

DRIVER

SIMPLE carpooling for your
daily commute

INFO 360 C: Design Thinking

Team 12

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DRIVER

DESIGN PROBLEM

Getting to class everyday quickly and cheaply is commonly a major issue for college students. Unfortunately many college students do not have extra money and are extremely short for time. According to a study done at the University of Washington (Northwest Research Group) 26% of college students live more than 5 mile away from campus. The University of Washington has 44,786 students. This means that about 11,644 students commute to campus from a place that is too far away to reasonably walk with textbooks, a laptop, and food packed into their backpacks.

While public transportation is a great solution for many students, it oftentimes does not work as well as intended. According to Google Maps a bus from Bellevue to UW can take upwards of an hour. It is not uncommon for the busses to only show up every half hour. This means if a student misses their bus by a few minutes they might get to school 30 minutes late.

There is a lucky minority of students that own cars, but even they can run into problems. A parking space at UW can cost \$7.50 if you are the only person in the car. If you are driving from Bellevue and want to avoid tolls you will need to drive about 15 miles. At the time of writing this gas costs \$1.66 per gallon. And I will assume a 30 mpg car. Assuming a 5 day week a student will spend nearly 46 dollars just on driving their car. If a student drives their car every day for an entire school year they could end up spending \$1374. All of this is not even considering insurance and other car expenses.

One solution to these problems would be to use a carpool. Unfortunately there are downsides to current carpool solutions. First is the issue of safety. If a student uses a carpool service they will not necessarily know the person they are riding with. While in most cases this may not be a problem, it can add an element of danger due to the lack of accountability from most carpool services. Many of these services do not require real names or other information that could identify the users. Second is the difficulty most users go through to find carpools that match up with their current schedule. But, if we could solve all of the problems with carpools we would open up an option for many student who need help to get to school.

ROLE OF DRIVER

In light of these issues we have designed Driver. Driver is a mobile application to facilitate carpools between students who attend the University of Washington. The goal of the app is to solve the problems of carpools listed above. First by creating accountability by making user sign in with a current UW NetID and including a rating system for all users. And second, by using the UW NetID schedule in concert with Google Calendar and Outlook integration to find carpools that match up with any schedule a user could have.

PROJECT SCOPE

PLATFORM

This will be developed for mobile platforms. Often a user might not have access to a computer when trying to find or set up a carpool, but according to Pearson 83% of college student use a smartphone on a regular basis (Pearson)

AUDIENCE

This application was designed for current students at the University of Washington with a UW NetID who commute to campus regularly. These students will own smartphones. We estimate that number to be around 9,664 students.

DEFINING DATA

UW Student Information:

- Name and Class Schedule will be gathered through the UW NetID login
- Other scheduling matters will be taken through either the in app process or Google Calendar/Outlook integration
- Current location will be gathered through phone location.
- Profile picture will be edited through the edit profile screen

Carpool Information:

- All data regarding carpools will be gathered from the creator of the carpool at the time of creation. Data may be changed at a later date.
- Data will include, but is not limited to: pick-up/drop off locations, price, other riders, driver,

FUNCTIONALITIES

Login

- User will be prompted to login. The information give is then checked in the UW database to make sure they are a current student.

Edit Profile

- User will be able to edit pertinent scheduling information. The user's name cannot be changed.

Creating a Ride

- Drivers will be able create carpools setting the price, desired number of riders, locations, and times.

Finding a Ride

- Riders will be able to find carpools either through proximity, via a map, or through a search box. They are then able to request a ride in the selected carpool.

Accepting Riders

- Owners of carpools are able to see all rider applications and may select whichever they feel best fits the carpool.

Messaging

- Users are able to message each other.

DRIVER

OUT OF SCOPE

Non-Students

- Faculty, staff, students without a UW NetID, and the general public will not be considered as users for this application and therefore will not be able to access it.

Other Campuses

- This application will only serve the UW Seattle campus. It will not serve the Tacoma and Bothell campuses.

Payment

- Payment will not be handled through the application. Users will need to determine their own systems for handling transactions.

DRIVER

PERSONAS & SCENARIOS

PERSONAS



Aaron Abnrey

Aaron Abenrey is a 21 year old Jewish American living in the Rainier Beach area. He is studying Public Policy at the Evan School, in the University of Washington Seattle. He is currently living with his family, consisting of four other members that all share a single car. He usually needs to take the bus to commute to school. If the car is not being used he will take the car to commute to school. He is in charge of his little brother and needs to wait for his little brother to get on the school bus before he leaves for the bus. He is very involved with this little bother education and takes a large amount of time in the morning to make sure his brother is prepared for school. His family economic standing is low income. He is very aware of his financial situation. He is sometimes late to class due to the situation of waiting for his brother school bus as well as bus delays.



