

MYES Bus Ticketing System



Use Case Specification

Revision History

Date	Author(s)	Description	Version
10/04/2021	Yiğit Erkal Eren Erol	Initial Version	v1.0
17/04/2021	Yiğit Erkal Eren Erol	Use Case diagram and specifications revised based on the feedback given by Review Team	v1.1
28/04/2021	Yiğit Erkal Eren Erol	Fully dressed use cases #2, #8, #9, #10 and #11 are added.	v1.2
09/05/2021	Yiğit Erkal Eren Erol	Necessary changes are made for the accepted review items	v1.3
30/05/2021	Mustafa Ilikkan	Fully dressed use cases #7 and #12 are added.	v1.4
06/06/2021	Yiğit Erkal Eren Erol	Necessary changes are made for the accepted review items	v1.5
20/06/2021	Mustafa Ilikkan	Fully dressed use cases #6, #13, and #14 are added. Use Case Diagram is updated.	v1.6

Use Case Diagram



Brief Descriptions

Use Case Number	Use Case Name	Actor	Brief Description
UC1	Login	Passenger, Bus company user, Admin, Staff	Passenger, Admin, Staff or Bus company users want to sign in. System requests a sign in information. Users fill requested information. System approves and displays a successful sign in message and lets the user in.
UC2	Sign Up	Passenger	The Passenger wants to sign up as a user. System shows the sign up page. User fills information provided. System stores the information and displays a success message.
UC3	Manage Trip	Bus company user, Staff	Actor logs in to the system and wants to manage a trip. System shows the trip list of the company user. Company user selects the edit button from the list and performs a CRUD operation.
UC4	Manage Bus	Bus company user, Staff	Actor logs in to the system and wants to manage buses in the system. System shows the bus list of the company user. Company user selects the edit button from the list and performs a CRUD operation.
UC5	Manage Driver	Bus company user, Staff	Actor logs in to the system and wants to manage a driver. System shows the driver list of the company user. Company user selects the edit button from the list and performs a CRUD operation.

UC6	Make Impersonation	Staff	<p>Staff logs in to the system and wants to manage the driver, manage a bus or manage a trip on behalf of the bus company user.</p> <p>Staff logs in to the system with required credentials. System displays a list of bus company users. Staff chooses one of them and performs required action. System displays a success message and redirects staff to the related page.</p>
UC7	Manage Bus Company Account	Admin	<p>Admin logs in to the system and wants to manage a bus company account. System shows the bus company list. Admin performs a CRUD operation.</p>
UC8	Search for a Trip	Passenger	<p>Passenger logs in to the system and wants to search for a trip. System display search screen. Passenger enters the search criteria. System displays a list of the search results.</p>
UC9	Manage reservations	Passenger	<p>Passenger logs in to the system and wants to manage reservations. System displays the trip list. Passenger selects a trip. System displays the reservation list. Passenger performs a CRUD operation. System displays a successful message that indicates the operation is done.</p>
UC10	Monitor Sales & Transactions	Bus company user	<p>Actor logs in to the system and wants to monitor sales & transactions. System shows the list of the sales and transactions. Actor selects one of the sales or transaction items. System displays the information</p>

			in detail.
UC11	Buy a ticket	Passenger	Actor logs in to the system and lists the reservation to select one of the reservations to buy a ticket. System displays the payment screen and the Actor enters the payment details and the system performs the payment operation through a 3rd party payment vendor and then displays the success message and converts the reservation into a ticket. System displays a success message.
UC12	Monitor Reservations & Tickets	Bus Company User, Staff	Actor logs in to the system and wants to monitor reservations & tickets. System shows the list of the trips. Actor selects one of the trips. System shows the list of the selected trips' reservations and tickets.
UC13	Change Password	Passenger, Bus company user, Admin, Staff	Actor logs in to the system and wants to change the password. System displays a form for changing the password. Actor enters the existing password, new password in the appropriate inputs. Systems checks if the existing password is correct and new password satisfies the criteria then sets the new password for the actor.
UC14	Update Account Details	Passenger, Bus company user, Admin, Staff	Actor logs in to the system and wants to update the account details. System displays a form that shows the existing account details. Actor makes the necessary changes in the account details and proceeds. System saves the updated account details.

Fully-Dressed Descriptions

UC1: Login

Scope: MYES Bus Ticketing System

Level: User Goal

Primary Actor: Bus company user, Passenger, Staff, Admin

Pre-conditions: User has to be registered to the system previously and knows their credentials.

