

CS353 - DATABASE SYSTEMS

FINAL REPORT



04.01.2022

GROUP NO: 5

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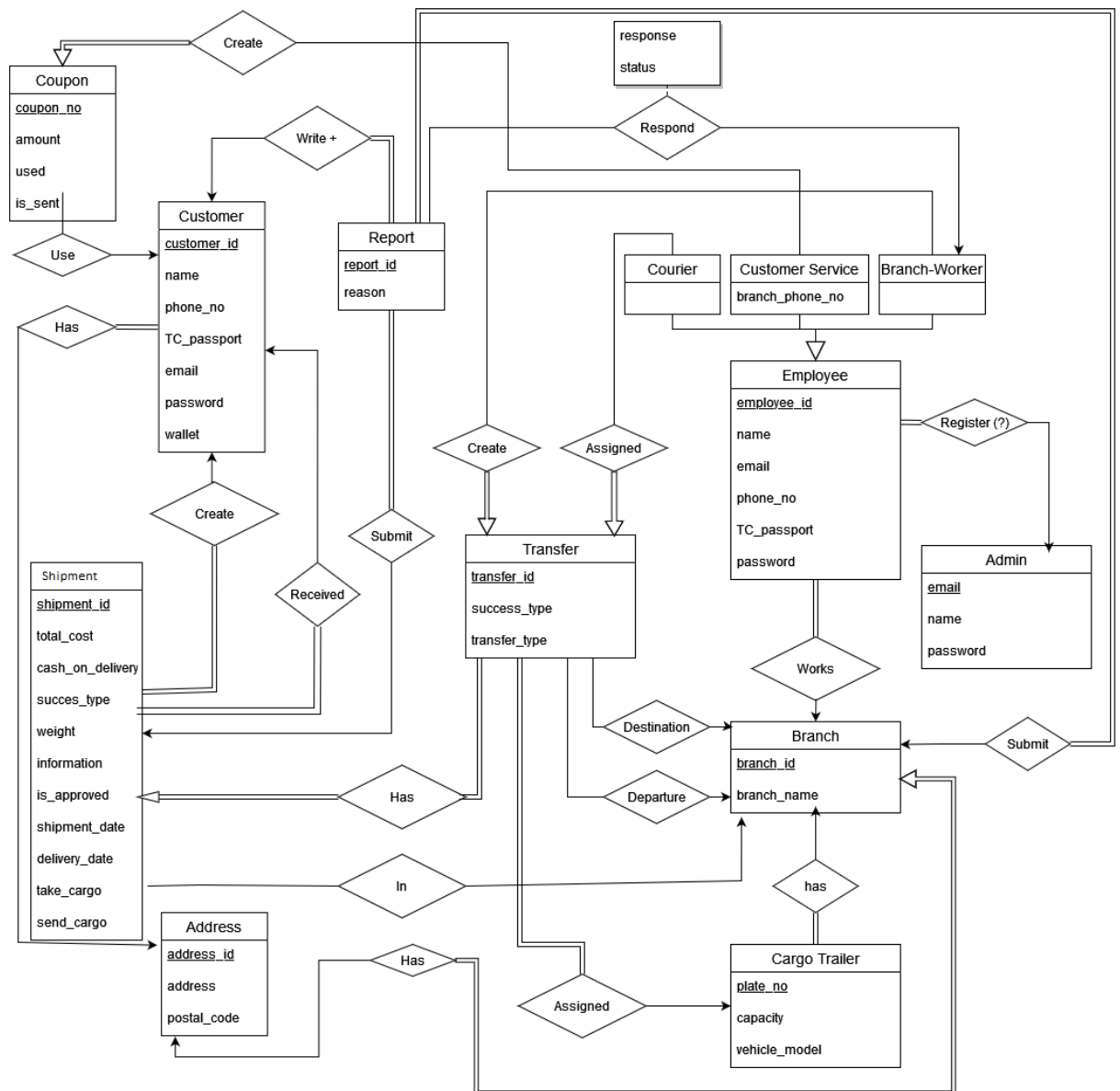
Description

Our project is a shipping company data management system that is called Shipmin. This system stores information about customers, shipments, employees (including couriers), branches, complaint reports, cargo trailers, and discount coupons. It aims to help the company to track the shipments. Also, by using this system the company will be able to get informed about customer complaints. The system allows for shipment management for companies. The users who wish to make a shipment are able to sign in to the system as a customer. Customers of our system specify their credentials, location and contact information. This system assigns unique IDs to each shipment made by a customer. These IDs are used for reaching the attributes of the shipment. The system also creates unique tracking numbers for every shipment. The sender or the receiver can track their shipment via using this number.

Our system stores employees as branch workers or as couriers. The branch workers who are working on branches are responsible for creating transfers in order to perform the shipments. For these transfers, cargo trailers and couriers are assigned by the branch workers. Couriers are responsible for transferring cargo from one place to another. These places may be branches or sender/receiver addresses. Receivers of the shipments are able create and submit reports to the relevant branches when they are dissatisfied with their shipment. These reports are assigned to a branch worker in the relevant branch to be reviewed. The reports can be either an online form or a physical form filled in the destination by the receiver. Senders of the shipment are also able to create reports if they are dissatisfied with the shipment.

