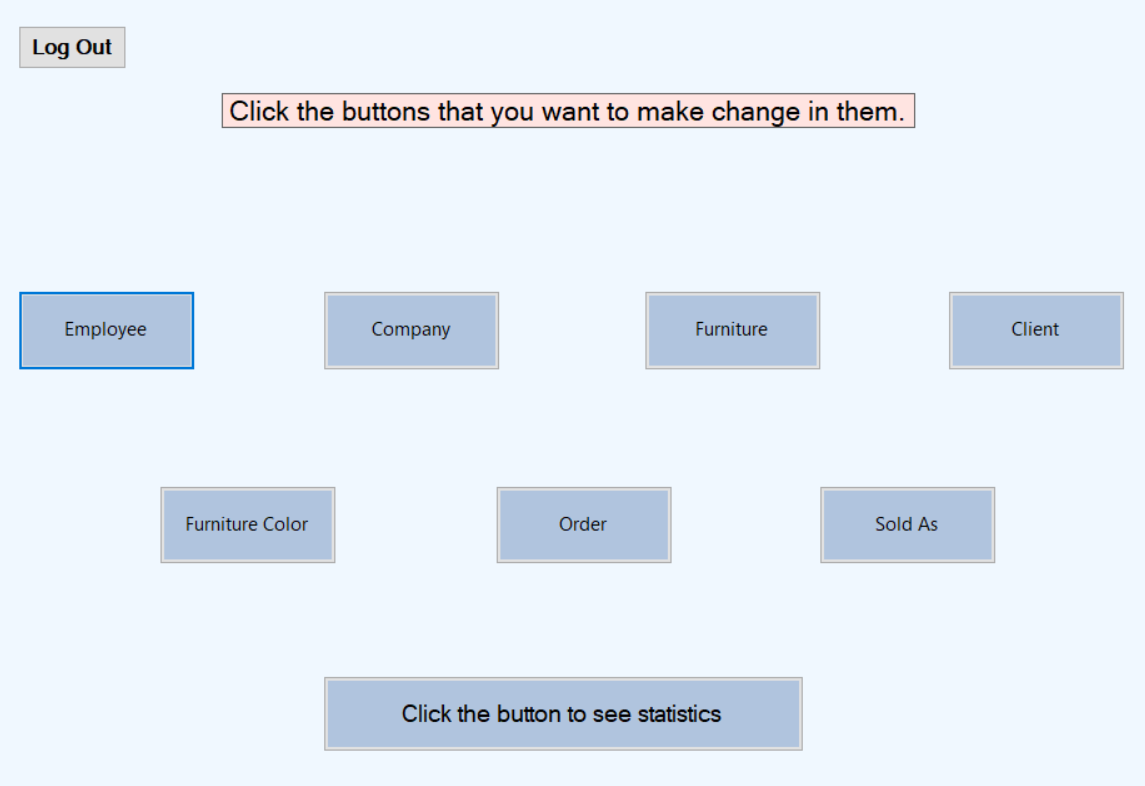
USER 3 → authorized to see all data

SCREENSHOTS

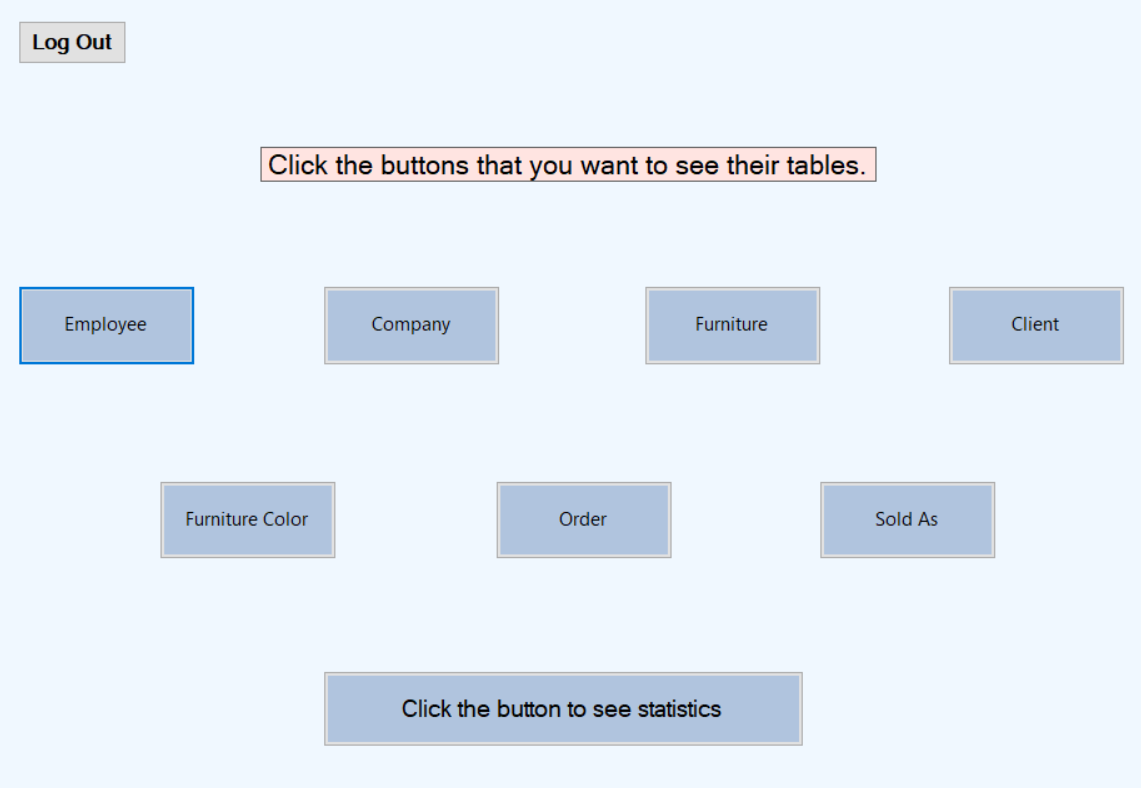
Here we have Login screen and have 3 users. When the username and/or password is incorrect it shows a messagebox.



