

# **Tell'all Requirements Specification**

**Version 2.1**

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# 1. Executive Summary

## 1.1 *Project Overview*

Nowdays, with all the technology we have, is important to spread the information and automatization in order to help everyone in daily life. Our country faces many problems in businesses, education system, transportation and employment, but what caught our eye is that public transportation is very informal and people that travel everyday from one city to another find it very stressful.

So, our idea is to build up a system that helps Municipality of Tirana and other cities, drivers, administrators and most importantly everyone who need transportation. The national transportation with buses in our country is in a bit of a chaos. There is very little automation which creates difficulties in organizing the system. This is the reason we found it logical to create a software that addresses that.

The information people have about buses that travel from city to city is limited and comes from word-of-mouth. That is what our project aims to resolve. We want to create a software where municipality manages employees, drivers and help people to get information about timetables, destinations, buses used, travel agencies and everything else. Besides information, the most important element is ticket reservation. Travelers can enter our software to buy tickets, know their reserved seat and choose their leaving and returning time. Each economic transaction goes directly to the economist account.

## 1.2 *Purpose and Scope of this Specification*

The purpose of this specification is to currently define the state of the application design and documentation of the processes.

In this scope:

- Documentation of the features
- Technical overview of application processes (discussed in Part 2.1)
- Components & Functional/non-functional requirements (discussed in Part 3)
- Use cases/scenarios (discussed in Part 4)
- Constraints (discussed in Part 2.4/5) of the Document
- *Legislative requirements for the product*

## 2. Product/Service Description

### 2.1 Product Context

Tell-All is a software that helps Municipality of Tirana and other cities, drivers, administrators and most importantly everyone who need transportation. The information people in Albania have about buses that travel from city to city is limited and comes from word-of-mouth. That's why we will create a software where municipality manages employees, drivers and help people to get information about timetables, destinations, buses used, travel agencies and everything else. Every citizen as well, will have the opportunity to find the schedules in a short time and reserve their ticket. Travelers can enter our software to buy tickets, know their reserved seat and choose their leaving and returning time. Each economic transaction goes directly to the economist account.

### 2.2 User Characteristics

1. **Manager**, which represents Municipality, or the person who is responsible for Public Transportation. This user will have access to the whole system and to all other users, can check them and their work, will also be responsible to make transparent everything that is going on with the system. Manager will specifically assign the administrators and can also edit other accounts in the system.
2. **Administrator**, actually there will more than one. Since Albania is divided in 12 counties, we thought that would the best choice to have 12 administrators who will monitor all the lines in their municipalities (61), if there will be a need, we are going to give each administrator the credit to have a subadmin. The administrator is responsible to register/add/delete/edit other employees and monitor their work and the system as well.
3. **Economist**, which is register by the manager. The economist will be send the same reports to administrators and manager. He will be responsible for any kind of transaction, also will be the one than monitor and take care of online payments.
4. **Employee**, is going to be the user which include drivers, each of them should check in as soon as they left a station and check out when they arrive. This user can also be used for other employees that we have think about, they might be receptionist or other workers in the big stations like Tirana Terminal.
5. **Guest** will be each traveler that wants to travel and except they want to get information in the system, they want to reserve a place or/and pay online for the ticket.

### 2.3 Assumptions

We assume that the client is verified when entering our app through their ID number in order to be eligible as a client. Our software has the main function of seat reservation for national traveling, among other functions. It is assumed that the business workers update the system

with timetables, destinations, prices and seats. It is assumed the economist manages payments and economic reports. It is assumed the mayor's office oversees the whole process and makes sure it works according to regulations. It is assumed the app is not only useable, but efficient and effective as well.

## **2.4 Constraints**

- The only possible constraint for our Web Application is the necessity of an electronic device connected to the web that will be needed to access our application and an account that needs to be created by every user in order to make a reservation. With 1.8 million active internet users in Albania as of 2016, we believe that accessing our web application will not be a struggle for our users.
- Creating a user friendly interface will play a very important role knowing who our potential users will be.

## **2.5 Dependencies**

- As a Web-based Application, Internet access will be essential for our software to run. It should be constant and the Internet provider would be a good one with high speed.
- All the users and employees must have a smart device, which usually is a smartphone or other devices that have an internet connection.
- All administrator accounts will be created only by Manager (Direct Representative of Municipality).
- Other users will be monitored by administrators, especially drivers.
- System will be responsibility of Municipality and will be adapted though time, if the board of Municipality decide new adjustments.

