CSE 343 – Software Engineering

User Requirements Documentation

Assignment-1

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Author

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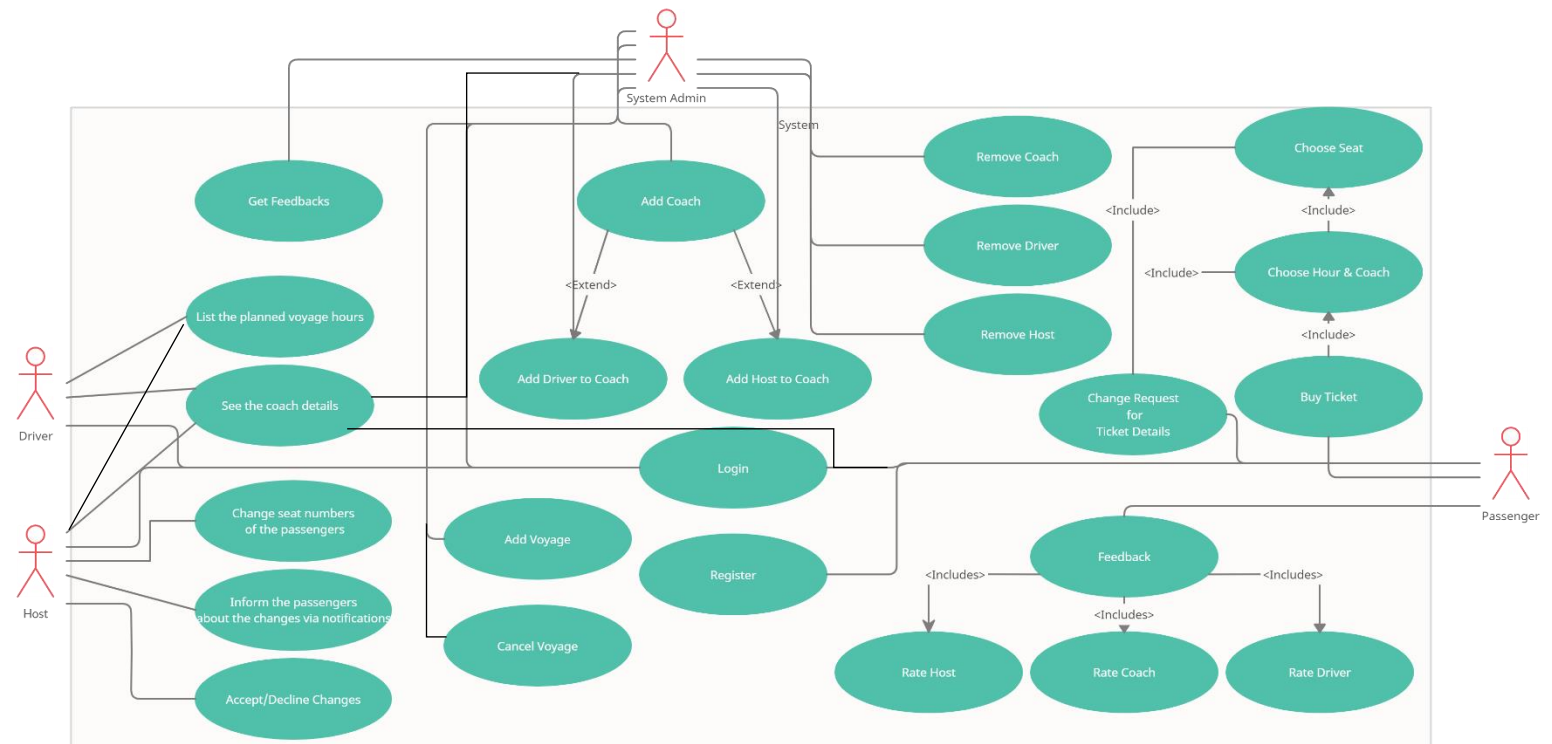
A) Stakeholders

System Admin: Monitors and Controls the whole operation of the system.

Driver: Driver of a specified coach. Uses the system for monitoring his voyages

Host: Host of a specified coach. Uses the system for monitoring his voyages, adjust seating and communicate with passengers.

Passenger: Uses the system for buying tickets and seeing details about the voyages.

B) Use-Case Diagram

C) Use Cases

System	HalilKOÇ Inc. Transportation Automation
Use-Case	Register
Actors	Passenger
Data	User info (Mail, Name, Surname, Age, Password, Gender etc.)
Stimulus	Interface Interaction by the User (Button Click)
Response	Save the given data to database
Comments	The data will be used at login and choose seat pages for seating arrangements. (some passengers might want to sit with the same gender passengers. In this case, gender has to be shared with the system.)

System	HalilKOÇ Inc. Transportation Automation
Use-Case	Login
Actors	Passenger, Driver, Host, System Admin
Data	Mail Adress and Password
Stimulus	Interface Interaction by the User (Button Click)
Response	Compare the given data with the data on the database. Accept/Decline login.
Comments	

System	HalilKOÇ Inc. Transportation Automation
Use-Case	Get Feedback
Actors	System Admin
Data	Feedback given by the Passengers
Stimulus	Feedbacks by the Passenger Users.
Response	
Comments	There is no response because a notification is sent when a user gives feedback. Admin might take action for the feedbacks or not. Feedbacks doesn't have any direct impact on the system.

