

# Setup Document

**ProP**

**Group : ProP-17**

**Date :**

**Version : 0.6**

**Fontys ICT**  
English stream

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## Agreements - made with the client

The team agreed to create a software solution to manage a event. This solution must use a database, a website and applications to manage the event.

# Processes

## Use cases website

**Name:** Create account

**Brief Description:** The user creates a account by opening the website and going to the register page then providing their name, surname, email, password and bank account number. The user is then sent a confirmation email. When the user confirms this email their account will be officially created.

**Actors:**

The user is the visitor of the website.

The system is a website.

**Basic Flow:**

1. User opens website
2. User goes to the register page
3. System asks for name, surname, email, password and bank account number
4. The user provides their name, surname, email, password and bank account number
5. System requires confirmation
6. User provides confirmation
7. The system verifies that the user's email, password, and bank account number are valid
8. The system sends an confirmation email to the user's email
9. User confirms the email
10. The system creates the users account

**Exceptions:**

7.a One or more of the following items that the user provide is not valid: email password and bank account. The use case end.

10.a User doesn't confirm email. The account is not created. The use case ends

**Name:** Log in

**Brief Description:** A user with an account logs in to their account on the website by providing their password and email these are verified by the website. If the password and email are valid the user gains access to their account

**Actors:**

The user is an account owner.

The system is a website.

**Preconditions:** User Created a account or has a temporary account

**Basic Flow:**

1. User Opens the system
2. User goes to login page
3. The system asks for the password and email
4. The user provides their email and password
5. System requires confirmation
6. User provides confirmation
7. The system verifies that the user's email and password is valid

8. The system gives the user access to their account

**Exceptions:**

7.a The email and or password that the user provided is not valid. The use case ends.

**Name:** Log out

**Brief Description:** Logs the user out of the system

**Actors:**

The user is an account owner.

The system is a website.

**Preconditions:** User is logged in

**Basic Flow:**

1. The user selects Log out or closes the system
2. The system logs out of the account
3. The system shows the Home page

**Name:** Buy a ticket

**Brief Description:** The user purchases a ticket on the website by logging into their account and selecting buy ticket . The user receives an email with the ticket and its information.

**Actors:**

The user is the visitor of the website.

The system is a website.

**Preconditions:** User is logged in

**Basic Flow:**

1. User goes to the buy ticket page
2. User selects buy ticket
3. System requires confirmation
4. User provides confirmation
5. System complete the transaction
6. The system sends an email to the user's email with the ticket

**Exceptions:**

5.a There was not enough funds to complete the transaction. The use case ends.

**Name:** Add credits to account

**Brief Description:** User logs in to account and adds credits to their account by providing the amount of credits wanted. The system collects the selected amount from the users bank account. The credits are then added to the user's account.

**Actors:**

The user is an account owner.

The system is a website.

**Preconditions:** User is logged in and User bought ticket for upcoming event

**Basic Flow:**

1. User goes to the profile page
2. The user selects add credits
3. System ask for an amount
4. The user provides a amount
5. The system waits to receive the correct amount from the user's bank account
6. The system adds credits to the user's account

**Exceptions:**

6.a There was not enough funds to complete the transaction. The use case ends.

**Name:** Reserve camping

**Brief Description:** User logs in to account and reserves a camping spot by selecting the spot and specifying the other participants. The user has the option to pay immediately or later.

**Actors:**

The user is an account owner.

The system is a website.

**Preconditions:** User is logged in, the users account is not temporary and User bought ticket for upcoming event

**Basic Flow:**

1. User goes to the profile page
2. The user selects reserve camping spot
3. The system asks the user to select a camping spot and amount of participants
4. The user selects a camping spot and provides the number of participants
5. The system provides the options to pay now or later
6. User selects pay now
7. The system waits to receive the correct amount from the user's bank account
8. System reserves camping spot

**Exceptions:**

7.a There was not enough funds to complete the transaction. The use case ends.

**Alternate flow:**

6.a User selects pay later

**Name:** Leave a review

**Brief Description:** User logs in to account and leaves a review of the event.

**Actors:**

The user is an account owner.

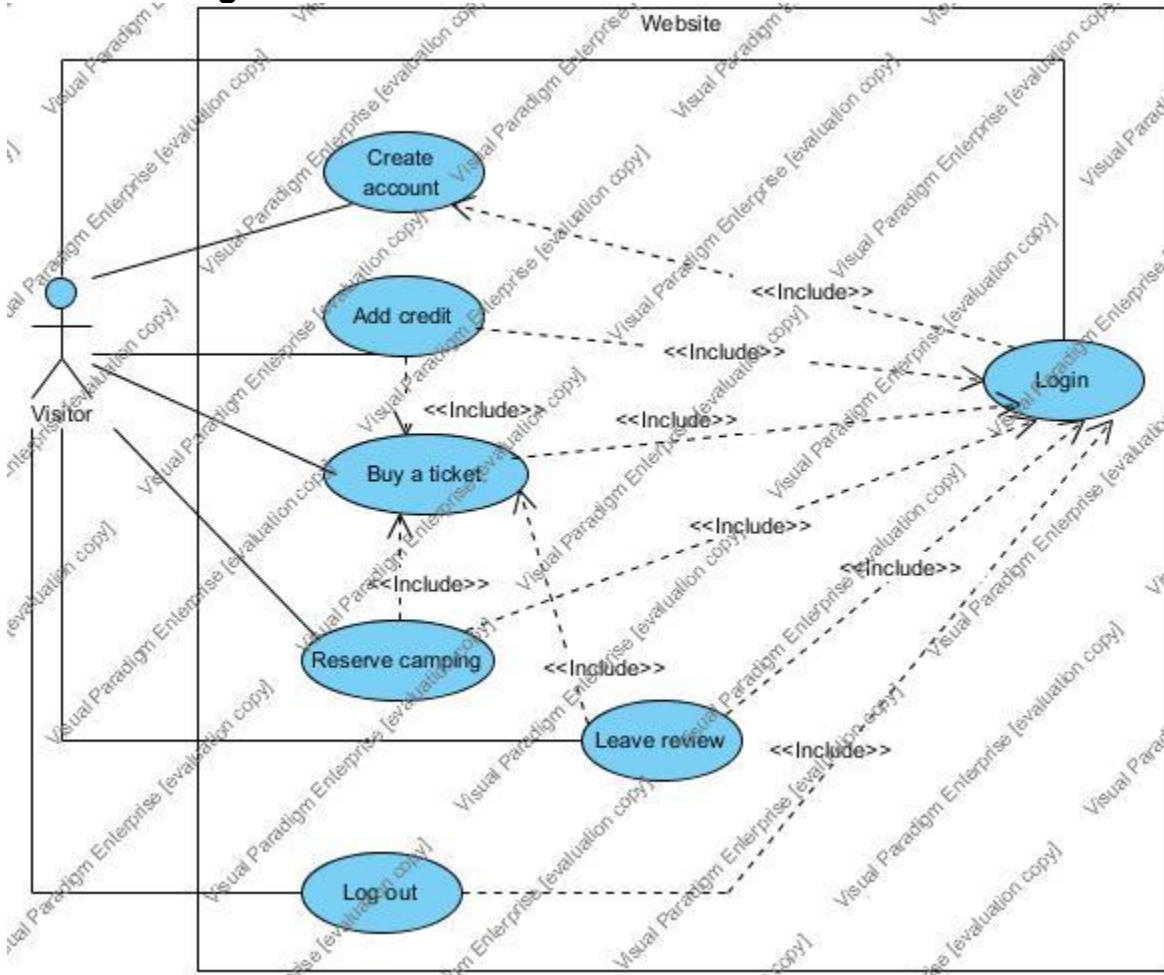
The system is a website.