Post-conditions: User is logged in successfully to the system

Main Success Scenario:

1. User wants to login to the system
2. System presents a login form
3. User enters login credentials
4. System checks the user's credentials. (See Glossary)

Extensions:

4a System validates the credentials.

1. System redirects user to the main page.

4b System cannot validate the credentials.

1. System shows an "Please enter a correct username and password. Note that both fields may be case-sensitive." message.
2. Go to step 2.

Frequency of Occurrence: could be nearly continuous

UC2: Sign-Up

Scope: MYES Bus Ticketing System

Level: User Goal

Primary Actor: Passenger

Pre-conditions: User hasn't registered yet

Post-conditions: User is signed up successfully to the system

Main Success Scenario:

1. User wants to sign up to the system

2. System presents a sign up form
3. User enters sign up information and presses sign-up button
4. System records the user information and redirects the user to the login page.

Extensions:

- 4a** User does not fulfill the required sign up information
1. System shows a warning message to fulfill required data.
 2. Go to step 3.
- 4b** User enters an existing email address
1. System shows an error message.
 2. Go to step 3.

Frequency of Occurrence: once per user

UC3: Manage Trip

Scope: MYES Bus Ticketing System

Level: User Goal

Primary Actor: Bus company user, Staff

Pre-conditions: User is logged in successfully to the system and authenticated with the privileges to manage trips. Bus that will be managed must be active.

Post-conditions: One or more trips are created/retrieved/updated/deleted.

Main Success Scenario:

1. User wants to manage trips
 2. System presents a list of company trips
 3. User may select edit button of a trip from the list
 4. System presents the details of the selected trip (See Glossary)
- Step 3-4 repeated until user indicates it is done

Extensions

3a User wants to add a new trip

1. User provides the details of the new trip (System only allow future date selection for the trip date)
 - 1a User provides the same city for both from and to city.
 1. System displays a warning message
2. System performs create operation
3. 2a. There is another trip with the same bus, same date, time, departure city, destination city details.
 1. System displays a “Trip with this Bus, From city and To city already exists” message
 2. Go to step 3a.

4a User wants to delete a trip

1. System asks for confirmation for delete operation
2. User confirms
3. System checks the trip and found no related reserved or purchased ticket for the selected trip
 - 3a. System found related reserved or purchased ticket to the trip
 1. System does not perform
4. System performs delete operation

4b User wants to update a trip

1. User updates trip information
 - 1a. User provides the same city for both from and to city.
 2. Go step 4b
2. System validates the details and performs the update operation
 - 2a. System does not validate the details
 1. Go step 4b

Frequency of Occurrence: could be nearly continuous

UC4: Manage Available Bus

Scope: MYES Bus Ticketing System

Level: User Goal

Primary Actor: Bus company user, Staff

Pre-conditions: User is logged in successfully to the system and authenticated with the privileges to manage busses.

Post-conditions: One or more buses are created/retrieved/updated/deleted

Main Success Scenario:

1. User wants to manage bus
 2. System presents a list of company buses
 3. User may select the edit button of a bus from the list
 4. The system presents the details of the selected bus (See Glossary)
- Step 3-4 repeated until user decides it is done

Extensions

3a User wants to add a new bus

1. User clicks Add New Record button
2. User provides the details of the new bus
3. System performs create operation
 - 3a. There is a bus with the same plate text
 1. System displays a warning message

4a User wants to delete a bus

1. System asks for confirmation for delete operation
2. User confirms
3. System checks the bus and found no related trip for the selected bus
 - 3a. System found related trip for the bus
 1. System does not perform a delete operation and shows an "Trip relation exists" error message.
 2. User performs back operation from browser
 3. Go step 4a
4. System performs delete operation

4b User wants to update a bus

1. User updates bus information.
2. System validates the details and performs the update operation
 - 2a. System does not validate the details
 1. System displays the error message for the details

Frequency of Occurrence: Rarely

UC5: Manage Driver

Scope: MYES Bus Ticketing System

Level: User Goal

Primary Actor: Bus company user, Staff

Pre-conditions: User is logged in successfully to the system and authenticated with the privileges to manage drivers.

Post-conditions: One or more drivers are created/retrieved/updated/deleted.

