MYES Bus Ticketing System
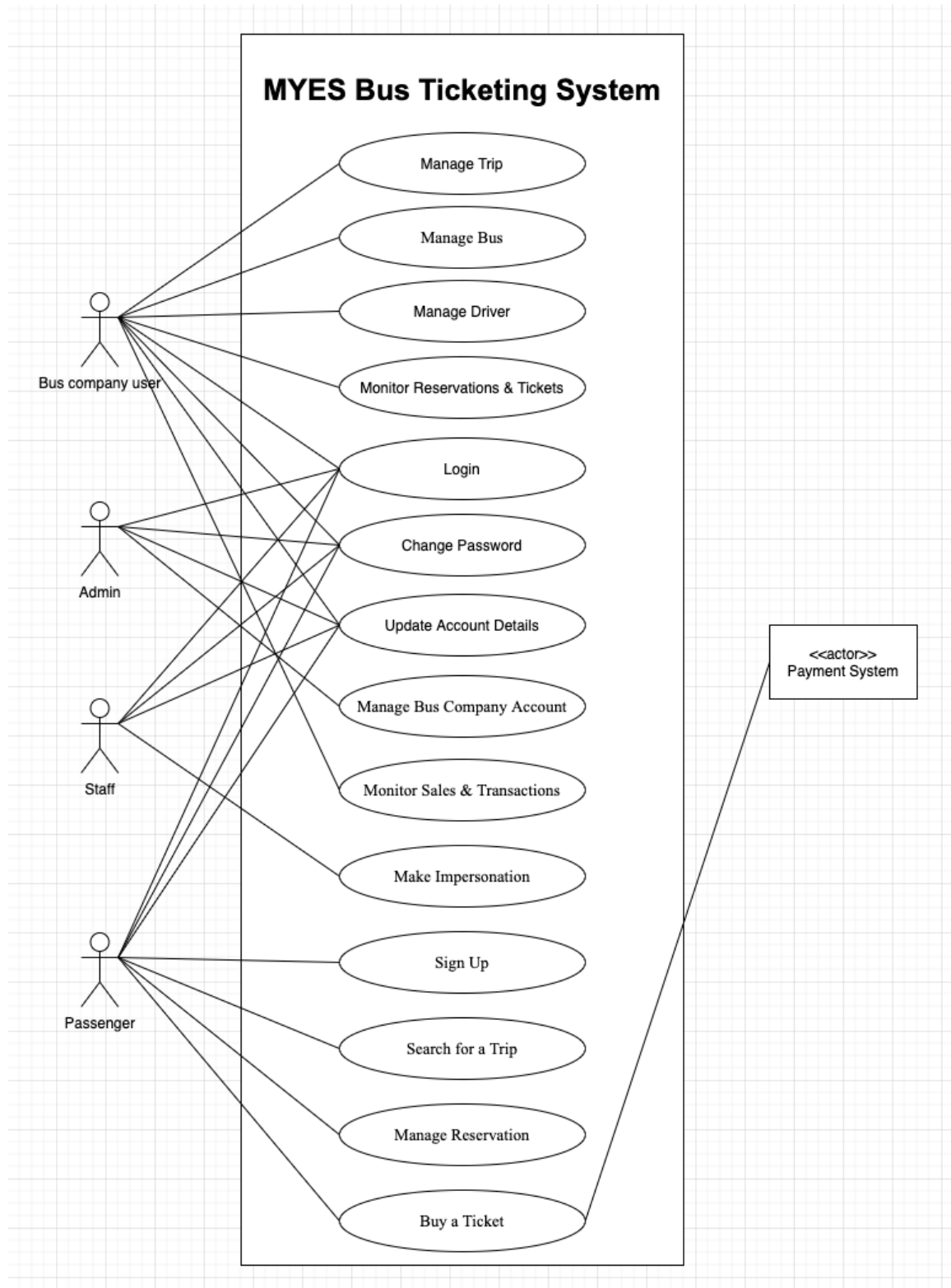
Use Case Specification