**Preconditions:** User is logged in and User bought ticket for upcoming event

**Basic Flow:**

1. User goes to review page
2. The user selects to add a review
3. System ask for the review
4. The user provides their review
5. System submits the user's review

## Use case diagram for website



## Use cases for applications

### Log in application

**Name:** Log into the application

**Brief Description:** Logs the user into their employee account

**Actors:**

The user is an event worker that works at the event

The system is the Login the application.

**Basic Flow:**

1. The system waits for an employee number and password
2. The user provides employee number and password
3. The system verifies the employee number and password
4. The system displays the different applications that the user can choose from

5. The user chooses the application

**Exceptions:**

3.a The employee number or password that the user provided is not valid. The system displays that they are not valid. The use case ends

## **For all other use cases for applications, the user must Log into the application**

**Name:** Log out of employee account

**Brief Description:** Logs the user out of the system

**Actors:**

The user is an event worker that works at the event

The system entire application.

**Basic Flow:**

4. The user selects Log out or closes the system
5. The system logs out of the account

### **Administration application**

**Name:** Add employee account

**Brief Description:** Creates a new employee account with the position and employee number provided by the user

**Actors:**

The user is an event worker that has an administrative account

The system is the Administration application.

**Basic Flow:**

1. The user selects add employee
2. The system waits for the user to provide an employee number and position
3. The user provides employee number and position
4. The system verifies that the employee number is unique
5. The system creates the account

**Exceptions:**

4.a The employee number provided by the user is not unique. The use case ends.

**Name:** Remove employee account

**Brief Description:** Deletes the selected employee account

**Actors:**

The user is an event worker that has an administrative account

The system is the Administration application.

**Basic Flow:**

1. The user selects remove employee account
2. The system waits for the user to provide the employee number of the employee
3. The user provides employee number
4. The system verifies that the employee number belongs to an employee and displays the employee's information
5. The system asks for confirmation to remove the account



6. The user gives confirmation

**Exceptions:**

4.a The provided employee number doesn't belong to an employee account. The use case ends

**Alternate flow:**

6.a The user does not give confirmation. The use case ends

**Name:** Edit employee account

**Brief Description:** Allows the user to select an employee account and change its settings

**Actors:**

The user is an event worker that has an administrative account

The system is the Administration application.

**Basic Flow:**

1. The user selects edit employee account
2. The system waits for the user to provide the employee number of the employee
3. The user provides employee number
4. The system verifies that the employee number belongs to an employee and displays the employee's information
5. The system displays the employee's current settings
6. The user edits the settings
7. The system saves the changes to the settings

**Exceptions:**

4.a The provided employee number doesn't belong to an employee account. The use case ends

## Entrance application

**Name:** Scan ticket

**Brief Description:** The user scans the QR code and the system determines if the QR code is valid. The system displays whether the QR code is valid or not

**Actors:**

The user is an event worker that works at the entrance of the event

The system is the entrance application.

**Basic Flow:**

1. The system waits for a QR code to be scanned
2. User scans QR code
3. The system verifies that the QR code belongs to a valid ticket that has not already scanned
4. System displays that the ticket is valid

**Exceptions:**

3.a The QR code does not belong to a valid ticket or the ticket has already been scanned. The System displays that the ticket is not valid. The use case ends.

**Name:** Sell a ticket

**Brief Description:** User provides email to the system. The system then generates a secure password and sends the password to the provided email. This is a temporary account it expires a couple days after the event.

**Actors:**

The user is an event worker that works at the entrance of the event  
The system is the entrance application.

**Basic Flow:**

1. The user provides the email of the person buying a ticket
2. The system verifies that the provided email is valid
3. The system generates a secure password and sends the password
4. The system provides confirmation that purchasing the ticket was a success

**Exceptions:**

2.a The email that was provided by the user was not a valid email address. The use case ends.

**Name:** Link RFID chip

**Brief Description:** The system links the unique value of the RFID chip to the account of the selected ticket number

**Actors:**

The user is an event worker that works at the entrance of the event  
The system is the entrance application.

**Preconditions:** A ticket has been scanned or a ticket was just bought

**Basic Flow:**

1. The user selects link chip
2. System links the unique value of the RFID chip to the account of the ticket that was scanned or bought
3. The system gives confirmation that the chip was programmed successfully

**Alternate flow:**

3.a The system says that the chip programming was unsuccessful.

## Entrance at camping application

**Name:** Check if group paid

**Brief Description:** The user provides the account by scanning the RFID chip. The system then checks if the camping spot still needs to be paid for and if so calculate and display the to be paid amount.

**Actors:**

The user is an event worker that works at the entrance of the camping spots  
The system is the camping application.

**Basic Flow:**

1. The user provides the visitors RFID chip
2. The system reads the provided RFID chip
3. The system verifies that the provided account has reserved a camping spot
4. The system verifies that the camping spot still needs to be paid for
5. The system calculates the amount needed to be paid
6. The system displays the amount that needs to be paid

**Alternate flow:**

4.a The camping spot has already been paid for. The system displays that it has already been paid for. The use case ends.

## Shop application

**Name:** Sell an item

**Brief Description:** The user selects item(s) the system then calculates the total price. The user then provides an account by scanning the RFID chip. The system then checks if there is enough funds to purchase the selected items and if so lower the credits by that amount.

**Actors:**

The user is an event worker that works the shops at the event

The system is the shop application.

**Basic Flow:**

1. The user selects the item(s) that the visitor requested
2. The system calculates and displays the total price of the item(s)
3. The user provides the visitors RFID chip
4. The system reads the provided RFID chip
5. The system verifies that the provided account has enough event credits to purchase the item(s)
6. The system lowers the credits of the provided account by the total price of the items
7. The system generates and provides a receipt

**Exceptions:**

5.a The provided account does not have enough credits to pay for items. The system displays that there are not enough funds to complete the transaction. The use case ends.

## Loan stand application

**Name:** Loan items

**Brief Description:** The user selects an item(s) the system then calculates the total price. The user then provides an account by scanning the RFID chip. The system then checks if there are enough funds to loan the selected items and if so lower the credits by that amount and put the loaned items on the provided account.

**Actors:**

The user is an event worker that works at the loan stand at the event

The system is the loan stand application.

**Basic Flow:**

1. The user selects the item(s) that the visitor requested
2. The system calculates and displays the total price of the item(s)
3. The user provides the visitors RFID chip
4. The system reads the provided RFID chip
5. The system verifies that the provided account has enough event credits to loan item(s)
6. The system lowers the credits of the provided account by the total price of the loaned item(s)
7. The system adds loaned items to provided account
8. The system generates and provides a receipt

**Exceptions:**

5.a The provided account does not have enough credits to pay for items. System displays that there are not enough funds to complete the transaction. The use case ends.

