Phase 3

This is the third and final phase of the project. You may do either the heavyweight or lightweight options for this phase, exempting the final exam if you chose the former. For the heavyweight, you will be implementing a full front end system using the language of your choosing (web, Java GUI, etc.). If you choose the lightweight option, you will only be responsible for the SQL queries required to achieve the functionality described in the rest of this document.
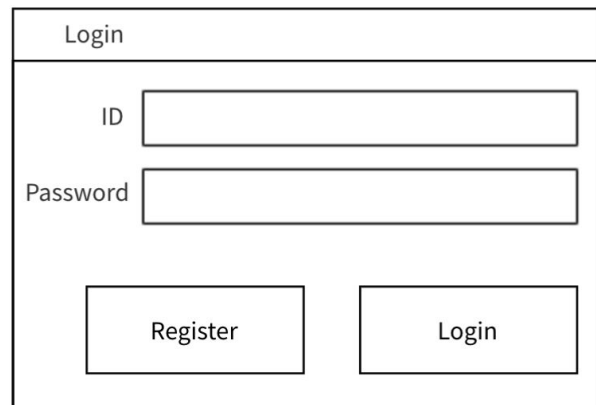
General Notes:
- The following sections contain a functional description of the system along with some mockup screenshots. Each section explains the functionality and then presents an example screen about it.
- **You don't have to follow the UI designs, but your program needs to support all the functionalities. (Pay close attention to tables - they have sortable arrows to indicate which fields are sortable.)**
- These mockups are just for helping you to understand all the functionalities. A complete reorganization of the user interface is permissible as long as your application supports all the functionality listed below. The sections have been grouped by administrator and passenger functionality.
- Arrows in tables: On all arrows that allow for sorting, these should be able to sort the information in ascending or descending order
- Page Navigation: You can do this however you want. Back buttons and such are great, but you can also just refresh your application or whatever to get back to a landing page or login page. As long as you can get to each page and prove your application has the functionality, you will receive full credit.
- If something is not allowed, you should always inform the user and not allow them to proceed

Login

A user must log in before using the application. There are two types of users - passengers and administrators. To log in, a valid username and password combination is required. If a user provides invalid login credentials, an error message should be shown on the screen. If a user does not have an account, they can click on the register button to create an account.

Notes:
- Since all user types share the same login screen, you will need to determine what the user type is before proceeding to the next screen
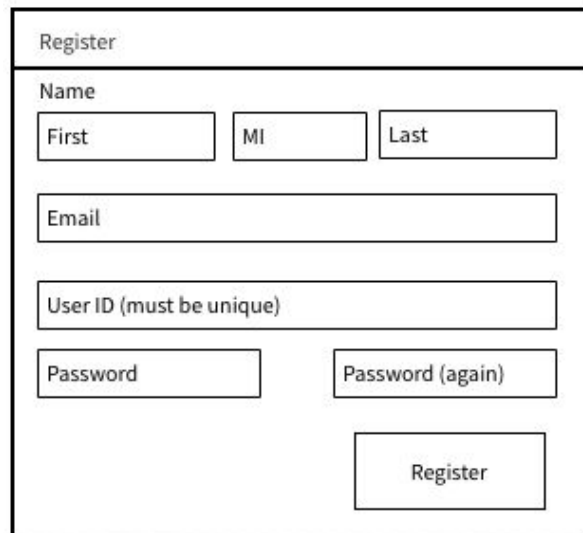
Registration

After clicking the Register button on the login screen, the user will be redirected to a registration page to create a passenger account. All fields are required except for the middle initial.

Requirements
- Username must be **unique**
- Password and confirm password must match.
- Passwords must have at least eight characters.
- An email address is valid (consists of alphanumeric characters, followed by an @ symbol, followed by alphanumeric characters, followed by a ., followed by alphanumeric or . symbols.)

Notes
- Administrator accounts are created in the database - the create account page can only be used to create passenger accounts.
- You may validate the email address using the database (SQL CHECK constraint) or in the front-end application.
- Only passengers have email addresses.
- If these requirements are not met, display an error message

Passenger Only

Passenger Landing

Once a passenger logs into the system, they will be taken to this page with their first and last name displayed at the top. They can then navigate to any of the other passenger pages from this page.

Welcome Jesse Pinkman	
Leave Review	View Trips
View Reviews	Edit Profile
Buy Card	
Go On Trip	

Leave Review

Requirements:
- The station drop-down box should pull from the database all of the current stations, listed in alphabetical order.
- Once submit review is clicked, the page should check to ensure that a station has been selected, as well as a shopping and connection speed rating
- Display an error message if any of these are not selected

Notes:
- The comment is optional
- The default status of a review is pending

Leave a Review

Station ▼

Shopping ★ ☆ ☆ ☆ ☆

Connection Speed ★ ☆ ☆ ☆ ☆

Comment

Submit Review

View Reviews

This page should show all of the reviews left by the user.