Main Success Scenario:

1. User wants to manage drivers
 2. System presents a list of company drivers
 3. User may select edit button for the driver from the list
 4. System presents the details of the selected driver (See Glossary)
- Step 3-4 repeated until user indicates it is done

Extensions:

3a User wants to add a new driver

1. User provides the details of the new driver (System allows selection of older dates than 18 years as the birthday field)
2. System performs create operation

4a User wants to delete a driver

1. System asks for confirmation for delete operation
2. User confirms
3. System checks and found no related trip for the selected driver
 - 3a. System found related trip for the driver
 1. System does not perform a delete operation and shows an error message.
4. System performs delete operation

4b User wants to update a driver

1. User updates driver information.
2. System validates the details and performs the update operation
 - 2a. System does not validate the details
 1. System displays the error message for the details

Frequency of Occurrence: Rarely

UC6: Make Impersonation

Scope: MYES Bus Ticketing System

Level: User Goal

Primary Actor: Staff

Pre-conditions: Staff is logged in to the system successfully and is authenticated with the privileges to manage bus company accounts.

Post-conditions: One or more drivers, busses, or trips are created, retrieved, updated, deleted.

Main Success Scenario:

1. Staff wants to impersonate one of the existing bus company accounts
2. System presents a list of bus company accounts
3. Admin selects a bus company account from the list by clicking on its name
4. System displays a success message and redirects staff to the related page

Extensions

- 4a. Managing the drivers of the selected bus company: Include *Manage Driver*
- 4b. Managing the busses of the selected bus company: Include *Manage Bus*
- 4c. Managing the trips of the selected bus company: Include *Manage Trip*

Frequency of Occurrence: Rare

UC7: Manage Bus Company Account

Scope: MYES Bus Ticketing System

Level: User Goal

Primary Actor: Admin

Pre-conditions: Admin is logged in successfully to the system and authenticated with the privileges to manage bus company accounts.

Post-conditions: One or more bus company accounts are created, retrieved, updated, or deleted.

Main Success Scenario:

1. Admin wants to manage bus company accounts
 2. System presents a list of bus company accounts
 3. Admin may select a bus company account from the list by clicking edit button
 4. System presents the details of the selected bus company account (See Glossary for Bus Company Details)
- Step 3-4 repeated until admin indicates it is done

Extensions

3a Admin wants to add a new bus company account

1. Admin selects “Bus company user” from the left menu
2. Admin clicks “Add new Record” from the list
3. Admin provides the details of the new bus company account and clicks the “Submit” button.
4. System performs create operation
 - 2a. There is an existing bus company in the system with the same username
 1. System displays an error message

3b Admin wants to delete a bus company account

1. Admin selects “Bus company user” from the left menu
2. Admin clicks any item’s “Delete Icon” from the list
3. System performs delete operation and redirects user to the account list.
4. Go step 3b

3c Admin wants to update a bus company account

1. Admin clicks any item’s “Edit Icon” from the list
2. Admin updates the selected bus company account’s information
2. System validates the details and performs the update operation
 - 2a. Updated name is the same as one of the existing company names
 1. System displays an error message
 - 2b. System does not validate the details
 1. System displays the error message for the details

Frequency of Occurrence: Rare

UC8: Search for a Trip

Scope: MYES Bus Ticketing System

Level: User Goal

Primary Actor: Passenger

Pre-conditions: User is logged in successfully to the system and authenticated with the privileges to search a trip.

Post-conditions: Zero or more trips are displayed

Main Success Scenario:

1. User wants to search for a trip
 2. System presents a search bar
 3. User selects the trip destination and trip departure cities and date/time interval
 4. System presents the available trips according to the user request
- Step 3-4 repeated until user indicates it is done

Extensions:

4a_User wants to filter the trips

1. System provides a search box to be filtered (See Glossary - Trip Details)
2. User provides a detail for the search box and submit
3. System displays related information on the page

4b There is no available trips for the user request (See Glossary)

1. System displays related information on the page

Frequency of Occurrence: could be nearly continuous

UC9: Manage Reservations

Scope: MYES Bus Ticketing System

Level: User Goal

Primary Actor: Passenger

Pre-conditions: User is logged in successfully to the system and authenticated with the privileges to manage reservation.

Post-conditions: One or more reservations are created/retrieved/updated/deleted.

Main Success Scenario:

1. User wants to manage reservations
 2. System presents a list of reservations
 3. User may select edit button from the list
 4. System presents the details of the selected reservation(See Glossary)
- Step 3-4 repeated until user indicates it is done

Extensions:

3a User wants to make a reservation

1. User first performs Search for a Trip
2. User selects one of the available trip to make a reservation for
 - 2a. There are already 5 active reservations for the passenger.
 1. System displays a warning message
3. System asks for seat selection
4. User selects an empty seat from the list and proceeds
 - 4a. There is no empty seat for the selected trip
 1. System warns the user that there is no available seats for the related trip
5. System creates a reservation for the user and displays a success message

3b User wants to delete(cancel) a reservation

1. System asks for confirmation for delete operation
2. User confirms
3. System cancels the reservation for the user, makes the seat available again and displays a success message

3c User wants to update a reservation

1. System displays the existing reservation seat selection
2. User selects another available seat and proceeds
3. System updates the reservation for the user and displays a success message

Frequency of Occurrence: Rarely

UC10: Monitor Sales & Transactions

Scope: MYES Bus Ticketing System

Level: User Goal

Primary Actor: Bus company user

Pre-conditions: User is logged in successfully to the system and authenticated with the privileges to monitor sales and transactions.