**Name:** Return loaned items

**Brief Description:** The user provides an account by scanning the RFID chip. The system then checks if there are any loaned items on the account and if so displays the items

**Actors:**

The user is an event worker that works at the loan stand at the event

The system is the loan stand application.

**Preconditions:** Visitor has loaned items

**Basic Flow:**

1. The user provides the visitors RFID chip
2. The system reads the provided RFID chip
3. The system displays all of the items loaned by the provided account
4. User collects items
5. The system marks the items on the provided account as returned

## Exiting application

**Name:** Check out

**Brief Description:** The user provides an account by scanning the RFID chip. The system then checks if there are any loaned items on the account if there are it displays the items. It also checks there is still credits on the account and if there are it displays the amount that needs to be returned. The provided account is then marked invalid.

**Actors:**

The user is an event worker that works at the exit of the event

The system is the exit application.

**Preconditions:** Visitor has entered the event

**Basic Flow:**

1. The user provides the visitors RFID chip
2. The system reads the provided RFID chip
3. The system checks the balance of the provided account
4. The system displays the amount to be returned
5. The system verifies that there are no loaned items on the provided account
6. The system marks the provided account as invalid

**Alternate flow:**

5.a There are loaned items on the provided account. The system displays the loaned items.

## Status application

**Name:** Update status

**Brief Description:** The user request to update the status of the application. The system then retrieves the data from the database and displays the updated status.

**Actors:**

The user is an event worker

The system is the status application.

**Basic Flow:**

1. The user selects show info
2. The system displays the update data it retrieves from the database

## Convert transaction-log-file application

**Name:** Convert

**Brief Description:** The user provides a transaction-log-file. The system then extracts the information from the file and updates the database.

**Actors:**

The user is an event worker

The system is the transaction-log-file converter application.