## 3. Requirements

### 3.1 Functional Requirements

The following table shows all function requirements for our Software:

Req#	Requirement	Comments	Priority	Date Reviewed	SME Reviewed/ Approved
UR_01	Every user has a unique account secured by a password.	Account will be stored in a database using hashing techniques.	1	4/21/2020	Megi Kongjinaj
UR_02	The main manager can create other manager's accounts and employees.	The main manager can access all accounts regarding to managers and employees	2	4/21/2020	Megi Kongjinaj
UR_03	Other managers can create the employees accounts with the permission of the main manager.	Other managers can not create employees accounts without the verification code.	2	4/21/2020	Megi Kongjinaj
UR_04	The main manager can access clients' accounts only with the permission of the admin.	The main manager must receive the verification code to process the clients' accounts.	1	4/21/2020	Megi Kongjinaj
UR_05	The main manager has access to other managers and employees databases.	There is a list with the respective details	1	4/21/2020	Megi Kongjinaj
UR_06	The manager is in charge of updating accounts for each of the employees.	This is represented in the Employees List view.	1	4/21/2020	Megi Kongjinaj
UR_07	The manager should be able to delete employees that are no longer part of the company.	He can change information or delete their accounts.	2	4/21/2020	Megi Kongjinaj
UR_08	When creating employees, the manager will need different fields where they will input employee/client information.	The field includes required info and validation after filled in	1	4/21/2020	Megi Kongjinaj
UR_09	The main manager keeps track of other managers and employees' performance.	If they have fulfilled their daily, weekly, monthly and yearly hours.	2	4/21/2020	Megi Kongjinaj
UR_10	The main manager is always in charge.	If the admin isn't present, the main	1	4/21/2020	Megi Kongjinaj

		manager is the only one who can do his job.			
UR_11	The main manager is able to check the task history of every manager and employee.	Their list will be displayed and the tasks they have completed.	2	4/21/2020	Megi Kongjinaj
UR_12	The economist has a unique account secured by a password.	The account will be stored in a database.	1	4/21/2020	Megi Zaimaj
UR_13	The economist has access to daily reservations.	This includes the client IDs and their payments.	1	4/21/2020	Megi Zaimaj
UR_14	The economist is responsible for entering costs.	He updates the system any time costs are paid.	2	4/21/2020	Megi Zaimaj
UR_15	The economist can access past balances at any time.	Past balances consist of every month's sales, costs and profit.	2	4/21/2020	Megi Zaimaj
UR_16	The economist registers and accesses future investments.	He uploads the system with every plan made and payment necessary.	2	4/21/2020	Megi Zaimaj
UR_17	The economist keeps in contact with the managers.	He gathers information and gets permission.	1	4/21/2020	Megi Zaimaj
UR_18	The economist discusses financial decisions with the management.	Each party considers the other's opinion before making a decision.	1	4/21/2020	Megi Zaimaj
UR_19	The administrator accepts every guest who wants to create an account.	The guest with an account should be identified by a specific ID.	1	4/21/2020	Edvin Hysenagolli
UR_20	The administrator can delete clientes that no longer use their accounts.	In this way the database will be updated and working properly.	2	4/21/2020	Edvin Hysenagolli
UR_21	The administrator can update clientes that want to change their accounts.	In this way the database will not have the same client twice or more.	1	4/21/2020	Edvin Hysenagolli
UR_22	The administrator checks every week, each employee's job.	He gathers information to make the right decisions for the future.	1	4/21/2020	Edvin Hysenagolli
UR_23	The client can log in with a username and a password.	Manager or administrator can accept a client.	1	4/21/2020	Edvin Hysenagolli
UR_24	The client can log in also as a guest.	He will be able to operate the same as a client who has an account.	1	4/21/2020	Edvin Hysenagolli

UR_25	The client will be able to access all the services the software provides.	All services will be listed and grouped to be easy to access.	1	4/21/2020	Edvin Hysenagolli
UR_26	The client can reserve his ticket online.	All clients who have an account can reserve a ticket.	1	4/21/2020	Edvin Hysenagolli
UR_27	The client can pay online by choosing a method for his ticket.	Not only reserve, but the client can also pay online.	1	4/21/2020	Edvin Hysenagolli
UR_28	There will be a Paypal payment method and Credit/Debit Card payment method.	Clients can choose either way to pay online.	1	4/21/2020	Edvin Hysenagolli
UR_29	A client can reserve the ticket even without paying online.	Clients can pay for the ticket in cash, during the travel.	1	4/21/2020	Brisilda Kurti
UR_30	A client can easily search for information about the destination he wants.	After writing details like the cities, dates etc, the available departures will appear.	1	4/21/2020	Brisilda Kurti
UR_31	Extra information for each departure will be available for the clients to check.	Clients can see the company name, seats available, if there is wifi or not etc.	2	4/21/2020	Brisilda Kurti
UR_32	A client can reserve more than one ticket.	A client can reserve tickets even for other passengers.	1	4/21/2020	Brisilda Kurti
UR_33	After reservation, the ticket can be printed, or clients can show it on their phone.	Each ticket will have a unique barcode.	1	4/21/2020	Brisilda Kurti
UR_34	Clients can easily change the details of their ticket before the reservation.	One step before paying, they can make changes if they have done sth wrong.	1	4/21/2020	Brisilda Kurti
SR_01	Different account roles and types.	Different views since there are different users like: manager, administrator, economist employee and client.	1	4/21/2020	Brisilda Kurti
SR_02	Users and tickets are uniquely identifiable.	Each user has a unique ID and tickets have their unique barcode.	1	4/21/2020	Brisilda Kurti
SR_03	The software provides the opportunity to update account information.	Each user can have this opportunity.	2	4/21/2020	Brisilda Kurti
SR_04	The web application provides the opportunity to reset the password by email confirmation.	Each user can have the opportunity	2	4/21/2020	Klajdi Hoxha