Post-conditions: One or more sales and transactions monitored

Main Success Scenario:

1. User wants to monitor sales and transactions
 2. System presents a list of sales
 3. User may select a sale from the list
 4. System presents the transaction details of the selected sale
- Step 3-4 repeated until user indicates it is done

Extensions:

- 4a** There is no related transaction data for the selected sale
1. System warns the user that there is no transaction data
- 4b** User wants to print out the details of the transaction.
1. User selects print option
 2. System displays a preview page ask for confirmation
 3. User selects the correct printer confirms printing
 4. System sends the page for printing

Frequency of Occurrence: periodically (daily/weekly basis)

UC11: Buy a Ticket

Scope: MYES Bus Ticketing System

Level: User Goal

Primary Actor: Passenger

Pre-conditions: User is logged in successfully to the system and authenticated with the privileges to buy a ticket.

Post-conditions: One or more tickets bought.

Main Success Scenario:

1. User wants to buy a ticket.
 2. System presents a list of reservations.
 3. User may select a reserved ticket from the list
 4. System presents the ticket details of the selected reservation.
 5. User selects buy option
 6. System asks for payment information
 7. User provide payment information
 8. System performs the payment operation through a 3rd party payment vendor and then displays the success message.
- Step 3-8 repeated until user indicates it is done

Extensions:

3a There is no reserved ticket.

1. System warns the user that there is no reserved ticket.

6a Payment operation failed due to external reasons.

1. System warns the user that there is an error while purchasing.

Frequency of Occurrence: periodically (daily/weekly basis)

UC12: Monitor Reservations & Tickets

Scope: MYES Bus Ticketing System

Level: User Goal

Primary Actor: Bus company user, Staff

Pre-conditions: User is logged in successfully to the system and authenticated with the privileges to monitor reservations and tickets.

Post-conditions: One or more reservations and/or tickets are monitored

Main Success Scenario:

1. User wants to monitor reservations and tickets
 2. System presents a list of trips
 3. User clicks “Reservation and tickets” from the left menu.
 4. System presents the reservations and tickets for the trips
- Step 3-4 repeated until user indicates it is done

Extensions:

3a User wants to filter reservations

1. User selects the reservation option from “Is ticket?” field
2. System filters the reservations regarding to user’s decision

3b User wants to filter trips

1. User selects the trip option from “Is ticket?” field
2. System filters the trips regarding to user’s decision

3c User wants to filter trips with specific trip details

1. User selects the trip option from “Trip” field
2. System filters the trips and reservation regarding to user’s decision

4a There is no reservation or ticket for the selected trip

1. System displays “No data available in table” message”

Frequency of Occurrence: periodically (daily/weekly basis)

UC13: Change Password

Scope: MYES Bus Ticketing System

Level: User Goal

Primary Actor: Passenger, Bus company user, Admin, Staff

Pre-conditions: User is logged in to the system successfully.

Post-conditions: User password is changed.

Main Success Scenario:

1. User wants to change his/her password.
2. System displays a form that has text areas for the existing password and new password.
3. User inputs the existing password and new password into the form and clicks the save button.
4. System updates the user's password and displays a success message.

Extensions:

3a Existing password is wrong

1. System displays an error message
2. Continue with Step 2 of main success scenario

3b New password does not meet the password requirements

1. System displays an error message
2. Continue with Step 2 of main success scenario

Frequency of Occurrence: Rare

UC14: Update Account Details

Scope: MYES Bus Ticketing System

Level: User Goal

Primary Actor: Passenger, Bus company user, Admin, Staff

Pre-conditions: User is logged in to the system successfully.

Post-conditions: One or more user account details are changed.

Main Success Scenario:

1. User wants to change his/her account details.
2. System displays the account details form.
3. User updates any of the form items and clicks the save button.
4. System updates the user's account details and displays a success message.

Extensions:

3a User leaves at least one of the fields empty (all fields are required)

1. System displays an error message
2. Continue with Step 2 of main success scenario

3b User enters an invalid email address

1. System displays an error message
2. Continue with Step 2 of main success scenario

Frequency of Occurrence: Rare