**Preconditions:** Visitor has entered the event

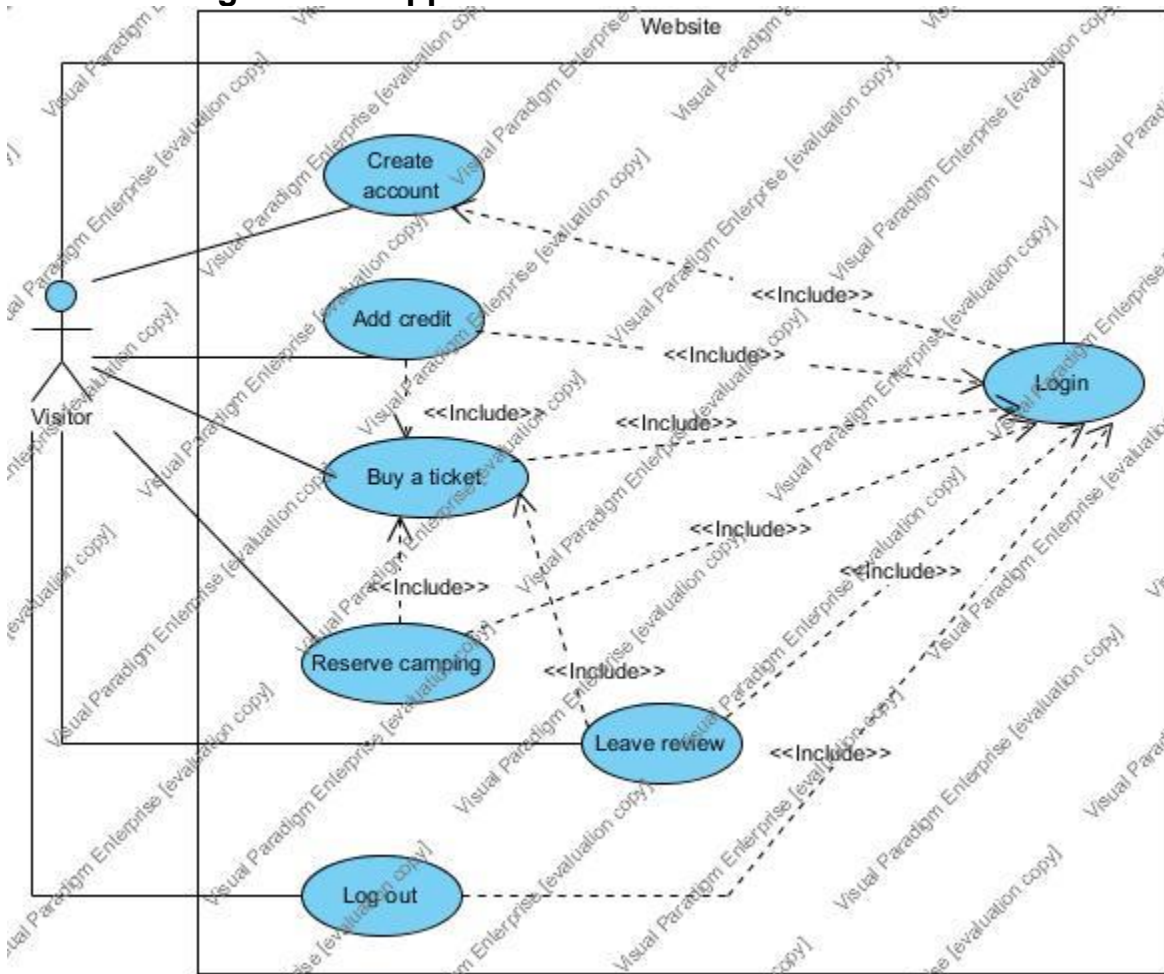
**Basic Flow:**

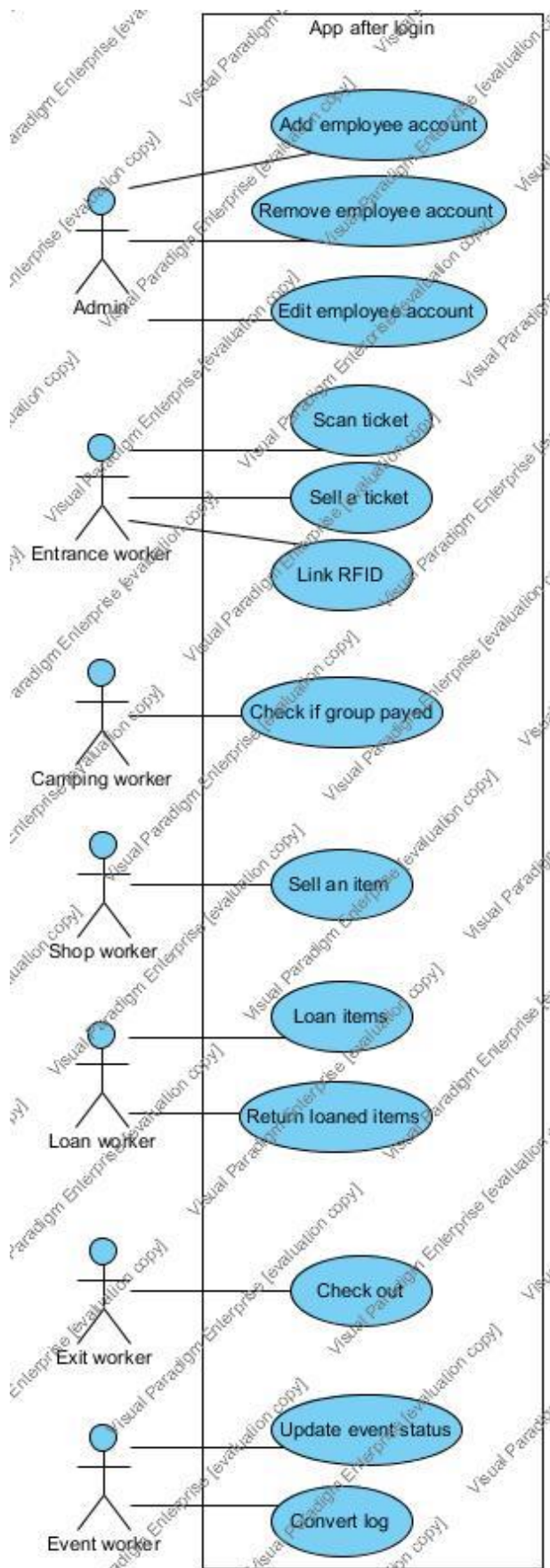
1. User provides transaction-log-file
2. The system verifies the provided file is valid
3. The system transfers the information from the text file to the database
4. System displays that the information was transferred successfully

**Alternate flow:**

4.a The system displays that the information transfer was unsuccessful

## Use case diagrams for applications







# Functional requirements

## Website

Must:

- Allow a person to buy a ticket to the event
- Allow account owners to reserve camping
- Allow account owners to add credits to their account
- Display information about the event
- Allow account owners to log in and out of their account

Should:

- Display contact information
- Allow a person to buy multiple tickets

Could:

- Display the answers to frequently asked questions
- Allow account owners to leave a review of the event
- Display the events review
- Support mobile devices

## Applications

Must:

- Show if the scanned ticket is a valid ticket
- Create a new temporary account with the provided email
- Program RFID chip
- Read RFID chip
- Lower the credits of the provided account by the total price of the items
- Check if account has reserved a camping spot and if it's paid for
- Calculate the to be paid amount for the camping spot
- Lower the credits of the provided account by the total price of the loaned items and adds loaned items to account
- Mark the item(s) on the provided account as returned
- Check that there are no loaned items on the provided account
- Show the amount of money that needs to be returned when exiting event
- Mark the provided account as invalid when exiting event
- Show status of the event

- Convert the information in transaction-log-file to database
- Generate receipt

Should:

- Allow employees to log in to get access to the applications they have access to
- Allow an administrator to add, edit or remove employee accounts
- Send receipt to the email
- Have a nice overview of items in shops and loan stands

Could:

- Support touch screen
- Allow administrator to view the activity of a particular employee
- Be able to refund items bought at the shops
- Calculate how much money should be returned when buying a ticket at the entrance
- Be able to add notes to food or beverages such as “no pickles on the hamburger”



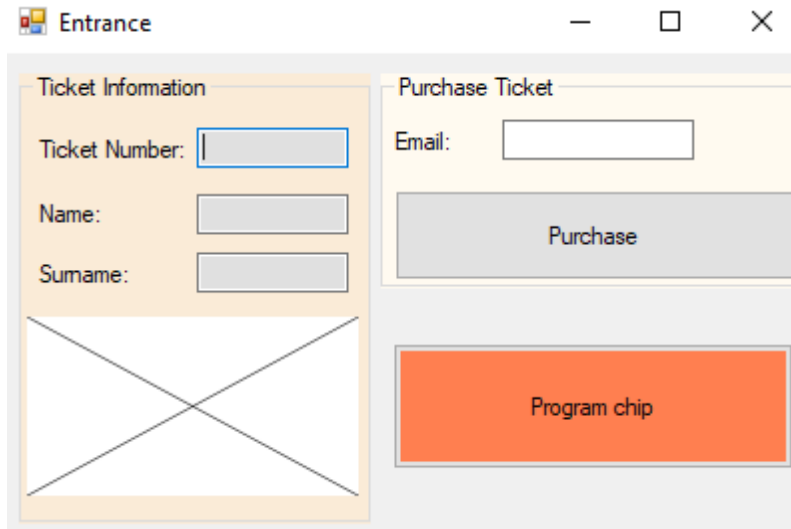
## Graphical user interface

The light grey text boxes are read-only.

The white text boxes are read and type.

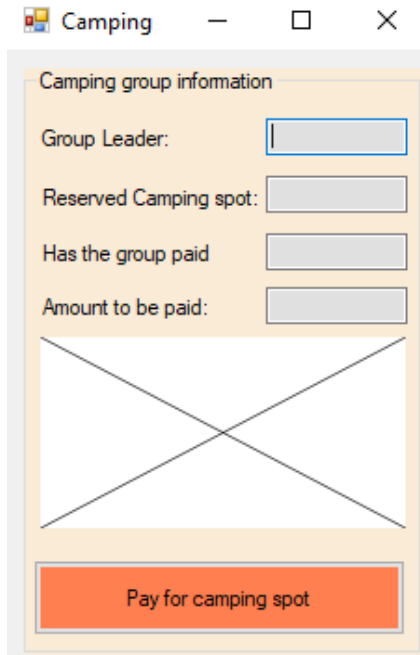
The white box with a cross is a picture box.

### Entrance application:



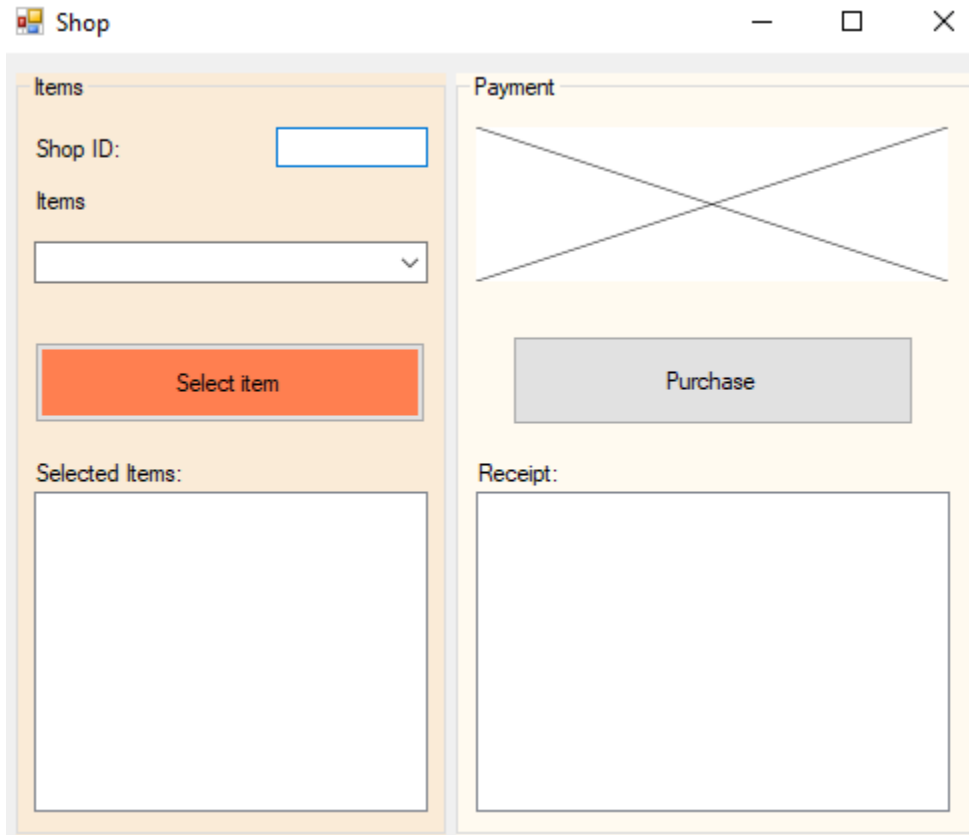
The picture box first show waiting then when a code is scanned the ticket number, name, and surname text boxes are filled in if the code is valid. If not it displays that the code is not valid in the picture box. The user fills in the email text box and clicks purchase. A ticket is then purchased with that email. When the program chip button is pressed the RFID chip is then programmed.