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 Ilıkkan	Fully dressed use cases #7 and #12 are added.	v1.4

Use Case Diagram

MYES Bus Ticketing System

- Manage Trip
- Manage Bus
- Manage Driver
- Monitor Reservations & Tickets
- Login
- Change Password
- Update Account Details
- Manage Bus Company Account
- Monitor Sales & Transactions
- Make Impersonation
- Sign Up
- Search for a Trip
- Manage Reservation
- Buy a Ticket

Actors: Bus company user, Admin, Staff, Passenger

<<actor>>
Payment System

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 logins to the system and wants to manage a trip. System shows the trip list of the company user. Company user selects a trip from the list and performs a CRUD operation.
UC4	Manage Bus	Bus company user, Staff	Actor logins to the system and wants to manage buses in the system. System shows the bus list of the company user. Company user selects a bus from the list and performs a CRUD operation.
UC5	Manage Driver	Bus company user, Staff	Actor logins to the system and wants to manage a driver. System shows the driver list of the company user. Company user selects a driver from the list and performs a CRUD operation.
UC6	Make	Staff	Staff logins to the system and

	Impersonation		wants to manage the driver, manage a bus or manage a trip on behalf of the bus company user. Staff logins 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.
UC7	Manage Bus Company Account	Admin	Admin logins to the system and wants to manage a bus company account. System shows the bus company list. Admin performs a CRUD operation.
UC8	Search for a Trip	Passenger	Passenger logins 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.
UC9	Manage reservations	Passenger	Passenger logins 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.
UC10	Monitor Sales & Transactions	Bus company user	Actor logins 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 in detail.

UC11	Buy a ticket	Passenger	Actor logins 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 logins 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 logins 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 logins 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 shows a successful login message.
4b System cannot validate the credentials.
    2. System shows an error message.
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 displays a successful registration message
Extensions:
3a User does not fulfill the required sign up information
    1. System shows a warning message.
3b User enters an existing email address
    1. System shows an error message.
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 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 and show successfully created message
      2a. There is another trip with the same bus, same date, time, departure city, destination city details.
         1. System displays a warning message

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 a delete operation and shows an error message.
   4. System performs delete operation and shows success message for deletion
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. System displays a warning message
   2. System validates the details and performs the update operation and shows success message for the update
      2a. System does not validate the details
         1. System displays the error message for the details

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 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 provides the details of the new bus
  2.   System performs create operation and show successfully created message
      2a.   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 error message.
  4. System performs delete operation and shows success message for deletion
4b User wants to update a bus
     1. User updates bus information.
     2. System validates the details and performs the update operation and shows successfully updated message
          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 a 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 and show successfully created message
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 and shows success message for deletion
4b User wants to update a driver
      1. User updates driver information.
      2. System validates the details and performs the update operation and shows successfully updated message
          2a. System does not validate the details
              1. System displays the error message for the details

Frequency of Occurrence: Rarely

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
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 provides the details of the new bus company account
   2. System performs create operation and shows a successful creation message
      2a. There is an existing bus company in the system with the same name
         1. System displays an error message

4a Admin wants to delete a bus company account
   1. System asks for confirmation for delete operation
   2. Admin confirms
   3. System performs delete operation and shows a success message for deletion

4b Admin wants to update a bus company account
   1. Admin updates the selected bus company account's information
   2. System validates the details and performs the update operation and shows a success message for the update
      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 form to be filtered (See Glossary - Trip Details)
    2. User provides details for the filter 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 a reservation 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 "Show reservations and tickets" for any of the listed trips
4. System presents the reservations and tickets for the selected trip
Step 3-4 repeated until user indicates it is done
Extensions:
4a There is no reservation or ticket for the selected trip
    1. System displays a warning message indicating there is no reservation or ticket for the selected trip yet

Frequency of Occurrence: periodically (daily/weekly basis)