Jack Schneider

Jack Schneider is a 22 year old German American living in the Mt. Baker area. Currently studying Informatics at the iSchool, in the University of Washington Seattle. He currently lives alone and drives a sports car. He always drives to school and has a fairly high income. He participates in stock exchanges as well as owns his own clothing brand that is fairly popular. He is not fond of the parking prices at the University of Washington and seeks companionship during this drives to school.

SCENARIOS

Aaron Abenrey has been running late to class almost everyday for the last quarter. He decided to download DRiver to find cheap carpooling. He is considered with pricing, using the DDriver feature he would filter by carpooling price. Fortunately he found a carpooling from Jack West for 1\$, finding the search result pricing suspicious he messages Jack West. Jack confirms that his carpooling is only 1\$ but is only able to drive Monday - Thursday. Aaron still needs to get to school in a timely manner on Fridays. Aaron is able to drive Fridays, he uses DDriver to form his own carpool and charges each participant 3\$.

Jack Schneider has drove everyday for the last quarter and finds that paying 15\$ everyday for parking at the Central Plaza extremely expensive. He decided to download DDriver to find other rider participants to join his carpool.. He places his DDriver features as a driver and set the pricing to 1\$ with the attempt to find more people with the search results to find people closest to his location. He sets his parking location to the Central Plaza for his convets.

DESIGN RATIONALE

OVERALL

Decision: Depending on which group the user belongs in, the theme color of the app will change.

Rationale: This mobile application accommodates two major user groups: drivers and riders. Many of the screens that the two users will be seeing are similar, but the processes and the activities they will accomplish through the app are very different. To help distinguish the two use cases, the app has two color themes depending on which group the user belong to. If the user is a driver, the banner and other buttons will appear yellow. If the user is a rider, they will appear blue.

Decision: There is only one font used throughout the whole app, with the exception of the UW NetID Login related pages.

Rationale: Often times, people get too caught up in choosing different fonts that match. Instead of spending time trying to match different fonts, we decided to use one font and only that font for the whole entire app to create a sense of unity. It give the entire system a clean look and makes it easier for the users to see what is going on.

Decision: Back button is located on the top left corner of the screen.

Rationale: The location and the logo for going back to the previous page is common on many iPhone apps. Many users are already familiar with this button and will not need further guidance in figuring out how to go back a page when using the application.

Decision: The profile pictures are circles.

Rationale: We decided to use a circle as an outline for the profile pictures to create consistency with the rest of the app. Because the corners of the buttons and input boxes are all rounded, we decided that it would be better for the profile pictures to be circles instead of squares. It is also consistent with the checkmark logo on the confirmation screens (19 & 20).

Screen: 19 & 20

Decision: The screen simply states “completed” with a check mark in the middle.

Rationale: Instead of having a separate confirmation page for each tasks, there is one confirmation page for all tasks that requires the user to submit something. This makes the developing process more efficient. Not only that, it also creates consistency throughout the app.

Screen: 19 & 20

Decision: Links back only to the Dashboard.

Rationale: Though this screen may feel restricting to the user, since there is only one option displayed on the screen, “Go To Dashboard”, the simple design is very clear and signifies to the user that the task has been completed. It establishes an end to the current process and resets to the homepage, or the dashboard, to indicate to the user a beginning of a new process. The back button also does not exist on this page because once you submit a request or a change on your profile, that task should be somewhat final. Though the user has the ability to edit and make changes later, once something is submitted the user should not just be able to go back and forth and change the content of the submission easily.

DRIVER

Name: Schedule (display and input)

Description: The schedule is a visual display of a user's time at UW. It is also used for entry of one's schedule.

1. Week Days:

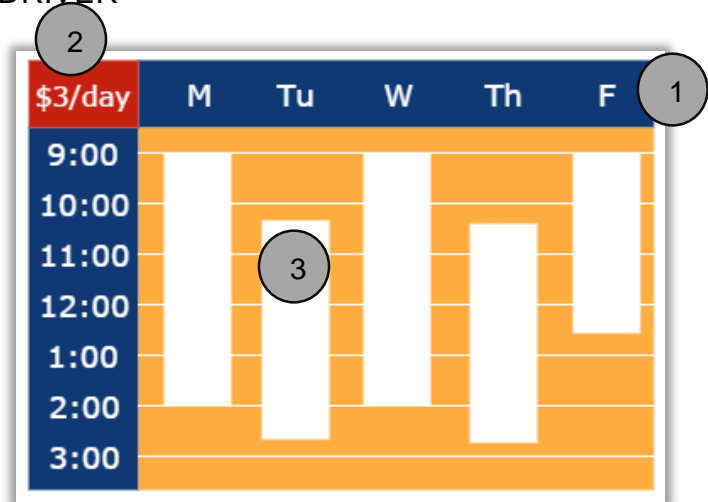
- Description:** The days of the week, abbreviated
- Rationale:** A user's schedule often changes from day to day based on class and club schedules. It's imperative that the schedule is flexible enough to let a user change their scheduled times day by day.