## Camping application:



The picture box shows waiting until an RFID chip is scanned. When a chip is scanned the above text boxes are filled if the account reserved a camping spot if not the picture box displays that there is no reservation on that account. When the pay for camping spot button is pressed the database is updated.

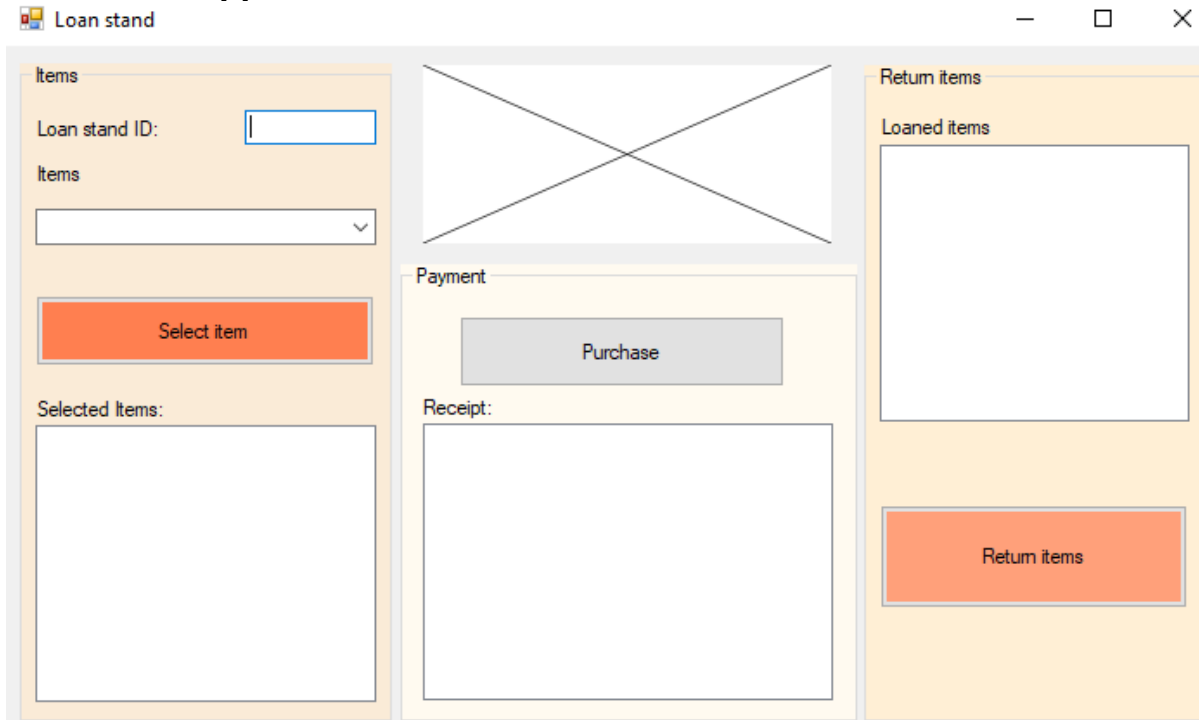
## Shop application:



The image shows a software window titled "Shop" with standard window controls (minimize, maximize, close). The window is divided into two main vertical panels. The left panel, titled "Items", contains a "Shop ID:" label followed by a text input box, an "Items" label followed by a dropdown menu, an orange "Select item" button, and a "Selected Items:" label followed by a large empty list box. The right panel, titled "Payment", contains a large rectangular area with a diagonal cross, a grey "Purchase" button, and a "Receipt:" label followed by a large empty list box.

The user fills in the ID of their shop in the text box. The user uses a combo box to pick an item and presses the select item button to select it. The selected items are displayed in the list box. The picture shows waiting until an RFID chip is read, the user can then press the purchase button to complete the transaction. The receipt of the transaction is then shown in a list box.

## Loan stand application



The image shows a software application window titled "Loan stand". The window has a standard Windows-style title bar with minimize, maximize, and close buttons. The main interface is divided into several sections:

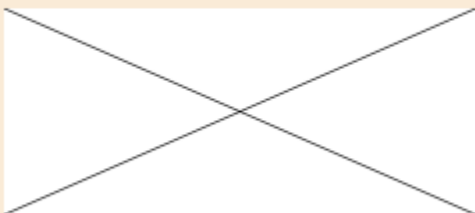
- Items section (top left):** Contains a "Loan stand ID:" label followed by a text input box. Below it is an "Items" label followed by a dropdown menu. At the bottom of this section is a "Selected Items:" label followed by a large empty list box.
- Payment section (center):** Features a large rectangular area with a diagonal cross, likely representing a camera or sensor. Below this is a "Purchase" button.
- Receipt section (bottom center):** Labeled "Receipt:" followed by a large empty list box.
- Return items section (right):** Labeled "Return items" at the top, followed by a "Loaned items" label and a large empty list box. At the bottom of this section is a "Return items" button.

The user fills in the ID of their Loan stand in the text box. The user uses a combo box to pick an item and presses the select item button to select it. The selected items are displayed in the list box. The picture shows waiting until an RFID chip is read, the user can then press the purchase button to complete the transaction. The receipt of the transaction is then shown in a list box. When the RFID chip is read the return items list box then displays all items currently loaned by that visitor. The user selects the items to return and then presses the return items button to return the items.

## Exit application

Exit event

Exit check



Ticket number:

Amount to be returned:

Loaned items

The picture box shows waiting until an RFID chip is scanned. The ticket number, amount to be returned are displayed in text boxes and the loaned items are shown in a list box.

## Status application

Visitor information

Total visitors:

Total balance of all visitors:

Total money spent:

Ticket number:

Find visitor info

Visitor status

Visitor history

Camping

Amount of booked camping spots:

Amount of free camping spots:

Amount earned per shop

Shop ID:

Amount earned:

Find shop

Amount earned per product

Product ID:

Amount earned:

Find product

The application retrieves the data from the database and fills in the text boxes and list boxes. For the specific information such as the amount earned per product, an ID is filled into the text boxes and when the button is pressed it finds the data and displays it in a list box or text box.