Finally, users can use a discount coupon that was assigned to them while making a payment.

Final E/R



Final list of tables

Address:

PK: address_id

address_id	address	postal_code
0	Dummy Mahallesi Random Sokak	46655

Admin:

PK: email

email	name	password	
aybala	aybala	admin	

Branch:

PK: branch_id

FK: address_id, references Address

branch_id	branch_name	address_id
0	dummy	0 →

Admin:

PK: email

email	name	password	
aybala	aybala	admin	

Branch_worker:

PK: employee_id

FK: employee_id, references Employee

employee_id	
1 →	

BranchAddress:

PK: (branch_id, address_id)

FK: branch_id, references Branch

FK: address_id, references Address

branch_id	address_id
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Coupon:

PK: coupon_no

FK: creator_id, references Employee

FK: owner_id, references Customer

coupon_no	amount	used	creator_id	owner_id	is_sent
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Courier:

PK: employee_id

FK: employee_id, references Employee

employee_id
52 →

Customer:

PK: customer_id

customer_id	name	phone_no	TC_passport	email	password	wallet
1	ahmet veli	05077203373	29638747029	mcagridurgut@gmail.com	zaaa	22

Customer_service:

PK: employee_id

FK: employee_id, references Employee

employee_id	branch_phone_no
54 →	03125364564

CustomerAddress:

PK: (customer_id, address_id)

FK: customer_id, references Customer

FK: address_id, references Address

customer_id	address_id
12 →	1 →

Employee:

PK: employee_id

FK: branch_id, references Branch

FK: adder_admin, references Admin

employee_id	name	phone_no	TC_passport	email	password	branch_id	adder_admin
0	dummy	02345854365	12312	dummy	dummy	0 →	aybala →

Report:

PK: report_id

FK: reporter_id, references Customer

FK: shipment_id, references Shipment

FK: respondent_id, references Employee

FK: branch_id, references Branch

report_id	reason	reporter_id	shipment_id	respondent_id	response	status	branch_id
1	Its broke	15 →	1 →	NULL →	NULL	NULL	1 →

Shipment:

PK: shipment_id
FK: sender_id, references Customer
FK: receiver_id, references Customer
FK: branch_id, references Branch
FK: employee_id, references Employee

shipment_id	sender_id	total_cost	cash_on_delivery	success_type	weight	information	receiver_id	is_approved	branch_id	employee_id	take_cargo	send_cargo	shipping_date	delivery_date
1	1 →	453	1	1	453	book	15 →	1	1 →	1 →	0	0	2022-01-03 20:54:44	2022-01-04 00:00:00
shipment_id	sender_id	total_cost	cash_on_delivery	success_type	weight	information								
receiver_id	is_approved	branch_id	employee_id	take_cargo	send_cargo	shipping_date	delivery_date							

Trailer:

PK: plate_no
FK: branch_id, references Branch

plate_no	capacity	vehicle_model	branch_id
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Transfer:

PK: transfer_id
FK: shipment_id, references Shipment
FK: trailer_plate, references Trailer
FK: assigned_employee_id, references Employee
FK: creator_id, references Employee
FK: departure_id, references Branch
FK: destination_id, references Branch

transfer_id	success_type	transfer_type	shipment_id	trailer_plate	assigned_employee_id	creator_id	departure_id	destination_id
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Implementation details

We have used PHP for the project. To style the front-end, we have also used CSS. We have not used any frameworks. We have used MySQLi as our relational database driver. We have used XAMPP to connect to the Apache server and TablePlus to see the database.

One of the problems that we faced was creating a central database to provide a developing environment. We used the dijkstra server that was provided to us from the University. We created a MySQL database in the Dijkstra server and reached it. In that way we were able to develop on the same database. Another frustrating point was seeing the contents of the database. We used a free software called TablePlus in order to see and edit the contents of our database.

Aybala Karakaya: Front-end of the courier profile page, courier “see transfers” page, admin profile page, admin register page. On the back-end, I implemented registering a new employee and removing existing employee functionality.

Halil Özgür Demir: Front-end of the customer, branch worker, and customer service pages. Implemented retrieval parts from the database and made dynamically growing lists from retrieved data. Implemented range function for previous shipments.

Oğuzhan Özçelik: Mainly worked on back-end. Connected already existing pages to the database. Worked on Customer functionalities such as editing the profile, changing the password, loading money to the account, creating a shipment request, accepting a shipment request, submitting a report about the shipment, etc.

Mustafa Çağrı Durgut: Worked on the construction of the database. Initialized the project and set up the connection. Implemented the login, logout and session systems of the project. Worked on the connection between back-end and front-end of the application.

Advanced DB features

A search GUI including range conditions:

```
$query = "select * from Shipment
        where (receiver_id = '$id' OR sender_id = '$id')
and
        success_type = 1
        and is_approved = 1 and
        shipping_date between '$start_date' and
'$end_date';";
```

Previous Shipments

01 . 09 . 2021

31 . 12 . 2021

APPLY

Shipment: 3 - Received

+

Shipment: 21 - Received

+

Shipment: 22 - Received

+

User's Manual

Shipping Data System

No account? [register](#)

Customer Email

Password

Submit

7°C Genellikle açık

18:32 4.01.2022

You can login to the system by using the opening page above. If you do not have an account, you can register to the system by clicking the “Register” and you will be directed to the following page.