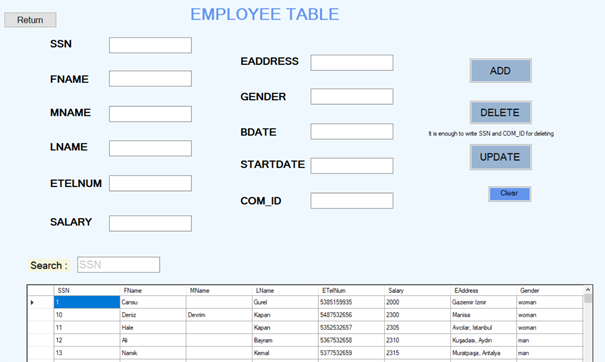
Here we have a Menu screen and if the user is the manager the text says “Click the button that you want to make changes in them.”. We have 7 buttons for tables. When clicked it shows the tables and their attributes to make changes on them. And we have a button for log out and one for queries.



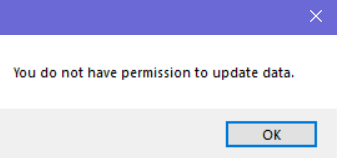
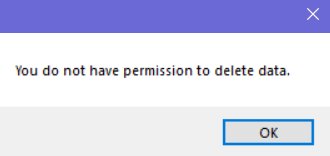
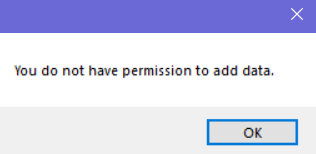
If the user is an engineer or accountant the text says “Click the button that you want to see their tables.”.