Requirements:
- This should pull all of the reviews of the user
- You should be able to sort all of the columns with arrows (i.e. everything but comment)
- There must be some way to view the review selected by the user. In the screenshot, there is a hyperlink for ID that serves this purpose. This should take you to the edit review page for that review
- Clicking the Station link should take you to the station info for that station

Jesse Pinkman's Reviews

ID ▼	Station ▼	Shopping ▼	Connection Speed ▼	Comment	Approval Status ▼
1	Espanya	4	3	Cool architectur...	Pending
2	Catalunya	1	2		Approved
3	Urquinoana	5	4	Absolutely love t...	Rejected

Edit Review

Requirements:
- This should pull all of the relevant information for the review selected from the view reviews page (note the Pending in the top right corner)
- Delete review should remove the review from the database
- Save review should save any changes to the review, as well as updating the time that the review was last updated (see the create table statement for review to get a clearer picture of the purpose of edit)
- Saving should also reset the review's status back to pending for approval or rejection by admin

Edit Review: Espanya						Pending
ID	1					
Shopping	★	★	★	★	☆	
Connection Speed	★	★	★	☆	☆	

Comment

Cool architecture, good shopping, kinda hot in the summertime though

Delete Review		Save Review

Station Info

Requirements:
- Pull all the info shown for the station
- Calculate average values for shopping and connection speed ratings
- The lines should link to their respective summaries (see the next page)
- Only approved reviews for the station should be displayed

Catalunya   Status: Closed

Address: Plaça de Catalunya, 08002 Barcelona

Lines: Line 1 Line 3 Line 6 Line 7

Average Shopping: 4   Average Connection Speed: 2.5

Reviews

User	Shopping	Connection Speed	Comment
Skylar White	3	2	My least favorite station
Hank Schrader	5	3	Great Connections

Line Summary

Requirements:

- This page should display the line name, and stations in descending order
- Both station and order should be able to be sorted
- Clicking a station should take you to the station's summary page
- The number of stops should also be displayed

Line 3	27 Stops

Station ▼	Order ▼
Zona Universitària	1
Palau Reial	2
Maria Christina	3
Les Corts	4
Plaça del Centre	5

Edit Profile

Similar requirements to register a new user
Requirements:
- Should pull all the user's information
- Should check that the password and confirm password are the same
- Should ensure that user ID is still unique
- Should ensure that email is valid
- Should ensure that the first and last names are still valid
- If any of them are invalid, display a message, otherwise, update the user
- Delete should delete the user's account, and all subsequent reviews, cards, and trips for that user should also be deleted
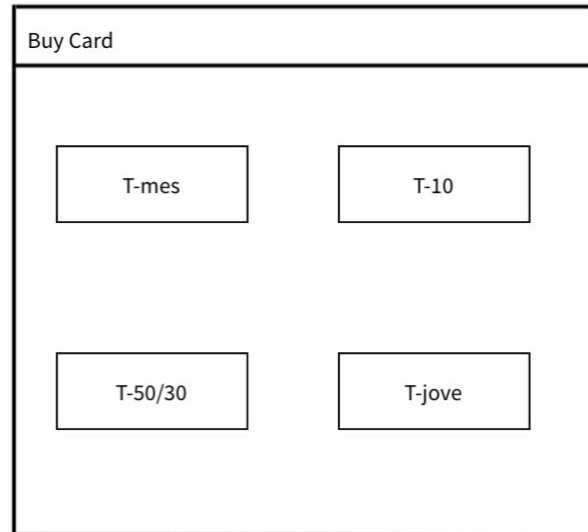
Edit Profile

Name

Jesse   B   Pinkman

Email

jpikie62@hotmail.com

User ID

jp123

Password   Confirm Password

pass_word   pass_word

Delete   Update

Passenger And Admin

Buy Card

Requirements:
- Clicking any of the four buttons should "buy" that card for the user (they should show up in the drop-down in Go on a Trip).
- T-mes cards expire a month from when they are purchased (i.e. if it is purchased March 21, it expires April 21) and have infinite uses
- T-10 cards have 10 uses and never expire
- T-50/30 cards have 50 uses over the span of 30 days
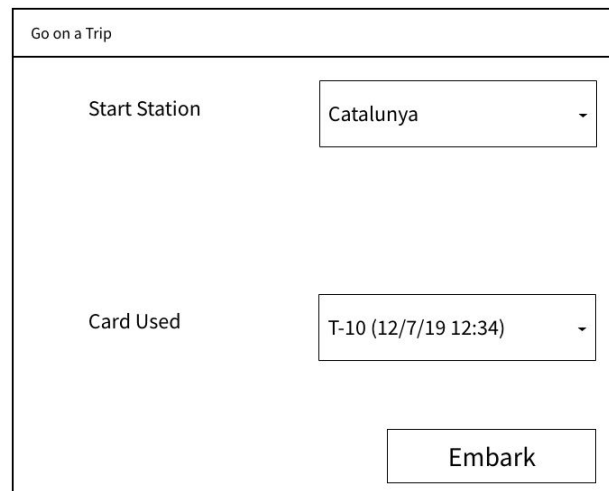- T-jove cards have infinite uses and last for 90 days

```
Buy Card

   [ T-mes ]        [ T-10 ]



   [ T-50/30 ]      [ T-jove ]
```

Go on a Trip

This page should be treated as if a person manned the turnstiles and entered each trip into the system. They put the starting station and the card that the user uses into the database, but they don't know where they are going to or how long it will take the user (see update trip and view trips for a complete picture of how the system works).