Shipping Data System

Already have an account? [Login](#)

Email

Password

Confirm Password

Legal Name

Phone Number

National ID

City

Postal Code

Address

When you login to the system by using your email and password, you will be directed to a profile page depending on your user type. Possible user types are customer, branch worker, courier, customer service, and admin.

1. Customer:

1.1 Customer Profile Page

SHIPMIN - Customer

Özgür Demir
310 TL

Profile

Create Shipment

Ongoing Shipment

Reports

User Information

Name: Özgür Demir

Email: hozgurde@gmail.com

Phone Number: 05522012070

Address: Taner Sağır Sokak

Postal Code: 06145

National ID: [Show](#)

Change Password

Enter Current Password

Enter New Password

Confirm Password

Load Money To Wallet

Enter Amount

Current Amount: 310 TL

Use Coupon

Enter Coupon

This page is the Customer Profile Page, with the help of this page users will be able to edit and see their information. They can change their password and top up

money to their wallet and switch to other pages. The button on the top right allows users to log off from the system. Customers are able to switch pages in the application using the menu on the left. Users can also choose to use a discount coupon that was assigned to them. Note that the coupon no would have been sent to the email address of the user. To use a coupon, the users should enter the coupon no from the bottom-right of the page and press the “submit” button.

1.2 Create Shipment

The screenshot displays the SHIPMIN Customer interface. The top navigation bar includes 'SHIPMIN', 'Customer', 'Contact Us', and 'Logout'. The left sidebar shows the user profile 'Özgür Demir' with '310 TL' and a 'Logout' button, along with a menu: 'Profile', 'Create Shipment' (highlighted in red), 'Ongoing Shipment', and 'Reports'. The main content area is divided into two panels. The left panel, titled 'Create Shipment Request', contains form fields for 'Receiver' (with an 'Enter Receiver ID' placeholder), 'Take Cargo From Address' (with a location pin icon), 'Branch' (with an 'Enter Branch ID' placeholder), 'Branch Employee' (with an 'Enter Employee ID' placeholder), and 'Send Cargo To Address' (with a location pin icon). Below these is an 'Information' text area. At the bottom of this panel, it shows 'Weight (kg):' with a placeholder 'Enter weight (if known)', 'Cost: 0.00 TL', and a 'Cash On Delivery' checkbox. A 'CREATE SHIPMENT REQUEST' button is at the bottom, followed by a green 'Success.' message. The right panel, titled 'Cancel Waiting Request', shows a 'Shipment: 32' with a minus icon, and details: 'Receiver: Gorkem', 'Date: 2022-01-04', 'Information: asasd', 'Weight: 1 gr', and 'Status: Waiting'. A 'CANCEL SHIPMENT REQUEST' button is at the bottom of this panel. The Windows taskbar at the bottom shows the time as 18:58 on 4.01.2022.

This page is Create Shipment Page in which customers can create new shipment requests and also cancel waiting shipment requests. When a new shipment is created, some shipment id is assigned to that shipment by the system.

Customers can also cancel non-approved shipments by using the “CANCEL SHIPMENT REQUEST” button on the left.

1.3 Ongoing Shipment

The screenshot displays the SHIPMIN Customer interface for the 'Ongoing Shipment' page. The sidebar on the left shows the user's profile (Özgür Demir, 310 TL) and navigation options: Profile, Create Shipment, Ongoing Shipment (highlighted), and Reports. The main content area is divided into four sections:

- Going Shipments:** Contains two shipments. Shipment 2 and Shipment 4, both with Receiver: ahmet.
- Coming Shipments:** Contains three shipments. Shipment 6, Shipment 7, and Shipment 8, all with Sender: Gorkem.
- Previous Shipments:** Contains a form with two date input fields (gg. aa. yyyy) and an 'APPLY' button.
- Waiting Shipments:** Contains one shipment (Shipment 33) with Sender: ahmet veli, Date, Information: kkjsjs, Weight: 3 gr, and Cost: 0 - cash on delivery. It includes an 'APPROVE SHIPMENT' button.

Customers can see their coming, going, waiting, and previous shipments that were sent at a given date range using this page. For the waiting shipments, they can approve the shipment by using the “Approve Shipment” button.

1.4 Reports

The screenshot displays the SHIPMIN Customer interface for the 'Reports' page. The sidebar on the left shows the user's profile (Özgür Demir, 310 TL) and navigation options: Profile, Create Shipment, Ongoing Shipment, and Reports (highlighted). The main content area is divided into two sections:

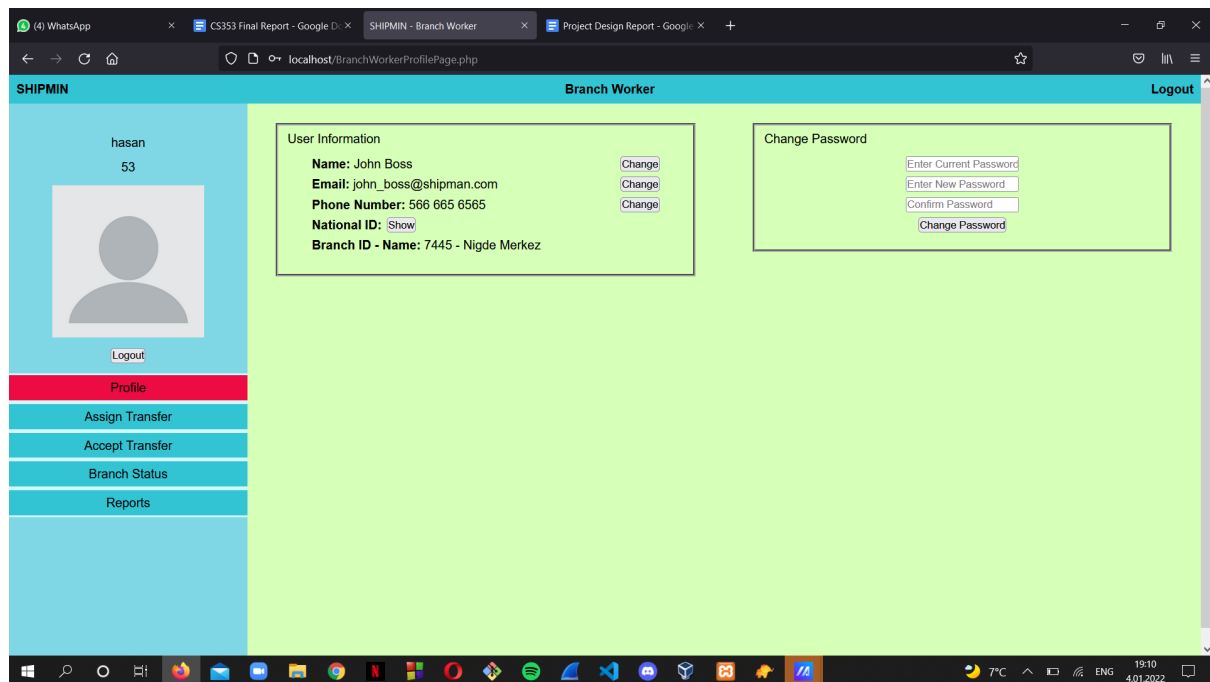
- Received Shipments:** Contains a form for creating a new report. It includes fields for Shipment ID (Shipment: 1), Branch (Afyon Merkez - 0), Date (2022-01-03 | 2022-01-04), and Information (book). There is a 'SUBMIT REPORT' button.
- Previous Report:** Contains a list of previous reports. Each report entry includes Shipment ID, Branch, Employee, Report, Status, and Response. For example, Shipment 1 has a Status of 'Positive Response' and a Response of 'thanks'.

This page is Customer Reports Page which is used for creating reports for received shipments and tracking the previous reports. Customers can create a new report by filling the space under the shipment information and pressing the “SUBMIT

REPORT” button. They can also see the result of a report that they previously submitted.

2. Branch worker

2.1 Branch Worker Profile Page



This page is the Branch Worker Profile Page, with the help of this page users will be able to edit and see their information. They can change their password and top up money to their wallet and switch to other pages. The button on the top right allows users to log off from the system.

2.2 Assign Transfer

The screenshot shows a web application interface for a branch worker. The header bar is blue and contains the text "SHIPMIN" on the left, "Branch Worker" in the center, and "Logout" on the right. Below the header, there is a sidebar on the left with a user profile section showing the name "hasan" and ID "53", a placeholder image, and a "Logout" button. Below the profile are five menu items: "Profile", "Assign Transfer" (highlighted in red), "Accept Transfer", "Branch Status", and "Reports". The main content area is light green and contains two panels. The left panel, titled "Assign Transfer", has a "Type of Transfer" dropdown menu, followed by input fields for "Courier:" (with "Enter Courier ID" placeholder), "Shipment:" (with "Enter Shipment ID" placeholder), "Select Trailer", "Destination:" (with "Select Destination" placeholder), and an "ASSIGN TRANSFER" button. The right panel, titled "Current Transfers", contains a box with transfer details: "Transfer: 352765858", "Courier: Ali Velioglu", "Destination: Address", "Address: Universiteler Mahallesi Ankara ANKARA", and "Information: Cactus Plant. Dont Break Please!!!". Below these details is a "CANCEL TRANSFER" button. The bottom of the screen shows a Windows taskbar with various application icons and system information: "7°C Genellikle açık", "ENG", and "19:11 4.01.2022".