SR_05	The password resetting will have a link to do it.	There will be a special link to reset password by each client or user.	2	4/21/2020	Klajdi Hoxha
SR_06	Each client will take a online receipt after the payment.r	If the clients have an account confirmed they can take a receipt.	1	4/21/2020	Klajdi Hoxha
SR_07	Each receipt will go to economist account.	Receipts will go as well to economist account, in order to keep inventory.	1	4/21/2020	Klajdi Hoxha
SR_08	Administrator is able to check any time the transaction and receipts.	Transactions will be stored and displayed.	1	4/21/2020	Klajdi Hoxha

## 3.2 Non-functional Requirements

### 3.2.1 Product Requirements

#### 3.2.1.1 User Interface Requirements

- Simple layout.
- Dynamic screen size.
- Real time notifications.
- Sliding navigation drawer for app.
- Static navigation drawer for the web page.
- Easy-to-use and user-friendly structure.
- Commands with specific functions.

#### 3.2.1.2 Usability

- Since the application is web based it is easy to access it in real time from different browsers online.
- It shall be easy to update to meet the user requirements.
- Since the application will be in Albanian as well as in English, it should be very easy to navigate through it.

#### 3.2.1.3 Availability

- The application will be available to use anytime of the day or night.
- You can use the application in any geographic location in Albania, as long as the user has Internet access.

- It will be designed in Albanian and English language.
- Different type of users will have different availability and access.

### **3.2.1.2 Efficiency Requirements**

#### **3.2.1.2.1 Performance Requirements**

- Firstly, our system will be a web-application that will be stored in a web server.
- It will be designed to support multiple users at the same time, by multiple interfaces.
- It will not require a very strong internet connection to perform properly.

#### **3.2.1.2.2 Space Requirements**

##### **3.2.1.2.2.1 Capacity**

Since our application is web-based, there is no need for capacity occupation in our mobile phones, computers or other devices. For sure internet connection is a key component but the application will work even if there is low internet strength provided.

Multiple users must be able to use the application at any time since it is expected to be accessed by a large number of users. The database that is going to be used must be capable enough to store a considerable amount of information.

To do all this we will be working on phpMyAdmin platform.

##### **3.2.1.2.2.2 Latency**

Acceptance script during the time that the website will not be loaded will be completed within less 3.21 seconds and less than 4 seconds when the website is loaded. In order to be efficient and productive, DMS is expected to fulfil some time limitations such as (also depending on internet speed and database size):

- Max 300 ms for the Log-in page to be loaded.
- Max 300 ms to perform and execute any other loading page.

### **3.2.1.3 Security Requirements**

#### **3.2.1.3.1 Security**

Predefined fields which are the required information that every user needs to fill in at the moment of registration help to almost create a non-existing error system and secure user's credentials.

Predefined fields which will require among other things, information like an email address, a phone number and a personal ID number will assure that user's personal information will need to be securely stored in the database.

#### **3.2.1.3.2 Protection**

When dealing with credentials creation/change there will be checking's:

- Every user's password will be encrypted.
- This password shall be reset only through the link sent to his/her email.
- Authentication will provide users to their respective access to the database and views.
- Database abasements forms will all be taken in consideration.
- Login/registration process will go through validation.

#### **3.2.1.3.3 Authorization and Authentication**

Authentication is made through Middleware layers such as auth('guest) and auth('login) to distinct all registered/logged-in in accounts. Admin will have preset login credentials, and has full authorization on all views, also can assign a Manager. The Manager has access on all Transport Module Entities/Functionalities such as employees CRUDs, Schedules-making, Raport-Checking, on the Warehouse Module he has access on the availability of current stock and on the Client Module he has access on the list of current clients, as it was required for the Manager to have a general knowledge for better performance. The Employee Entities on the other hand are authorized only for their specific department duties.

#### **3.2.1.3.4 Monitoring**

The application's user interfaces will be simple and easy to be used which will minimize the possibility for any error or crash of the system. Firstly, it will need two inputs, a username and a password that will redirect the user by its type to its corresponding page in the log in page. In the case that inputs are not valid or not matched in the database an Error message will be displayed.

Every user's page will include all the functionalities mentioned before and it will consist on simple manageable modules. Of course, a hierarchy will be set among different users with the manager standing at the top and the administrator, the economist and other employees following.

#### **3.2.1.3.5 Maintenance**

PhpMyAdmin will provide an ease of maintenance of the database. Still the construction of the application will consist on simple and well-organized modules, not complex and user-friendly interface designs in order to create simple experience for the users. In case of any error it is recommended simply a refresh or a re-initialization of the application. If the application faces a failure again outside help is required.

## **3.2.2 Organizational Requirements**

### **3.2.2.1 Operational Requirements**

A user will be able and responsible to these operations:

- Log-in
- Create/remove new users (manager, administrator)
- Alter the schedules or prices (administrator)
- Modify personal information
- Book tickets (client)

### **3.2.2.2 Development Requirements**

#### **3.2.2.2.1 System Interface/Integration**

The system is going to operate as long as it is supported by a database in phpMyAdmin platform. Once the construction and the design of the application is finished and its system interface is accordingly connected with the database it is its duty to manage the avoidance of any possible error occurrence. Also, the administrator and the manager who have the most system access can make any changes in the database, if needed.