## Convert application

Convert file

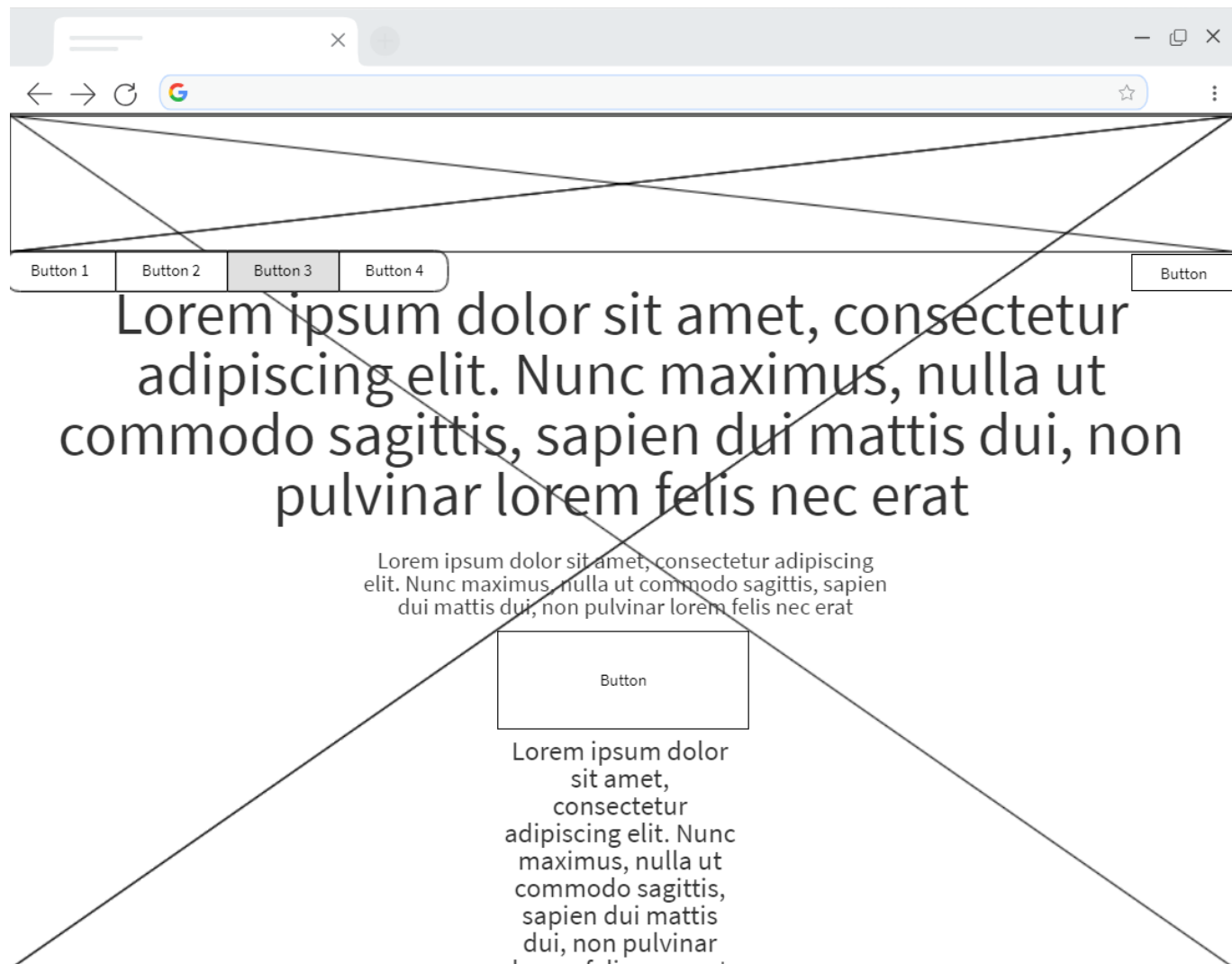
Insert transaction-log file:

Convert

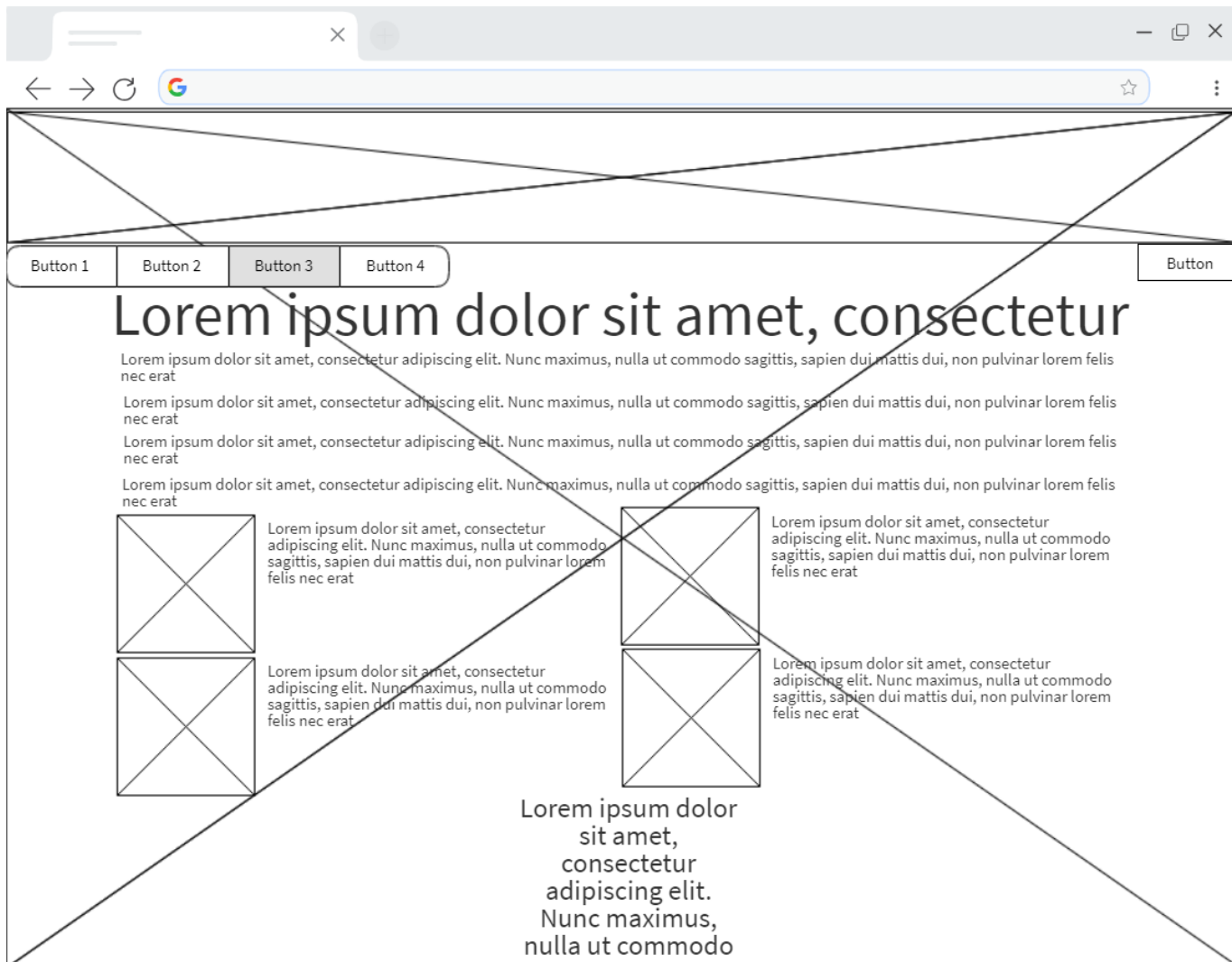
The user provides a transaction log file and presses the convert button to convert the file.