System	HalilKOÇ Inc. Transportation Automation
Use-Case	Feedback
Actors	Passenger
Data	Comments on coach, driver, and the host
Stimulus	Interface Interaction by the User (Button Click)
Response	Send notification to admin.
Comments	

System	HalilKOÇ Inc. Transportation Automation
Use-Case	Buy Ticket
Actors	Passenger
Data	Seat Number, Voyage Hour, and Coach
Stimulus	Interface Interaction by the User (Button Click)
Response	Passanger and Voyage info are saved to database
Comments	Non-Available seats, hours etc. are not selectable by the user.

System	HalilKOÇ Inc. Transportation Automation
Use-Case	Change Request for the Ticket Details
Actors	Passenger
Data	Seat Number, Voyage Hour, and Coach
Stimulus	Interface Interaction by the User (Button Click)
Response	A change request is sent to Host.
Comments	

System	HalilKOÇ Inc. Transportation Automation

Use-Case	Accept/Decline Changes
Actors	Host
Data	Passenger's info who wants to change details. Old and new details about the voyage
Stimulus	Interface Interaction by the User (Button Click)
Response	Change the data if the change is accepted. Notify the user via notifications if the request is accepted or not.
Comments	Changing the details are up to host but if the change is acceptable (if it is not a last minute request etc.) host should accept it. System admin can monitor this process and warn the host about wrong decisions.

System	HalilKOÇ Inc. Transportation Automation
Use-Case	Add Voyage
Actors	System Admin
Data	Voyage hour and the Coach details
Stimulus	Interface Interaction by the User (Button Click)
Response	New voyage is saved to the database
Comments	Voyage details can be changed. All related users should be notified about changes.

System	HalilKOÇ Inc. Transportation Automation
Use-Case	Cancel Voyage
Actors	System Admin
Data	Voyage which will be canceled
Stimulus	Interface Interaction by the User (Button Click)
Response	Voyage and its details are removed from the database
Comments	All related users should be notified when a voyage is canceled.

System	HalilKOÇ Inc. Transportation Automation
Use-Case	Add Coach
Actors	System Admin
Data	Coach details (Brand, Model, Passenger Capacity etc.)
Stimulus	Interface Interaction by the User (Button Click)
Response	Coach and its details are saved to the database.
Comments	This should be used everytime a new coach is bought or coaches are changed. (reducing and increasing seats etc.)

System	HalilKOÇ Inc. Transportation Automation
Use-Case	Add Driver to Coach
Actors	System Admin
Data	Driver and Coach info
Stimulus	Interface Interaction by the User (Button Click)
Response	Old driver of the coach (if exists) removed from the database and new one is saved.
Comments	

System	HalilKOÇ Inc. Transportation Automation
Use-Case	Add Host to Coach
Actors	System Admin
Data	Host and Coach Info
Stimulus	Interface Interaction by the User (Button Click)
Response	Old host of the coach (if exists) removed from the database and new one is saved.
Comments	

System	HalilKOÇ Inc. Transportation Automation
Use-Case	Remove Coach
Actors	System Admin
Data	Coach info
Stimulus	Interface Interaction by the User (Button Click)
Response	Coach is removed from the database
Comments	Host and the Driver of the coach still exists in the database. Assigning them to a new coach or removing them is admin's responsibility.

System	HalilKOÇ Inc. Transportation Automation
Use-Case	Remove Driver
Actors	System Admin
Data	Driver info
Stimulus	Interface Interaction by the User (Button Click)
Response	Coach's driver data is assigned to null.
Comments	Coaches can't operate without a driver so assigning a new driver to coach before the next voyage is admin's responsibility

System	HalilKOÇ Inc. Transportation Automation
Use-Case	Remove Host
Actors	System Admin
Data	Host Info
Stimulus	Interface Interaction by the User (Button Click)
Response	Coach's host data is assigned to null.
Comments	Coaches can't operate without a host so assigning a new host to coach before the next voyage is admin's responsibility

System	HalilKOÇ Inc. Transportation Automation
Use-Case	Change seat numbers of the passengers
Actors	Host
Data	Passenger data and the new seat
Stimulus	Interface Interaction by the User (Button Click)
Response	Old seat is assigned to null, and the passenger is assigned to a new seat. (seat is a data field of the coach)
Comments	Host shouldn't do this without passengers approval.

System	HalilKOÇ Inc. Transportation Automation
Use-Case	Notify passengers about changes
Actors	Host
Data	String message
Stimulus	Interface Interaction by the User (Button Click)
Response	The message is sent to passanger via notification.
Comments	

System	HalilKOÇ Inc. Transportation Automation
Use-Case	See the Coach Details
Actors	Host, Driver, System Admin, Passenger
Data	Coach ID
Stimulus	Interface Interaction by the User (Button Click)
Response	Coach details are listed
Comments	

System	HalilKOÇ Inc. Transportation Automation
Use-Case	List the planned voyage hours
Actors	Host, Driver
Data	Coach Data
Stimulus	Interface Interaction by the User (Button Click)
Response	All the planned voyages are listed.
Comments	

Challenges

The main challenge is to determine the relations between the requirements. As the system gets more and more complex the risk of conflicting requirements is increasing.

Another challange is that some requirements need additional requirements to them. For example, an admin or a host should be able to change some details about voyages. But in this case, all the other stakeholders should be notified about the change. And once they are notified, they should be able to request to change details again because new details might not be adequate to all stakeholders.