#### **3.2.2.2.2 Network and Hardware Interfaces**

As we have acknowledged before our software will be a web-based application that will be stored in a web server, which will be a HTTP server.

This way a TCP connection will be created between the user and the server using HTTP protocol.

We will be working with phpMyAdmin which will be properly supported by the server.

The web page will be accessible by every device that supports internet connection since the screen size will be dynamic.

### **3.2.2.2.3 Systems Interfaces**

There will be 4 main view interfaces:

1. Manager view
2. Administrator view
3. Economist view
4. Employee view
5. Client view

Surely the manager will be the most privileged one, having more access and usability upon the system.

The administrator, manager, economist, employees and the clients will be able to authenticate using the following methods:

- email
- password

The required fields to fill in for the client to sign up will be:

- Name
- Surname
- Email
- Phone number
- Street address
- City

### **3.2.2.2.4 Data Management**

- We will primarily be using MySQL.
- Its model is relational, it is open source.
- It supports various languages (JavaScript, C, C++).
- We will be using PhpMyAdmin which supports a wide range of operations and tasks.
- Depending in the user's level of accessibility different privileges will be set.

### **3.2.2.2.5 Portability**

Since it is a web application it can be accessed by multiple devices such as mobile phone, computer or iPad and multiple platforms as long as internet connection is provided.

(\*\*This web application is worked on Laravel, PHP-based. PHP is available for UNIX, MICROSOFT WINDOWS, MAC OS, and OS/2 and it is portable amongst platforms.)

In the future, the experience is thought to be improved with Android and iOS for client and/or employee, with the basis of the current backend and not many changes made to the main infrastructure.

### **3.2.2.2.6 Other Requirements**

The system will be work in respect of the Laws of Albania and other laws of EU that are not adapted yet to Albanian system.

### 3.3 Domain Requirements

The system manages and covers everything related to the distribution process for an existing medium-size business. It should be able to add and update employees and clients and store tabs of information on the database. It should operate in a way that most tasks should be able to be completed without the need to make endless calls or texts between a small number of people, but instead they can do this online by using their web browser.

## 4. User Scenarios/Use Cases

### User Scenarios

NUMBER	SCENARIO	DESCRIPTION
1	Guest crates account	Guests create accounts in order to fully use the application.
2	Guest logs in	Guests log in to their account using their credentials.
3	Profile page	Guests can view their own profile information.
4	Change credentials	Guests can change their username, password and email.
5	View timetable	Guests can check the timetable.
6	Book a trip	Guests can make a reservation.
7	Guest logs out	Guests can log out of their account.
8	Add new employee	Manager creates a new account for a new employee.
9	Update employee	Manager updates the account of an existing employee.
10	Remove an employee	Manager deletes an existing account of an employee from the system use.
11	Search employee	Manager searches for an employee account and

		views his profile.
12	Add new guest	Manager creates a new account for a new guest.
13	Update guest	Manager updates the account of an existing guest.
14	Remove a guest	Manager deletes an existing account of a guest from the system use.
15	Search guest	Manager searches for a guest account and views his profile.
16	Economist page	Economist views the daily sales and reservations.
17	Access past balances	Economist can check the sales for past months and years.
18	Future investments	Economist can view the investments planned for the future.
19	Add new investment	Economist can add to the investments page, when a new one is planned.
20	Enter costs	Economist enters costs to the system everyday, or at least every time a cost is payed.
21	Financial report	Economist reports all financial activities to managers.
22	Search page	Guest can search for their destination after writing all the details.
23	Departures	Shows all the available departures based on the details given by the guest.
24	Arrivals	Shows all the available arrivals based on the details given by the guest.
25	More information	Extra informations about the bus and the trip.
26	Your reservation	Guests can see the final details of their reservation.
27	Change	Guests can make changes to their final reservation.
28	Proceed to payment	Guests can pay online for their reservation.
29	Add a new manager	The main manager is the only one who can create the account of another manager.
30	Add client account	The main manager can add a new client account only with the verification code sent by the admin.

31	Check-in	Employees check-in to the system as they start the workday.
32	Check-out	Employees check-out at the end of the workday.
33	Working hours	The main manager has access to the working hours of the employees. Then he sends them to the other managers, so there are no manipulations.
34	Remove client account	Admin can delete a client account.
35	Remove client account II	The main manager can delete the client account through a verification code sent by the admin.