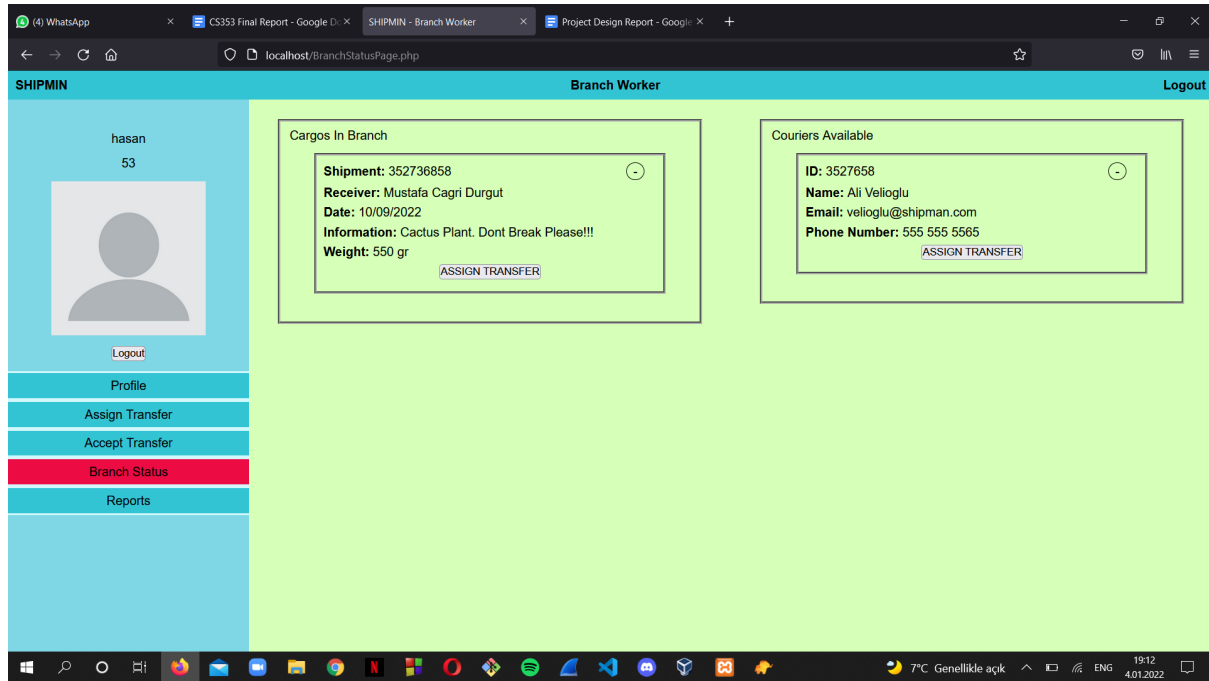
This page is Assign Transfer Page where branch workers can assign new transfers to current shipments in branch and couriers. It also provides canceling option to lately assigned transfers

2.3 Accept Transfer

The screenshot shows the same web application interface as the previous one, but for the "Accept Transfer" page. The sidebar menu has "Accept Transfer" highlighted in red. The main content area is light green and contains a single panel titled "Current Transfers". This panel lists two identical transfer entries. Each entry shows: "Shipment: 3527658", "Departure: Nigde Merkez", "Address: Universiteler Mahallesi Ankara ANKARA", and "Information: Cactus Plant. Dont Break Please!!!". Below each entry are two buttons: "ACCEPTED" and "DECLINED". At the bottom of the panel are two buttons: "ACCEPT ALL" and "DECLINE ALL". The bottom of the screen shows the same Windows taskbar with system information: "7°C Genellikle açık", "ENG", and "19:12 4.01.2022".

This page is the Accept Transfer Page which displays incoming transfers to the branch of the logged in branch worker. Also branch worker can accept or decline these transfers via “ACCEPTED” and “DECLINED” buttons

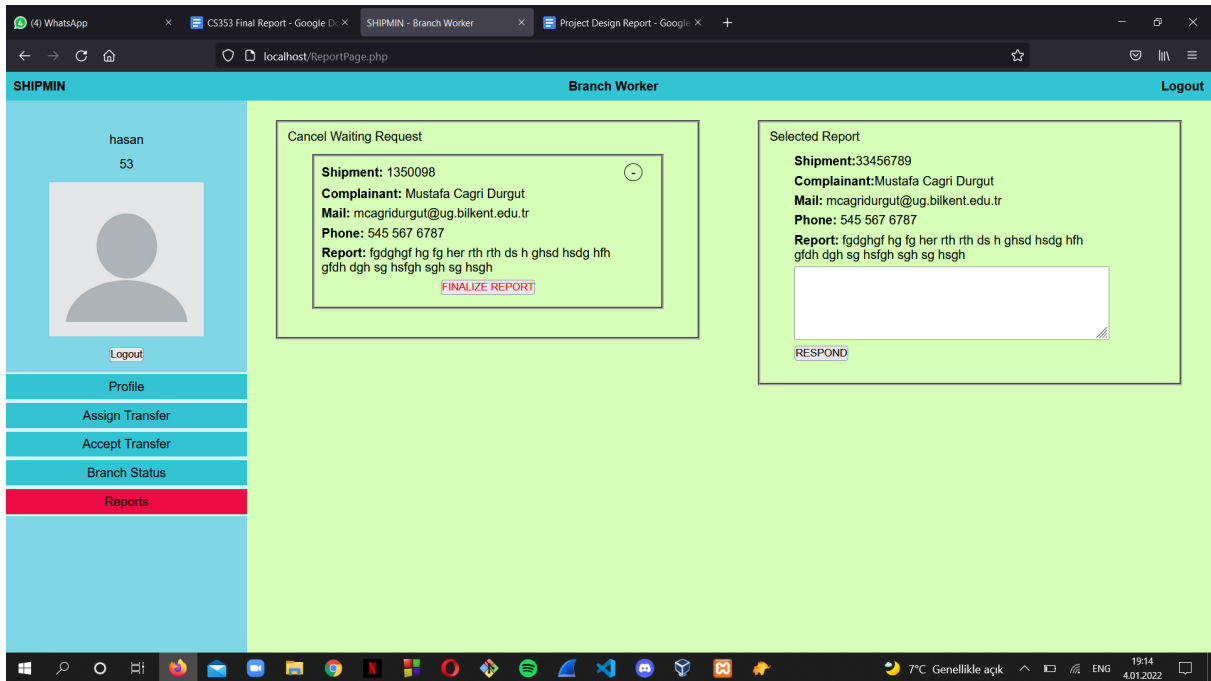
2.4 Branch Status



This page is Branch Status Page which is used for displaying current couriers and cargos exist in branch.