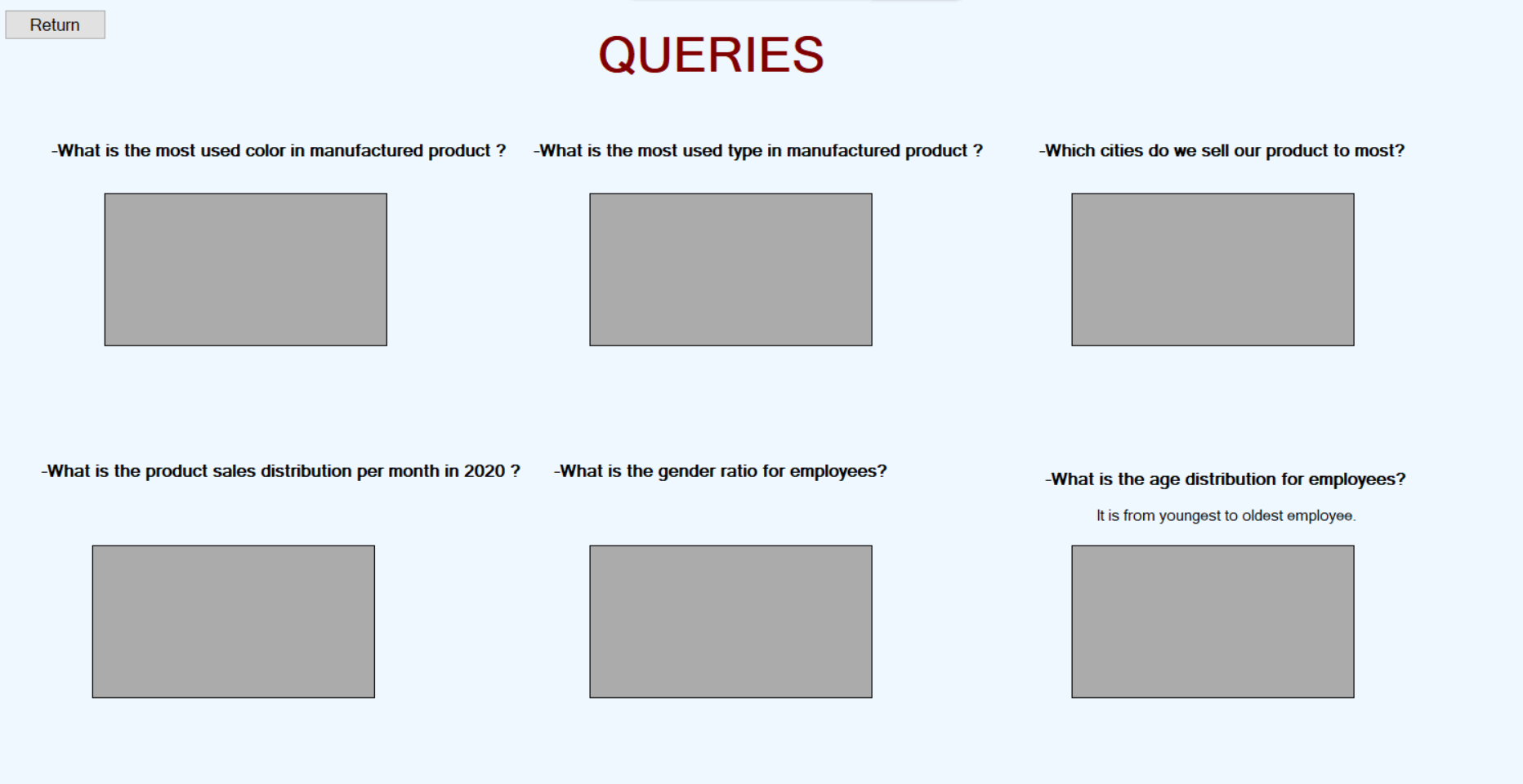
Here we have an Employee table as an example. In this part, it shows the tables attribute so the user can add, delete,search or modify data (in this case the engineer and accountant has only access to search and see the tables while the manager has access to all).



If the user is an engineer or accountant they get this message box when they click add, delete or modify buttons.



If the user clicks the “Click the button to see statistics” button it shows this page where we have queries. We couldn’t connect our mysql result tables to this page.

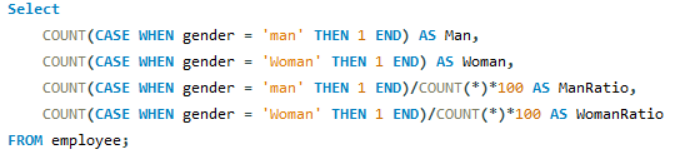


Every page has a return button to return the menu page.

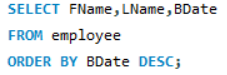
MYSQL SCREENSHOTS ABOUT QUERİES

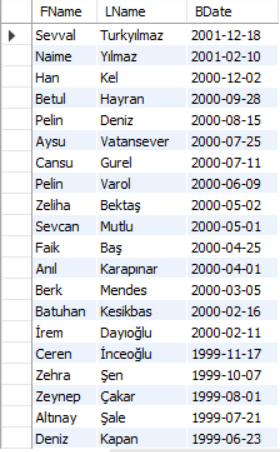
We wrote these queries in MySQL Workbench and the results are correct.

**-What is the gender ratio for employees?**

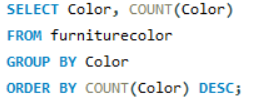


**-What is the age distribution for employees? It is from the youngest to the oldest employee.**



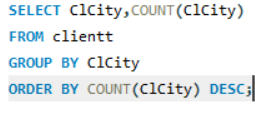
And table goes on.

**-What is the most used color in manufactured products ?**



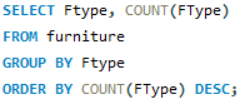
And table goes on.

**-Which cities do we sell our product to most?**



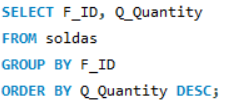


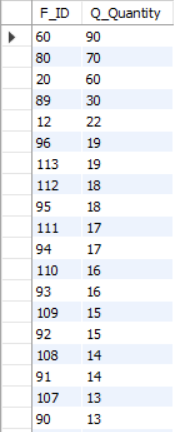
**-What is the most used type in manufactured product ?**



And table goes on.

**-What is the product sales distribution per month in 2020 ?**



And table goes on.