Requirements:
- The start station should list the stations in alphabetical order
- The card used should have all of the user's cards
- Only valid cards (ones that have uses left and have not expired) should populate the drop-down
- Embarking with a card should use one of the card's uses

```
Go on a Trip

  Start Station      [ Catalunya          ▾ ]



  Card Used          [ T-10 (12/7/19 12:34)  ▾ ]

                              [ Embark ]
```

Notes:
- The start date-time for a trip should be the current date and time
- The end time should start as null, as well as the end station
- If there are no valid cards, the user should not be able to embark on a trip

View Trips

Requirements:
- This page should pull all of the trips for the user, and be sortable by the indicated columns
- The user should be able to click on a trip and update the trip
- The user should be able to click on any of the stations and view the station summary

My Trips

Start DateTime ▼	End DateTime	Card Used	From ▼	To ▼
13/07/18 12:47	NA	T-mes	Catalunya	NA
03/07/18 14:47	03/07/18 15:17	T-mes	Catalunya	Palau Reial
28/12/17 7:47	28/12/17 07:57	T-10	Arc De Triomf	Universitat
20/12/17 23:47	21/12/17 00:03	T-10	Palau Reial	Espanya

Update Trip

This page should be treated as if the user puts in manually that they are leaving through the turnstiles, similar to Rodalies. This page is reached from View Trips page.

Requirements:
- The Start station and Card Used should be the ones that relate to the selected trip from view trips
- The end station should pull from the stations in the database
- Update saves the end station to the trip

Update Trip

| Start Station | Catalunya |

| End Station | Arc de Triomf ▾ |

| Card Used | T-10 (12/7/19 12:35) |

Update

Admin Only

Admin Landing

Same as passenger landing but with more functionality

Welcome Walter White	Admin

View Trips	Edit Profile
Buy Card	Add Station
Go On Trip	Add Line
Review Passenger Reviews	

Review Passenger Reviews

Requirements:
- Should pull all pending reviews from the database
- Clicking on a station should take you to the station summary page for admin
- Approve and Reject should appropriately approve or reject the review in the database, and the table should no longer show the review that has been approved or rejected

Pending Reviews

User	Station	Shopping	Connection Speed	Comment	
Jesse Pinkman	Espanya	4	3	Cool architecture …	Approve Reject
Skylar White	Catalunya	1	2	My least favorite st…	Approve Reject
Hank Schrader	Urquinoana	5	4	Absolutely love th…	Approve Reject

Edit Profile

- Same as edit profile for Passenger without the email
- Delete for admin should delete all appropriate cards and trips, as well as any stations or lines added by the admin
- Reviews approved by the admin should remain approved, but their admin id should be nulled out

Edit Profile	Admin

Name

Walter	H	White

heisenberg12

pass1234	pass1234

Delete	Update

Add Station

Requirements:
- The station name must be unique, along with the combination of the rest of the information concerning location (address, city, state/province, and zip)
- Each station must be on at least one line
- If the line already has a stop with that order number, a message should show saying telling the user of an invalid order number

Add Station

Station Name

Street Address

City | State / Province

Postal / Zip Code

Line ▼ | Order | Add Line

Line	Order
1	5
2	3

Add Station

- The Add Station button will add the station to the database if all of the above specifications pass and display an error message if they do not pass

Add Line

Requirements:
- ● Line Name is unique
- ● You cannot add two stations with the same order number
- ● The Station dropdown should display all of the stations in alphabetical order
- ● Add line adds the line to the database, should it pass all of the above requirements, and inform the user if any of the above do not pass the requirements

Add Line

Line Name

| Station | Order | Add Station |

Station	Order
Arc de Triomf	1
Tetuan	2
Diagonal	3

Add Line

Line Summary

Requirements:
- This page should display the line name, and stations in descending order
- Both station and order should be able to be sorted
- Clicking a station should take you to the station's summary page
- The number of stops should also be displayed
- The order of the lines should be able to be changed, and the stations should be able to be deleted
- None of the stations should have the same order number for the same line

Line 3		27 Stops
Station ▾	**Order** ▾	
Zona Universitària	1 ▲▼	Delete
Palau Reial	2 ▲▼	Delete
Maria Christina	3 ▲▼	Delete
Les Corts	4 ▲▼	Delete
Plaça del Centre	5 ▲▼	Delete
		Update

Station Info:

Requirements:
- Pull all the info shown for the station
- Calculate average values for shopping and connection speed ratings
- The lines should link to their respective summaries
- Only approved reviews for the station should be displayed
- The possible statuses for stations are open, closed, and half capacity

Catalunya		Status:	Closed ▾	

Address: Plaça de Catalunya, 08002 Barcelona

Lines: Line 1 Line 3 Line 6 Line 7

Average Shopping: 4   Average Connection Speed: 2.5

Reviews

User	Shopping	Connection Speed	Comment
Skylar White	3	2	My least favorite station
Hank Schrader	5	3	Great Connections