When branch worker clicks on “ASSIGN TRANSFER” button, page will become assign transfer page with spaces in assigning transfer area is filled with necessary information which comes with clicked button.

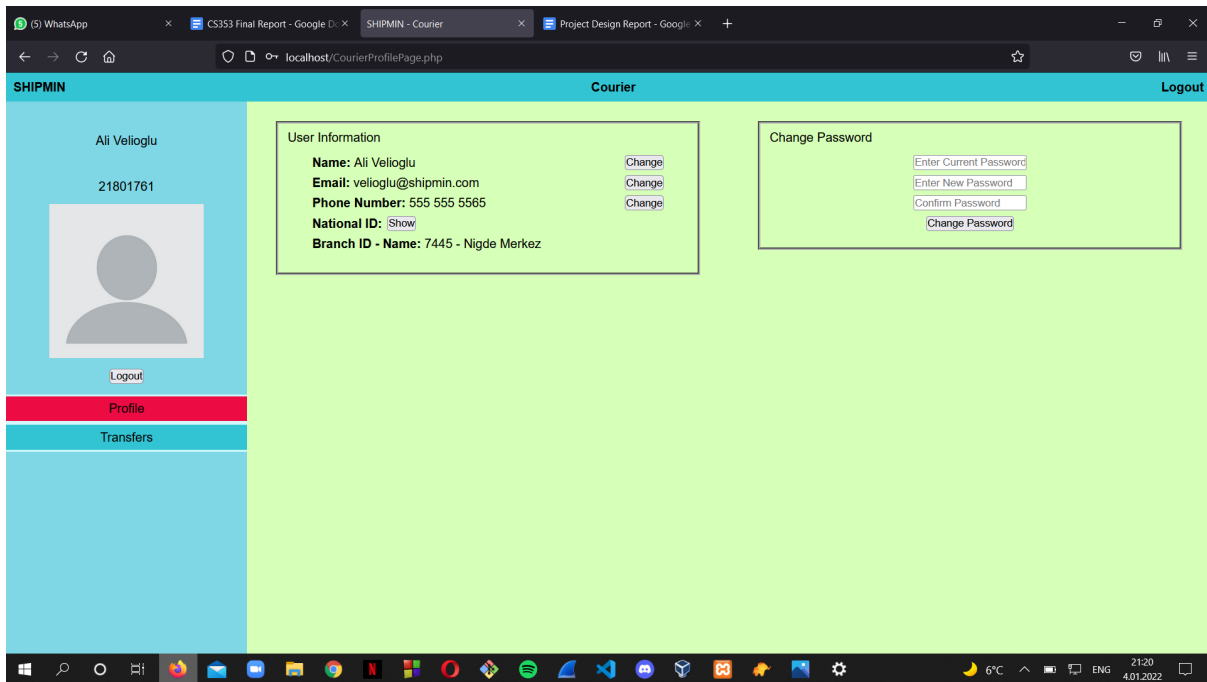
2.5 Reports



This page is Reports Page where branch workers can select among incoming reports and respond to them. When a branch worker clicks on the “FINALIZE REPORT” button, an extended version of that report will appear on the left as seen above. By clicking the “RESPOND” button, branch workers can respond to that report.

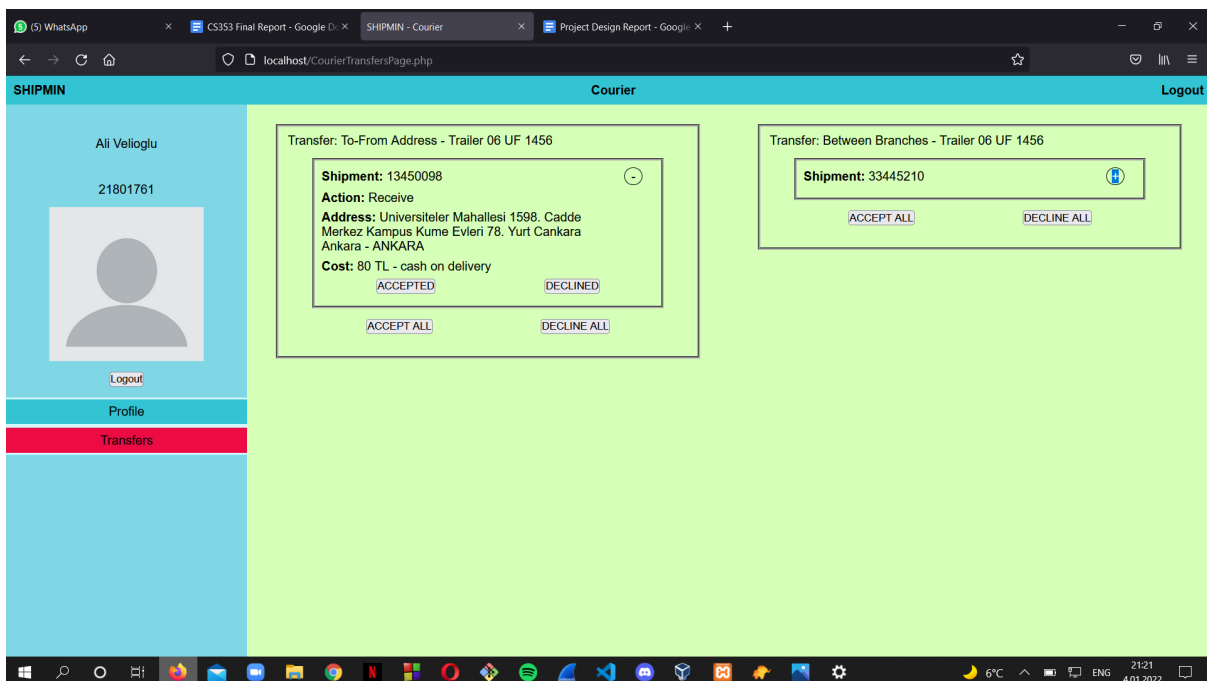
3. Courier:

3.1 Courier Profile Page



This page is the Courier Profile Page, with the help of this page couriers will be able to edit and see their information. They will be able to change their password and switch to other pages.

3.2 Transfers



This page is Courier Transfers Page in which couriers can see the transfer assigned to them which are grouped by their type and cargo trailer. Couriers also accept or decline transfers by using "ACCEPTED" and "DECLINED" buttons. Also the courier can accept or decline all the transfers by using "ACCEPT ALL" and "DECLINE ALL" buttons.

4 Customer service

4.1 Customer Service Profile Page

The screenshot shows a web browser window with the URL `localhost/customerServiceProfilePage.php`. The page has a light blue header with the text "SHIPMIN" on the left, "Customer Service" in the center, and "Logout" on the right. The main content area is divided into three sections:

- Left Sidebar:** Contains the user's name "Mark Brown" and phone number "17612780" above a placeholder profile picture. Below the picture is a "Logout" button. Further down are two buttons: "Profile" (highlighted in red) and "Create Coupons".
- User Information:** A box containing the following details:
 - Name: Mark Brown (with a "Change" button)
 - Email: mbrown@shipman.com (with a "Change" button)
 - Phone Number: 566 665 9065 (with a "Change" button)
 - Branch Phone: 312 665 9065 (with a "Change" button)
 - National ID: [Show](#)
 - Branch ID - Name: 7445 - Nigde Merkez
- Change Password:** A box containing three input fields: "Enter Current Password", "Enter New Password", and "Confirm Password", followed by a "Change Password" button.

The browser's taskbar at the bottom shows various application icons, including WhatsApp, Google Chrome, and a system tray with a clock showing 21:38 on 4.01.2022.

This page is the Customer Service Profile Page. Customer Service employees can change their passwords using that page. They can also switch to other pages and logout from the button on the right top.

4.2 Create Coupons

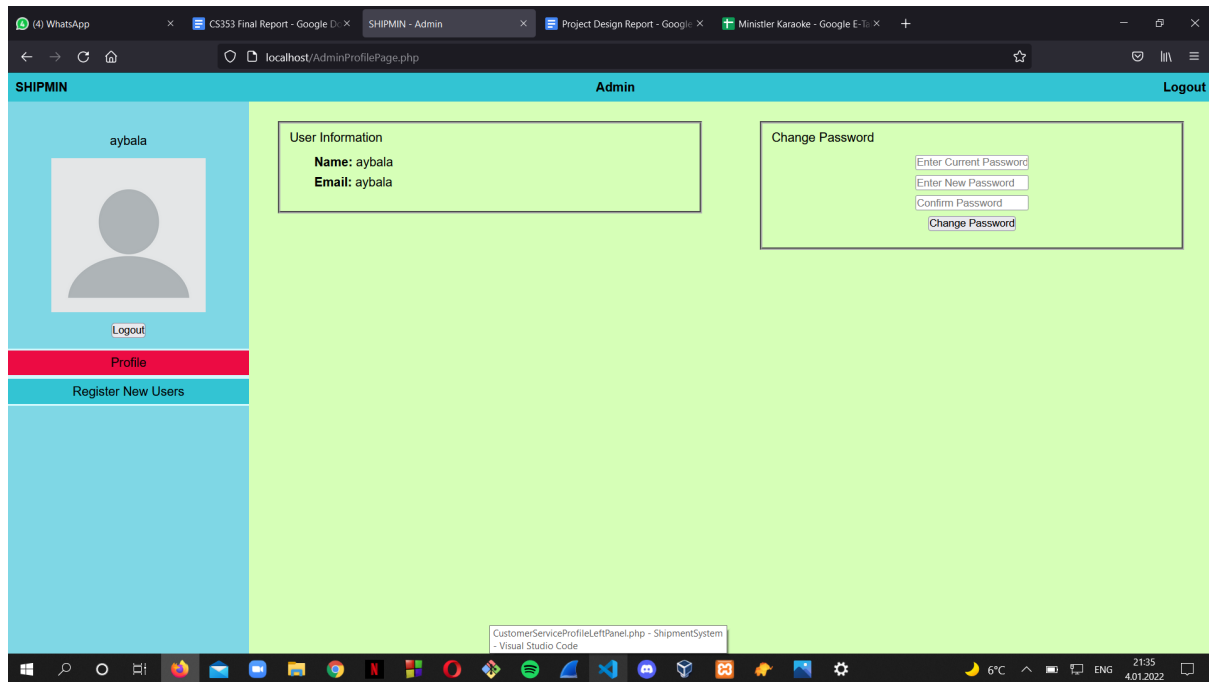
The screenshot shows a web browser window displaying the SHIPMIN Customer Service interface. The browser's address bar shows the URL `localhost/CreateCouponPage.php`. The interface has a light blue header with the text "SHIPMIN" on the left, "Customer Service" in the center, and "Logout" on the right. On the left side, there is a user profile section for "Mark Brown" with the ID "17612780", a placeholder image, and a "Logout" button. Below this is a navigation menu with "Profile" and "Create Coupons" (the latter is highlighted in red). The main content area has a light green background and contains two panels. The "Create Coupon" panel on the left includes a checkbox for "Use Random Available Code", input fields for "Enter Coupon Code" and "Enter Amount", and a "CREATE COUPON" button. The "Unsent Coupons" panel on the right displays a coupon code "GIDE-73JU-5HG3-9JF3" with a refresh icon, an "Amount: 10.00 TL", an input field for "Enter Email to Send", and a "SEND COUPON" button. The Windows taskbar at the bottom shows various application icons, the system clock at 21:29, and the date 4.01.2022.

