
The administrator side of the project should be able to evaluate and send the orders which are made by using online salt order mechanism. To do this, as a first step, the administrator of the program (or operator in short) who will use it in the factory should supply the login information. Hence we started by developing a login mechanism to be able to recognize administrator. For administrator side of the project there is no table in the database which stores the username and the password of the administrators, the members of the group has decided that such table is not required because there will be at most 3 or 4 administrators therefore we used “if” statements in the coding part for the login mechanism. Currently the program has two administrators (one for each group member) and the following Figure 17 illustrates the login mechanism.

![Login screen of Tekin Tuz administrator software](image)

Figure 17. Login screen of Tekin Tuz administrator software

After successful login information is entered by the operator(s) the following menu items appear:

- **Order**
  - New Orders
- **Waybill**
  - Waybill Printing
  - Printed Waybills
When the administrator selects the menu item, the frame for that menu item becomes visible to
him. A distinctive feature of the program is that we have used “frames” instead of “forms” for
each menu item because forms are inefficient way to implement the project. The reason for that is
the creation of a new window for each associated form created. Thus, whenever the operator
clicks a menu item a new window would be visible which will then confuse the screen of
program. As a result by using frames instead of forms helps us to achieve a better view.

9.2.1. Order Menu

Now let us start with the first menu item which is “Order”. When you click the “New Order”
menu item, the system checks whether new orders are available or not. According to the result of
the query, it prompts the administrator by warning with a message box containing “There is no
new order” string if there is no new orders, otherwise it shows the new orders using the grid

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1 “Müşteri Cari” in Turkish
which is called “istekgrid” as shown in Figure 18. Another function of this menu item is to refresh the content of the grid every time it is clicked.

As you recognize from the above figure the grid contains only the following columns:

- Order Id
- Company Name
- Is Waybill Printed
- Date and Time

When you select a row from this grid, the order details frame will be visible to the administrator as shown in Figure 19 below.

![Figure 18. Incoming orders grid](image1)

![Figure 19. Details of incoming orders](image2)
Each text box in this frame is dynamic in a way that they are directly connected to our database. Whenever you select the desired row these textboxes are automatically updated. An important point to emphasize here is that some text boxes (packet and number of packets or only quantity in kg) are shown according to order type of the associated salt. As you can see from the right side of the order details frame in the above figure, there are four available buttons which are

- Edit Order
- Remove Order
- Print Waybill
- Customer Information

as shown in Figure 20.

Now let us describe the functionalities of these buttons.

**Edit Order Button**

Everybody can make mistake; from this point in mind we decided that the system should include an edit mechanism for the orders made online (which are made by customers from the Internet). Operator should be able to change some fields such as type of salt, packet order and quantity order. When the administrator chooses one of the salts in the salt box, the system shows either a “packet order” or a “quantity order” field according to the selected salt similarly as in the client side of the system. And also the new button, located in the right bottom corner, which is called “Edit” becomes visible after clicking to the edit order button.

As an example for editing orders, please look at Figure 21 which illustrates an order by quantity case with the associated salt called “Raw Salt”. In this case, the packet order textbox is still locked because this type of salt is being sold by specifying only the desired quantity.
The other case, which requires ordering by packets, opens another box. This box contains packet weight selection box. It is worth noting that the weight selection box is again completely dynamic in a way that each salt can be wrapped up in different size of packets. An example view of this case is illustrated in Figure 22.

After all these steps whenever the administrator clicks the “Edit” button, it updates the selected order (both database and the grid). As a result it also changes the data of “Cost”, “VAT” (Value Added Tax), “Date” and “Time” textboxes as shown in Figure 23.
Remove Order Button

This button removes the selected order from both the database and grid after warning the administrator for confirmation, and it prompts the administrator by saying "There is no new order" if all orders are removed.

Print Waybill Button

The function of this button was really complex and the implementation of this functionality took the biggest portion of the project duration. This button has four main goals and we will discuss them briefly in this report:

- First goal is to print the waybill of the selected order. At the same time it checks other orders made by the same customer to see whether their waybills are printed or not. If they are not printed it prompts the administrator saying “This customer has other orders, would you like to print these orders in the same waybill?” The maximum number of orders in the waybill should not exceed 8. If the administrator confirms the usage of the same waybill for other orders, waybill will be printed for the selected orders. If the operator cancels this operation, the waybill is just printed for the selected order. After this operation, the “Is waybill printed”
Textbox updates its content as “Yes” for that order and the “Waybill number” textbox updates its content as the number of printed waybill. This operation is same for multiple waybill printings. A view of a printed waybill screen is shown in Figure 24. Pay attention to the selected row which has the value “Yes” for the “Is waybill printed” field in this figure.

Figure 24. Waybill printed to the selected order from the grid

- The second goal of this button is to insert a new row into the waybill table with the appropriate order “id”s and the total cost of order (or orders if the waybill is for multiple orders). Please refer to Figure 25.

Figure 25. Waybill follow up screen
- Another goal (third) is that, it updates the “Debt” field of Customer table as the cost of the waybill as shown in Figure 26.

![Figure 26. View of customer table after a successful waybill printing operation](image)

- The fourth goal of this button is to insert another new row into the “Financial” table in our database which includes the id of customer, id of waybill, the cost of waybill, date and time as shown in Figure 27.