### User Scenarios Extended

1. Guest creates account:
  - a) User chooses his type
  - b) He fills out the form with all the necessary information
  - c) He presses the signup button
  - d) He confirms his email by a confirmation email sent automatically
  - e) He is redirected to his profile page after reloading the page
2. Guest logs in:
  - a) Guest is directed the login page when initially entering the application
  - b) Guest enters his password and username
  - c) Guest presses the login button
  - d) Guest is redirected to his profile page
3. Profile page:
  - a) Guest logs in to his account
  - b) Guest can see his personal information
  - c) Guest can go the timetable by pressing the Timetable button
  - d) Guest can change his credentials by pressing the Change credentials button
  - e) Guest can log out by pressing the Logout button



4. Change credentials:
- a) Guest logs in to his account
  - b) Guest presses the Change credentials button in the profile page
  - c) Guest is redirected to the Change credentials page
  - d) Guest presses the edit button to make changes
  - e) Guest edits all the fields he wishes to
  - f) Guest presses save button
5. View timetable:
- a) Guest logs in to his account
  - b) Guest presses Timetable button
  - c) Guest is redirected to the timetable page
  - d) Guest can scroll through the timetable
  - e) Guest presses Book button to make a reservation
6. Book a trip:
- a) Guest log in to his account
  - b) Guest presses the Timetable button
  - c) Guest is redirected to the timetable page
  - d) Guest presses the Book button to make a reservation
  - e) Guest chooses the destination, the date and the time
  - f) Guest enters his personal information regarding the payment method
  - g) Guest presses the Confirm button
7. Guest logs out:
- a) Guest logs in to his account
  - b) Guest finishes all the necessary actions
  - c) Guest presses the Logout button from any page he might be in
  - d) Guest is redirected to the login page
8. Add new employee:
- a) Manager is logged in the system
  - b) Manager choses from the Main Menu, "UserAct" option
  - c) Manager presses "Add new employee" from "Users" list
  - d) A new page is displayed and manager fill in the fields with the proper information for adding a new user
  - e) Manager presses "Submit" button
  - f) New employee is added in the system
9. Update employee:
- a) Manager is logged in the system
  - b) Manager choses from the Main Menu, "UserAct" option
  - c) Manager presses "Edit User" button and searches employee's name
  - d) If employee exist, manager can change the necessary fields to update

- e) Manager presses "Save changes" button
- f) If information is okay, a confirmation message is displayed "Employee updated successfully"

10. Remove an employee:
- a) Manager is logged in the system
  - b) Manager chooses from the Main Menu, "UserAct" option
  - c) Manager presses "Edit User" button and searches employee's name
  - d) If employee exist, the employee's profile opens
  - e) Manager presses "Delete" button and a confirmation message is displayed "Employee deleted successfully"
11. Search an employee:
- a) Manager is logged in the system
  - b) Manager chooses from the Main Menu, "UserAct" option
  - c) Manager presses "Search user" button in users list
  - d) Manager types the name of the employee in the Search field
  - e) If employee exist, his profile will display
  - f) If it does not exist, a message "No result found" will appear
12. Add new guest:
- a) Manager is logged in the system
  - b) Manager chooses from the Main Menu, "UserAct" option
  - c) Manager presses "New Guest" button
  - d) If there are requested from guest to open an account, manager can see his information and press "Register Guest"
  - e) A message "Guest added successfully" appears and the system sends an email to the guest with the same text
13. Update guest:
- a) Manager is logged in the system
  - b) Manager chooses from the Main Menu, "UserAct" option
  - c) Manager presses "Edit Guest" button
  - d) If there are requested from guest to update an account, manager can see the changes and press "Update Guest"
  - e) A message "Guest updated successfully" appears and the system sends an email to the guest with the same text
14. Remove a guest:
- a) Manager is logged in the system
  - b) Manager chooses from the Main Menu, "UserAct" option
  - c) Manager presses "Edit Guest" button
  - d) If there are requested from guest to delete an account, the manager can see the changes and press "Confirm Delete"
  - e) A message "Guest deleted successfully" appears and the system sends an email to the guest with the same text

15. Search guest:
- a) Manager is logged in the system
  - b) Manager chooses from the Main Menu, "UserAct" option
  - c) Manager presses "Search guest" button in Guest list
  - d) Manager types the name of the guest in the Search field
  - e) If employee exist, his profile will display
  - f) If it does not exist, a message "No result found" will appear
16. Economist page:
- a) Economist is logged in the system
  - b) Economist views the daily reservations and payments
  - c) Economist can click Past Balances, Future Investments or Enter Costs.
17. Access past balances:
- a) Economist is logged in the system
  - b) Economist clicks Past Balances.
  - c) The balances for past years and months appear including sales, costs and profit
  - d) Economist can click Back, Future Investments or select the year they want to access.
18. Future investments:
- a) Economist is logged in the system
  - b) Economist clicks Future Investments.
  - c) The investments planned for the future and the necessary payments appear.
  - d) Economist can click Back, Past balances, Add New or select the month they want to access.
19. Add new investment:
- a) Economist is logged in the system
  - b) Economist clicks Future Investments.
  - c) Economist clicks Add New
  - d) Economist enters the investment and the payment required
  - e) Economist clicks Save.
20. Enter costs:
- a) Economist is logged in the system
  - b) Economist clicks Enter Costs.
  - c) A page with a table for costs and money appears.
  - d) Economist fills the table for the costs of the day.
  - e) Economist clicks Save.
  - f) Economist can click Home.
21. Financial report:
- a) Economist is logged in the system
  - b) Economist checks all activity and reports it to managers.

22. Search page: a) Guests logs in.

- b) Guest chooses One way or Round trip.
- c) Guest chooses the city to which he will travel from, at From.
- d) Guest chooses the city to which he will arrive to, at To.
- e) Guest writes the date of departure, at Departure.
- f) Guest writes the date of return, at Return.
- g) Guest adds the number of passengers he will buy tickets for, at Passengers.
- h) Guest clicks Search, to get the available trips.

