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Assignment 4 - OSS Analysis and Design
CSC 415 Software Engineering
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https://github.com/benjaminmeyer/ride-coordination-app

Eight Golden Rules of Interface Design
1. *Strive for Consistency* - The design of the interface is consistent across all pages, from the navigation bar on the top to the upcoming events on the side.
2. *Enable Frequent Users to Use Shortcuts* - Frequents users can see the events that they have signed up for on the sidebar. Those who have used the system can click the the "Auto Sign Up" button to match themselves with a ride based upon their previous selections.
3. *Offer Informative Feedback* - The interface will show the user the ride that have signed up under and anyone else that has signed up.
4. *Design Dialogs to Yield Closure* - Dialogs will show
5. *Offer Simple Error Handling* - Any information used to create organizations and events will be checked for validity. Any false logins will state that the user could not be logged in and the user will have to try again.
6. *Permit Easy Reversal of Actions* - Once a user has signed up as a driver or passenger, the sign up buttons will change to removal buttons for that user.
7. *Support Internal Locus of Control* - From the dashboard, the user can select whether they want to view events or organizations. In the future, the user will be able to sort through the events and organizations to find the one that they want.
8. *Reduce Short Term Memory Load* - All information needed is presented on screen for the user to view.

Test Case Design

While building the application, unit testing and integration testing will need to be done in order to make sure that the application works as expected. In order to do unit testing, Ruby on Rails provides the option to create unit tests when models, migrations, controllers, and views are created. This simplifies the testing process as it decreases the amount of work needed to write tests. Rails also provides a way for test data to be loaded into the database during development, making it simple to have test data in the database even when tables and rows are being moved around and changed. Integration testing will happen as each controller and view is created, making sure that any change that is made does not affect anything that has been currently written.

For debugging and testing, several different tools will be used. Rails comes with its own set of debugging tools, such as "debug" and "to_yaml". Another tool that will be used is the Ruby byebug gem. This allows the program to be examined line by line to look for errors. Valgrind

will be used to find memory leaks in the program. Apache JUnit will be used for load testing to see how many connections the server can handle at once.

Functionality Tested	Inputs	Expected Output	Actual Output
Login System	Correct login	User is logged into the system	
Login System	Incorrect username or password	User is not logged into system and a notice is shown saying that the username or password is incorrect	
Login System	No input	User is not logged into system and is shown a notice that username and password is required	
User creates a new organization	All of the input fields are valid	The organization is created in the database.	
User creates a new organization	Not all of the input fields are valid	The organization is not created and the user is displayed a message saying which fields were not correct.	
User creates new event	All of the input fields are valid	The event is created in the database.	
User creates new event	Not all of the input fields are valid	The event is not created and the user is displayed a message saying which fields were not correct.	
User signs up to drive for an event	User clicks button to mark themselves as a driver	The user is now listed in the "Drivers" list and other users can sign up to ride with them	

User signs up as a passenger	User chooses a driver who they want to drive with	The user is now listed with the driver that they signed under.	
User selects "Auto Sign Up"	Enough information is gathered from the database	The user will be signed up for the event.	
User selects "Auto Sign Up"	Not enough information is gathered from the database	The user will not be signed up for an event and will be displayed a message saying so.	