![Figure 27. View of “Financial” table after a successful waybill printing operation](image)

**Customer Information Button**

This button shows the information of the customer who made the selected order from the grid as shown in Figure 28.
9.2.2. Waybill Menu

One of the most important menus in our program is the “Waybill” menu which has two menu items called “Print waybill” and “Printed waybills”. The function of the former is the same as the button’s that we have discussed in the previous section (Print Waybill Button). The second menu item is “Printed Waybills”; we again used frame and grid for this menu to see the printed waybills as shown in Figure 29. Please see Appendix B for a real waybill given to us by the salt manufacturer.
As you see from the right side of the waybill information frame three options are available to the administrators which are

- Print Invoice
- Customer Information
- Cancel Waybill

as shown in Figure 30.

**Print Invoice Button**

As in the Print Waybill button, the job of this button is also very complex; it has again four main functions.

- The first function is to print the invoice of the selected waybill from the grid and to update the appropriate fields such as “Is Invoice Printed” and “Invoice Number” (both in the grid and database) as shown in Figure 31.

![Figure 31. Associated invoice number to a printed waybill](image)

- The second function is to insert a new row into the invoice table with the ids of invoices, waybill ids, and the cost of invoice which should be equal to the cost of waybill as shown in figure 32.
The third one is that it also updates the “Debt” field in Customer table in database as shown previously in Figure 26.

The fourth main function is to insert another row into “Financial” table with the required fields such as “Customer id”, “Invoice id”, “Waybill id” and the “Cost of invoice” fields in database as shown previously in Figure 27.

**Customer Information Button**

This button shows the information of the customer who made that order as shown previously in Figure 28.

**Remove Waybill Button**

This button removes the appropriate row from both “Financial” and “Waybill” tables in our database and also updates the “Is waybill printed” and “Waybill id” fields of the “Order” table as “No”, and “0” respectively. It then updates the “Debt” field of “Customer” table in our database as shown in Figure 26.
9.2.3. Invoice Menu

The third menu of our program is the “Invoice” menu. This menu has two menu items which are “Print invoice” and “Printed Invoices”. Function of the former is the same as the button which is visible to the administrator at the time when he clicks to the waybill grid as discussed previously. We again used frame and grid tools for “Printed invoices” menu item to see the printed invoices as shown in Figure 31 which is above. Please see Appendix C for a real invoice given to us by the salt manufacturer.

Two buttons are available to the administrator at the time when the administrator clicks to the grid. These buttons are

- Customer Information
- Remove Invoice

Figure 33. Buttons in printed invoices screen

as shown in Figure 33.

Customer Information Button

This button shows the information of the customer who makes that order as shown previously in Figure 28.

Remove Invoice Button

This button serves to remove the appropriate invoice from “Financial” and “Invoice” tables in database. One of the important functions of this button is to update the “Is invoice printed” and “Invoice id” fields as “No” and “0” respectively in “Waybill” table. It then updates the “Debt” field of “Customer” table as shown previously in the Figure 26.
9.2.4. Customer Menu

In the administrator side of this project, we decided to compensate a mechanism which will add, search, update, and delete the customer records. This menu has two menu items which are

- Customer Search
- Add Customer

Customer Search

Whenever you select this menu item a small frame becomes visible and the administrator can easily search the customer according to the customer’s id, customer’s company and customer’s account number which is given to the customer by the Tax Office\(^2\). If the administrator wants to search the customer using customer id, then other two search criteria (company name, account number) becomes locked. Similarly when he uses one of the other search criteria, the remaining two go to locked state as shown in Figure 34.

![Customer search](image)

*Figure 34. Customer search*

Add Customer

The job of this button is same as the user registration button in the client side of the project. The main difference between the two user registration menus is in the administrator side the password for new customer is not randomly selected and assigned to the customer by the program. Instead the administrator assigns a temporary password and the customer can change this password using

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\(^2\) We wanted to say “Vergi Dairesi”
the “Changing user password” in the client side of the system. The new User Registration form for administrator side of the project is shown in Figure 35.

![Figure 35. Adding new customers frame](image)

When the user submits the registration form, the system checks whether all the (required) fields are entered within the appropriate format (e.g. user should not enter any digit value into the “Company Agent” fields or any letter into the “Phone” fields). At this point the system evaluates a lot of control in order to collect the required information. Since this report should not include too much technical details, we will not mention those controls here.

The user names in the system must be unique for security purposes and if one of more entries is not in the scope of expectations of the system then the administrator is warned by an appropriate alert message.

Once the customer is successfully registered, the details are inserted to the database as shown in Figure 28 (see Print Waybill).
Customer Information

This menu item shows the information of the customers who are selected from the grids as shown previously in Figures 31-32-33. When you select the customer information three buttons are available for use. They are

- Financial Information
- Edit Customer
- Remove Customer

![Figure 36. Buttons in Customer Information screen](image)

as shown in Figure 36.

Financial Information

Financial Information button shows the financial information about customers using the grid as shown in Figure 37.

![Figure 37. Customers financial information screen](image)

Edit Customer

The administrator can edit the user information just using the white textboxes. As you see the pink ones are still locked because they should not be changed in order to preserve the stability of the
software. These boxes must be updated by the program automatically. It is worth noting that the textbox containing the password is emptied for the security purposes.

**Remove Customer**

Remove Customer button has to check whether the selected customer for deletion has any debt record in the “Financial” table. If there is no debt associated to the customer then it will be convenient to remove the customer record from the database.