Customer service employees can create coupons, see unsent coupons and send coupons using this page. To create a coupon, they should enter a coupon code or choose to use a random available code and they should enter the amount.

Then, for a coupon the customer service employee can enter an email address and send the coupon to the email address by pressing the “send coupon” button.

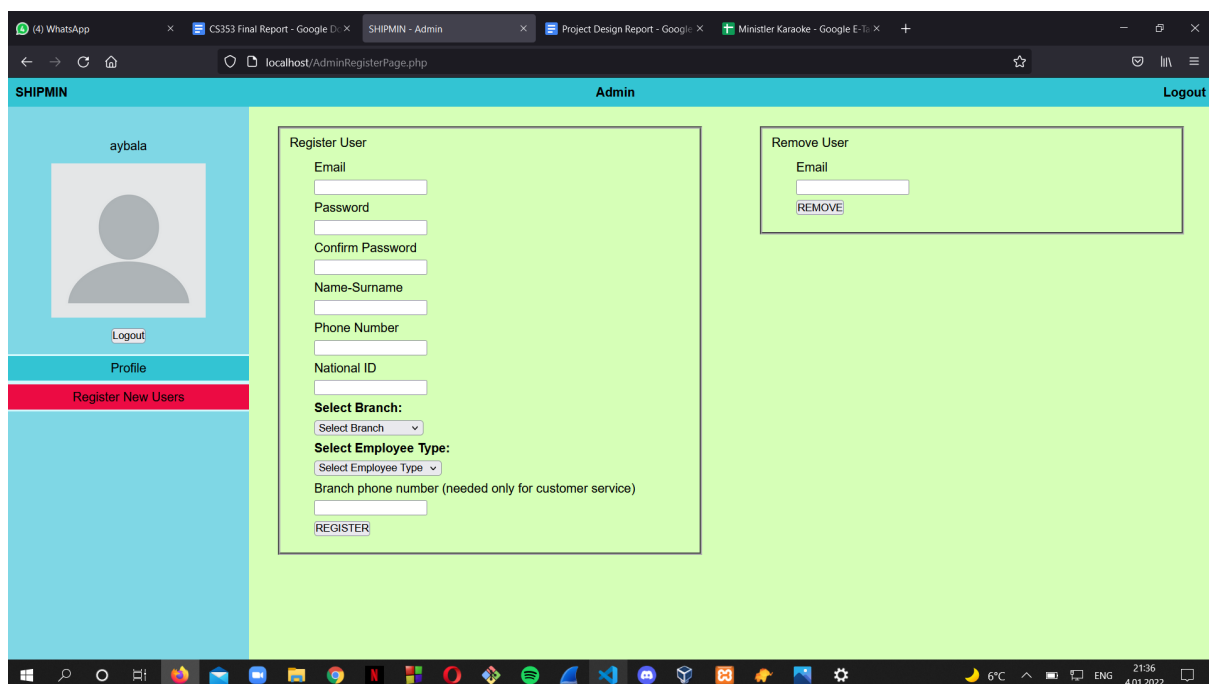
5 Admin

5.1 Admin Profile Page



This page is the Admin Profile Page, with the help of this page the admins will be able to update their information and see their information. They can also switch to other pages.

5.2 Admin Register Page



This page is the Admin Register Page. Admins can register new employees and remove the existing ones using this page. They can also switch to other pages and logout from the button on the right top.

To register an employee, an admin should fill the fields of the form on the left side (email, password, confirm password, name-surname, phone number, national ID) and they should choose a branch and employee type for the employee and click

on the “register” button. Please note that if the employee will be a customer service employee, they should also enter a branch phone number.