# Website wireframe

## Home page



## About us page





## Buy a ticket page

Button 1 Button 2 Button 3 Button 4 Button

# Lorem ipsum dolor sit amet, consectetur

## Buy a Ticket

First Name

Last Name

Email

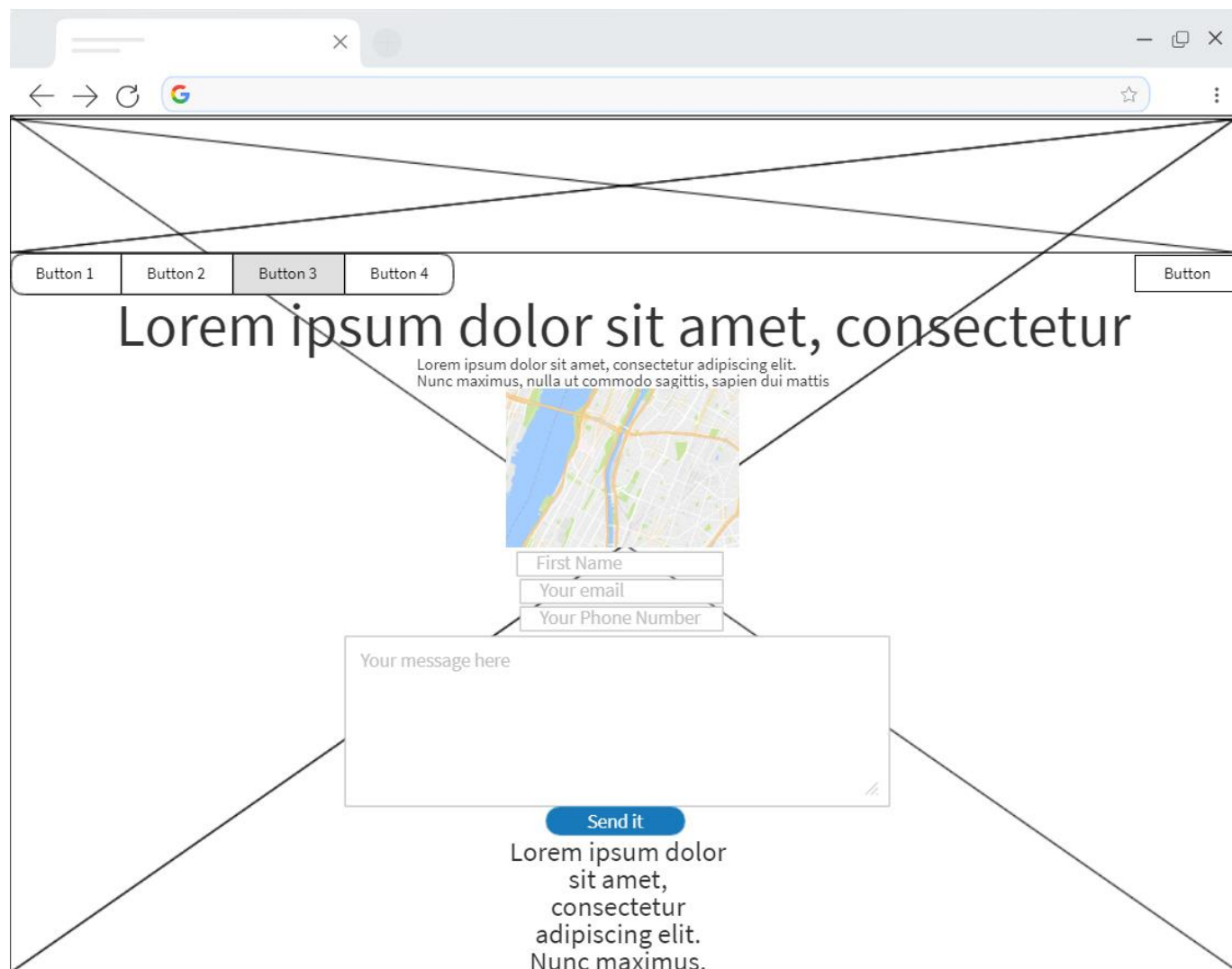
Password

IBAN

Confirm

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Nunc maximus, nulla ut commodo sagittis, sapien dui mattis dui, non pulvinar

## Contact us wireframe page

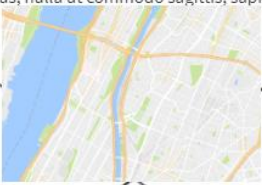


A wireframe of a contact us page. The page is enclosed in a browser window with a search bar and navigation icons. The main content area features a header with four buttons labeled 'Button 1', 'Button 2', 'Button 3', and 'Button 4'. Below the buttons is a large heading 'Lorem ipsum dolor sit amet, consectetur' followed by a paragraph of Lorem Ipsum text. A map image is positioned below the text. Below the map are three input fields labeled 'First Name', 'Your email', and 'Your Phone Number'. A large text area labeled 'Your message here' is below the input fields. A blue 'Send it' button is positioned below the message area. Below the button is another paragraph of Lorem Ipsum text. A diagonal line crosses the entire page content area.

Button 1 Button 2 Button 3 Button 4 Button

# Lorem ipsum dolor sit amet, consectetur

Lorem ipsum dolor sit amet, consectetur adipiscing elit.  
Nunc maximus, nulla ut commodo sagittis, sapien dui mattis



First Name  
Your email  
Your Phone Number

Your message here

Send it

Lorem ipsum dolor  
sit amet,  
consectetur  
adipiscing elit.  
Nunc maximus.