23. Departures: a) Guest logs in.

- b) Guest completes the details of Search page.
- c) Guest gets all the departures available, based on the details of the Search page.
- d) Guest reserves the departure trip that best fits his interest.

24. Arrivals: a) Guest logs in.

- b) Guest completes the details of Search page.
- c) Guest gets all the departures available, based on the details of the Search page.
- d) Guest reserves the departure trip that best fits his interest.
- f) Guest gets all the arrivals available, based on the details of the Search page.
- g) Guest reserves the arrival trip that best fits his interest.

25. More information: a) Guest logs in.

- b) Guest completes the details of Search page.
- c) Guest gets all the departures available, based on the details of the Search page.
- d) Guest clicks More information, to get extra informations about the bus and trip.
- e) Guest reserves the departure trip that best fits his interest.
- f) Guest gets all the arrivals available, based on the details of the Search page.
- h) Guest clicks More information, to get extra informations about the bus and trip.
- g) Guest reserves the arrival trip that best fits his interest.

26. Your reservation: a) Guest logs in.

- b) Guest completes the details of Search page.
- c) Guest gets all the departures available, based on the details of the Search page.
- d) Guest reserves the departure trip that best fits his interest.
- f) Guest gets all the arrivals available, based on the details of the Search page.
- g) Guest reserves the arrival trip that best fits his interest.
- h) Guest can see the final details of their reservation.

27. Change: a) Guest logs in.

- b) Guest completes the details of Search page.
- c) Guest gets all the departures available, based on the details of the Search page.
- d) Guest reserves the departure trip that best fits his interest.

- f) Guest gets all the arrivals available, based on the details of the Search page.
- g) Guest reserves the arrival trip that best fits his interest.
- h) Guest can see the final details of their reservation.
- i) Guest clicks Change, if he wants to make any change to their final reservation.

**28. Proceed to payment:** a) Guest logs in.

- b) Guest completes the details of Search page.
- c) Guest gets all the departures available, based on the details of the Search page.
- d) Guest reserves the departure trip that best fits his interest.
- f) Guest gets all the arrivals available, based on the details of the Search page.
- g) Guest reserves the arrival trip that best fits his interest.
- h) Guest can see the final details of their reservation.
- i) Guest completes his card details, to make online payment for the ticket/s.

**29. Add a new manager:** a) Main Manager is logged in the system

- b) Main Manager chooses from the Main Menu, "UserAct" option
- c) Main Manager presses "Create new Account" button
- d) Chooses one of the option, "Manager" one then "Submit" button
- e) The main manager fills the empty boxes with the right information about the manager, then press "Register"
- f) A message "Employee named \_\_\_\_\_, successfully registered.
- g) At the same page appear three buttons: "Edit", "Delete", "Back at my page"

**30. Add client account:** a) Main Manager is logged in the system

- b) Main Manager chooses from the Main Menu, "UserAct" option
- c) Main Manager presses "Clients Account" button
- d) A message appears: " To access these datas, you should have Admin permission"
- e) Two buttons appear as well: "send message to admin" and

“send email to admin

f) After you click one of the buttons a box that contains only numbers appears. You have to minutes to put the verification code in there

g) Then press “done”

31. Check-in: a) Employee logs in  
b) Employee is directed to the main page  
c) Worker types the code  
d) Employee is shown a confirmation window that he is checked-in on the system  
e) Employee hits “Ok” button and is directed to login page, meaning he has finished with the system for now
32. Check-out: a) Employee logs in  
b) Employee is directed to main page  
c) Employee types the code  
d) Employee is shown a confirmation window that he is checked-out from the system  
e) Employee hits “Ok” button and is out of the system
33. Working hours: a) Main Manager is logged in the system  
b) Main Manager choses from the Main Menu, “UserAct” option  
c) Main Manager presses “TimeTable” button  
d) Two buttons appear: “Manager” and “Employee”  
e) Each button takes you to the hours each employee has done, daily, weekly and Yearly.  
f) at the end of the page are to options: “Print” and “Email”  
g) He sends them to the respective manager, who takes care of this information.
34. Remove client account: a) Admin logs in  
b) Chooses from the Main Menu, “Log in” option  
c) Admin presses “Client Account” button  
d) Three options appear: “Create Account”, “Update” and “Remove”  
e) Press “Remove” button  
d) the tabel with the clients appear and you press on the client’s name and then

press remove button at the end.

**35. Remove Client Account II:** Main Manager is logged in the system

- b) Main Manager choses from the Main Menu, "UserAct" option
- c) Main Manager presses "Clients Account" button
- d) A message appears: " To access these datas, you should have Admin permission"
- e) Two buttons appear as well: "send message to admin" and "send email to admin"
- f) After you click one of the buttons a box that contains only numbers appears. You have to minutes to put the verification code in there
- g) Then press "done"
- k) You will be able to access to the clients account and remove them.

**Use Cases**

Name	Guest creates account (UC_1)
Summary	Guests create accounts in order to fully use the application.
Actor	Guest
Description	Each guest of the application in order to log in needs to firstly create an account using his credentials.
Precondition	The guest must have a device connected to the internet.
Alternatives	If the guest already has an account he can just log in.
Post condition	The new guest will have an account.