## Login page

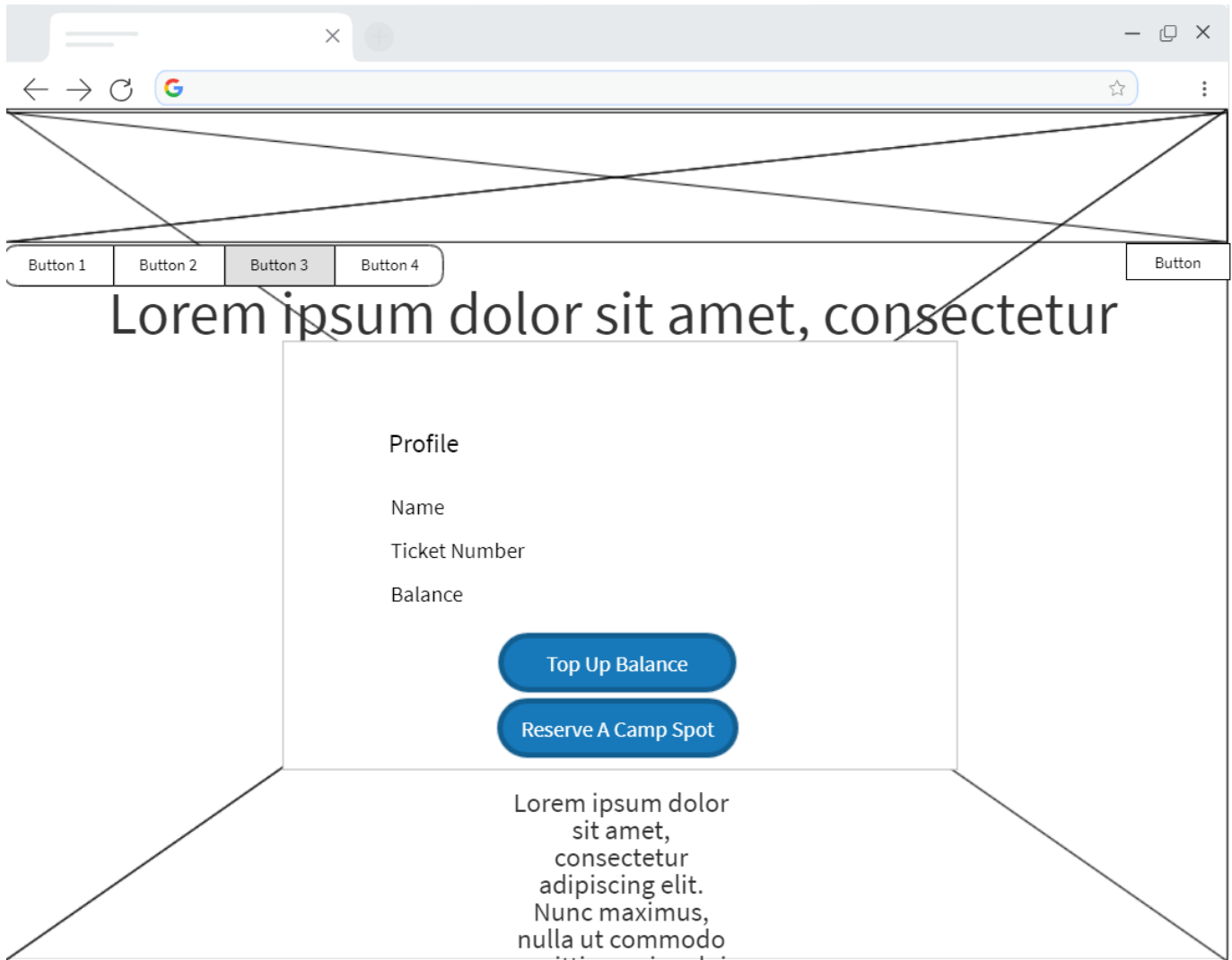
Button 1 Button 2 Button 3 Button 4 Button

# Lorem ipsum dolor sit amet, consectetur

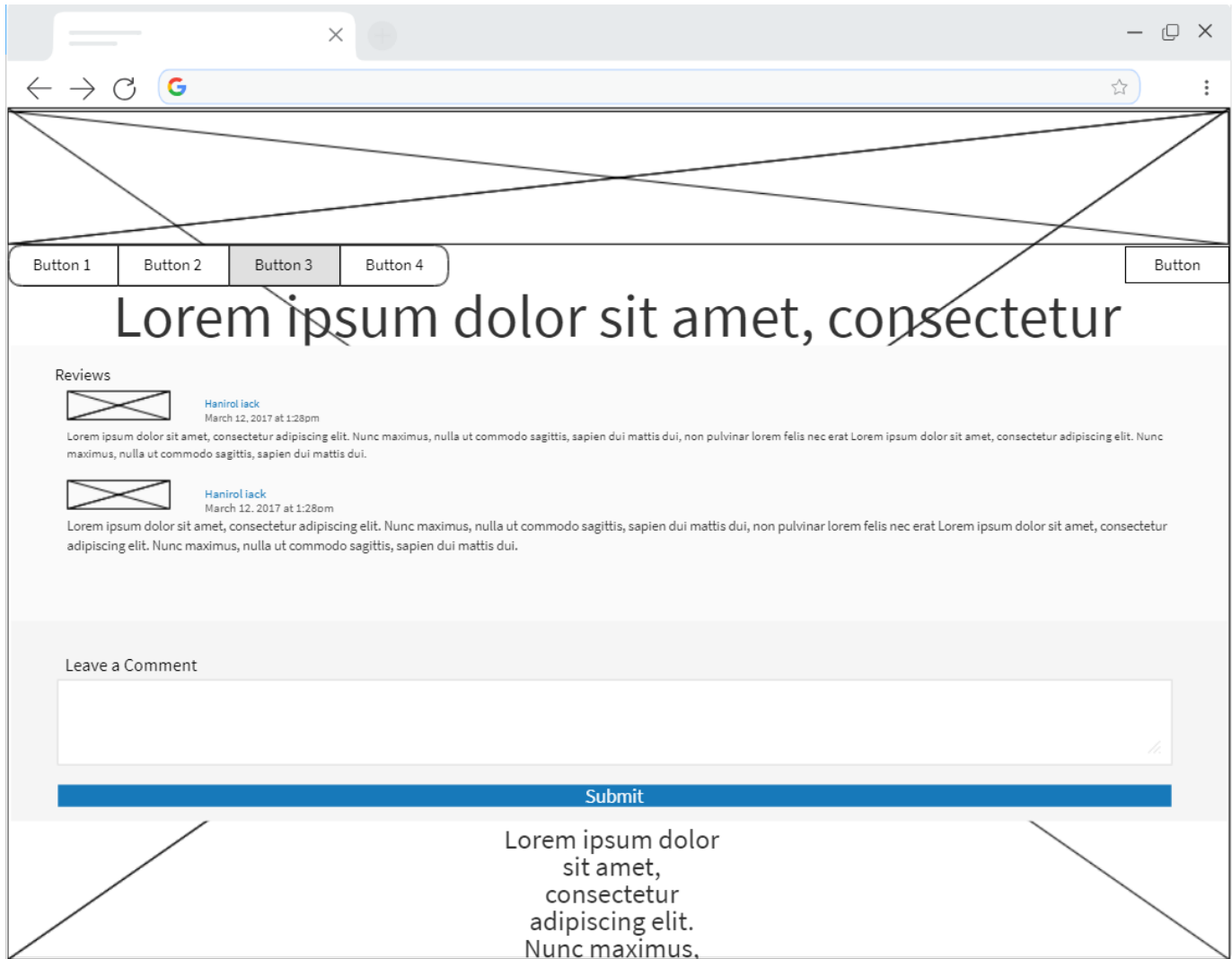
### Log In

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Nunc maximus, nulla ut commodo sagittis, sapien dui mattis dui, non pulvinar

## Profile page



## Review page



# Entity relationship diagram