Name	Guest logs in (UC_2)
Summary	Guests log in in order to fully use the application.
Actor	Guest
Description	Each guest of the application in order to fully use the application needs to log in to his account using his credentials.
Precondition	The guest must have a device connected to the internet.
Alternatives	There is no alternative.
Post condition	The guest will be logged in.

Name	Profile page (UC_3)
Summary	Guests can view their own profile information.
Actor	Guest
Description	Guests can view their own profile information, go to the timetable or make changes to their credentials.
Precondition	The guest must be logged in.
Alternatives	There is no alternative.
Post condition	The guest will be displayed information and he will be redirected to another page.

Name	Change credentials (UC_4)
Summary	Guests can change their credentials.
Actor	Guest.
Description	Guests can change different information about them like their username or their password. Certain information like the ID number will not be changeable though.
Precondition	The guest must be logged in.
Alternatives	The guest can only look at their information without making

	changes.
Post condition	The guests' information will be changed.

Name	View timetable (UC_5)
Summary	Guests can view the timetable.
Actor	Guest
Description	Guests can view the timetable where different information about the rides is shown and can then make a reservation.
Precondition	The guest must be logged in.
Alternatives	The guests can only view the timetable but not make a reservation.
Post condition	The guest will have a reservation or just information about the rides.

Name	Book a trip (UC_6)
Summary	Guests can make a reservation.
Actor	Guest
Description	After seeing the timetable, the guests can make a reservation using a number of different payment methods.
Precondition	The guest must be logged in.
Alternatives	The guest after filling the form with all the necessary information, can decide to not make a reservation.
Post condition	The guest will have a reservation.

Name	Guest logs out (UC_7)
Summary	Guests can log out of their account.
Actor	Guest
Description	After the guest has finished what he came to do, he can log out of his account from any page of the application using the Logout button.
Precondition	The guest must be logged in.
Alternatives	The guest can decide not to log out.
Post condition	The guest will be redirected to the login page.

Name	Add new employee (UC_8)
Summary	Manager creates a new account for a new employee.
Actor	Manager
Description	Manager can create a new account by filling the right information and pressing the submit button in UserAct.
Precondition	Manager should be logged in. The employee should be part of the system.
Alternatives	If information filled is valid, employee is added and he receives a confirmation email. If not, manager should change the information.
Post condition	A new employee is added to the system.

Name	Update employee (UC_9)
Summary	Manager updates the account of an existing employee.
Actor	Manager
Description	Manager can update an existing employee by making the necessary changes and pressing the update.
Precondition	Manager should be logged in. The employee should be part of the system.
Alternatives	If information filled is valid, employee is added and he receives a confirmation email. If not, manager should change the information.
Post condition	Employee's information are updated

Name	Remove an employee (UC_10)
Summary	Manager deletes the account of an existing employee.
Actor	Manager
Description	Manager deletes an existing account of an employee from the system use, by searching and pressing the delet button.
Precondition	Manager should be logged in. The employee should be part of the system.
Alternatives	If the employee's account does not exist, the manager should search again or the employee is already deleted.
Post condition	Employee's account is deleted

Name	Search an employee (UC_11)
Summary	Manager can search the account of an existing employee.
Actor	Manager
Description	Manager can search an existing employee by going at User Search and search by name of the employee
Precondition	Manager should be logged in. The employee should be part of the system.
Alternatives	If employee does not exist, a message will appear saying "No result found"
Post condition	Employee's information(profil) will display

Name	Add new guest (UC_12)
Summary	Manager can add the account of a new guest
Actor	Manager, Administrator
Description	Manager presses New Guest button and confirm the request from a new user of system
Precondition	Manager should be logged in. The guest should have sent a request to be added in the system.
Alternatives	If the information are not correct the request will not go through
Post condition	New guest will be added in the system

Name	Update a guest (UC_13)
Summary	Manager can update the account of a guest
Actor	Manager, Administrator
Description	Manager presses Edit Guest and if there are any requests he will confirm the changes and update the guest.
Precondition	Manager should be logged in. The guest should have sent a request to be updated in the system.
Alternatives	If the information are not correct the request will not go through
Post condition	Guest information will be updated in the system

Name	Remove a guest (UC_14)
Summary	Manager deletes an existing account of a guest from the system use.
Actor	Manager, Administrator
Description	Manager presses Edit Guest and if there are any requests to delete an account he will confirm the changes and delete the guest.
Precondition	Manager should be logged in. The guest should have sent a request to be deleted from the system.
Alternatives	If there are no requests, manager will go back
Post condition	Guest will be deleted from the system

Name	Search a guest (UC_15)
Summary	Manager can search the account of an existing guest.
Actor	Manager, Administrator, Economist
Description	Manager can search an existing guest by going at User Search and search by name of the guest in the Guest list
Precondition	Manager should be logged in. The guest should be part of the system.
Alternatives	If guest does not exist, a message will appear saying “No result found”
Post condition	Guest’s information(profil) will display

Name	Economist page (UC_16)
Summary	Economist accesses their page
Actor	Economist
Description	Economist can view the daily sales and reservations.
Precondition	Economist should be logged in.

Name	Access past balances (UC_17)
Summary	Economist views past financial balances
Actor	Economist
Description	Economist can check the sales for past months and years.
Precondition	Economist should be logged in and have clicked Past Balances.

Name	Future investments (UC_18)
Summary	Economist views planned investments
Actor	Economist
Description	Economist can view the investments planned for the future detailed by description and payment.
Precondition	Economist should be logged in and have clicked Future Investments.

Name	Add new investment (UC_19)
Summary	Economist adds a new investment planned.
Actor	Economist
Description	Economist adds to the investments page, when a new one is planned.
Precondition	Economist should be logged in and have clicked Future Investments, then Add New.

Name	Enter costs (UC_20)
Summary	Economist enters the business` costs
Actor	Economist
Description	Economist enters costs to the system everyday, or at least every time a cost is payed.
Precondition	Economist should be logged in and have clicked Enter Costs.



Name	Search page (UC_21)
Summary	Guest can search for their destination after writing all the details.
Actor	Guest
Description	Guest completes all the details of the trip he wants to search for, like cities, dates and number of passengers.
Precondition	Guest must be logged in.
Alternatives	No alternatives.
Post condition	Guest gets the information he wants about the trip.

Name	Departures (UC_22)
Summary	Shows all the available departures based on the details given by the guest.
Actor	Guest
Description	Guest can get information about all the available departures, based on the details he wrote at the Search page.
Precondition	Guest has to complete the Search page details.
Alternatives	No alternatives.
Post condition	Guest has to make a reservation.

Name	Arrivals (UC_23)
Summary	Shows all the available arrivals based on the details given by the guest.
Actor	Guest
Description	Guest can get information about all the available arrivals, based on the details he wrote at the Search page.
Precondition	Guest has to complete the Search page details and make a reservation at Departure page.
Alternatives	No alternatives.
Post condition	Guest has to make a reservation.

Name	More information (UC_24)
Summary	Extra informations about the bus and the trip.
Actor	Guest
Description	Guest can get information about the company, wifi, duration of the trip etc.
Precondition	Guest has to complete the Search page details.
Alternatives	Guest can continue with the reservation, without clicking it.
Post condition	Guest makes or not the reservation.

Name	Your reservation(UC_25)
Summary	Guests can see the final details of their reservation.
Actor	Guest
Description	Here the guest can see the final informations about what he has chosen to reserve about his trip.
Precondition	Guest has to make a reservation.
Alternatives	No alternatives.
Post condition	Guest can change any details he wants to, or continue to reserve the reservation with or without paying online.

Name	Change (UC_26)
Summary	Guests can make changes to their final reservation.
Actor	Guest
Description	Helps the guests to make any change on their reservation, like the date, time etc., before they confirm their reservation.
Precondition	Guest has to make a reservation.
Alternatives	Continuing to make the reservation.

Name	Proceed to payment (UC_27)
Summary	Guests can pay online for their reservation.
Actor	Guest
Description	Guests writes their card details, so they can pay online for the ticket/s.
Precondition	Guest has to make a reservation.
Alternatives	Not paying online.
Post condition	Guests get the ticket, which shows that they have made the payment.

Name	Add new manager(UC_30)
Summary	Main Manager creates a new account for a new manager.
Actor	Main Manager
Description	Main Manager can create a new account by filling the right information and pressing the submit button in UserAct.
Precondition	Main Manager should be logged in.
Alternatives	If information filled is valid, manager is added and he receives a confirmation email. If not, manager should change the information.
Post condition	A new manager is added to the system.

Name	Add client account(UC_31)
Summary	Main Manager creates a new client account.
Actor	Main Manager
Description	Main Manager can create a new account by filling the right information and pressing the submit button in UserAct.
Precondition	Main Manager must be allowed from the admin to continue
Alternatives	If information filled is valid, client is added and he receives a confirmation email. If not, client should email the main manager the right information.
Post condition	A new client is added to the system.

Name	Check-in(UC_32)
Summary	Employee check-in to the system as they start the workday
Actor	Employee
Description	Employee logs in and types his code and confirms his presence
Precondition	Employee must be registered first from the manager
Post condition	Confirmation done

Name	Check-out(UC_33)
Summary	Employee check-out of the system when they finish the workday
Actor	Employee
Description	Employee logs in and types his code and confirms he has

	finished the workday
Precondition	Employee must be registered first from the manager
Post condition	Confirmation done

Name	Working Hours(UC_34)
Summary	Main Manager access the working hours of employees and managers
Actor	Main Manager
Description	Main Manager takes the hours and sends them to the respective manager
Precondition	Main Manager should be logged in.

Name	Remove Client (UC_35)
Summary	Admin removes the client account
Actor	Admin
Description	Admin is the only one who can have the access to the clients account and only pass it to the main manager
Precondition	Admin must be logged in.
Post condition	The client account is removed

Name	Remove Client Account II (UC_36)
Summary	Main Manager has access to remove the client account
Actor	Main Manager
Description	Main Manager can remove the client account with the admin permission
Precondition	Main Manager must be logged in and have the admin permission first, so he can access next
Alternatives	If he cannot delete it, he needs to do a second verification.
Post condition	Client account removed