2. Price (optional):

- Description:** The price per day a driver charges riders. This is optional: not all users will have a price (such as exclusive riders). In such a case, the area is left red with no text.
- Rationale:** Because of table headers, this rectangle of space was left free for a small piece of information. Because students told us that price was an important factor in deciding on a carpool, we include it here, next to the schedule. This gives plenty of easily glanceable information for students looking for a carpool.

3. Time Bars:

- Description:** These bars represent the time a student is at or travelling to UW. The top edge of the rectangle is the arrival time, and the bottom part the departure time.
- Rationality:** There are many ways to display a schedule. We elected to use a bar chart for several reasons. First, many users of Outlook and Google Calendar are familiar with bars representing blocked out time on schedules. Second, it's far easier to glance a the schedule and understand it in its present visual medium than if times were listed by text. Third, it's intuitive to edit on a touch screen, where users can manipulate objects far better than on a computer.



Setting Functionality: On certain screens, a user may edit their schedule (the initial schedule is pulled from myUW). To input a time, the user drags from top to bottom or bottom to top on the orange area. The orange area is invisibly divided into columns so that dragging underneath M will not change the schedule for F. When a bar is present, the user may tap once to bring up a form entry that allows for the time to be typed in. Otherwise, the user may tap and drag the top or bottom of a block to move it up or down on the schedule. If the user pulls the block past the top or bottom, the schedule grows in height, adding more times along the side. To clear a block entirely, a user may hold the block until an x appears over the top right. Tapping the x removes the block.

DRIVER

Name: Day Chooser

Description: The day chooser allows riders and drivers to pick parts of another person's schedule. The form acts like a checkbox system with headers: To UW and From UW are the highest level checkboxes, with the days of the week being child selectors. As with regular selectors, a parent header must be selected for a child header to be selectable.

1. Direction Headers:

- a. **Description:** A user may select both or one direction to travel in. Tapping a blacked-out header turns all trip markers to selectable, and the direction header to the red active color. If a trip is full all days one way, that direction header is left greyed out.
- b. **Rationale:** Nested checkboxes, while fairly obvious to users, does not perform well on mobile applications. Built for computers, the selection areas to toggle checkboxes are frequently too small and lead to a degraded performance. By using the same information flow and rules as nested checkboxes, but adapting them to mobile touch based usage patterns, our design caters to the mobile market

2. Trip Markers:

- a. **Description:** When a direction header is inactive, trip markers remain greyed out. If a section header is activated, trip markers are selectable but inactivated. If the trip is at capacity, the trip marker remains greyed out. A user may tap any inactive or active button to toggle it: this signals the specific directions a user wishes a carpool for. The times above each trip marker correspond to the times listed on the schedule. Disabling an active direction header clears and greys out all child trip markers.
- b. **Rationale:** Trip markers act as children checkboxes to the parental checkboxes. Similarly to how a computer handles child checkboxes, these trip markers may only be interacted with while the parent Direction Header is selected.

DRIVER

Name: Colors

Description: Our application uses three main colors plus white, black, and several shades of grey. Blue and yellow are our primary colors, used for section headers, contrasting sections, selectors, the schedule, and more. Red is used as an action color, exclusively with buttons and notifications.

Rationale: We chose our shades of red, yellow/orange and blue for their contrast and conventional meanings.

The first reason for our color choice was the high contrast between the three. One color set on top of another gives good interplay between the two, drawing attention to the object at hand. This is important in two scenarios: when the screen is difficult to see (e.g. the phone is in direct sunlight while a user waits for pickup) and when a user is colorblind.

The most common color-blindness is red-green, with a prevalence of over 10% in some populations. For this reason, we stayed away from using both colors in our application, sticking only with red. No other type of colorblindness comes close to the prevalence of red-green, but we made sure to test our colors on a grayscale to ensure proper contrast even for people with total color blindness. We're confident these colors will work for users with any colorblind expression.

Another power our colors contain is in the feelings evoked by each one. Our blue, used primarily by riders, evokes a calming aesthetic. The yellow/orange, used primarily by drivers, has a relaxed but cheerful quality. Finally, our red signifies important actions through an alert tone.

Our consistent use of color helps users get familiar with our application. Blue appears as a primary color when acting as a rider, yellow as driver, and red when attention is necessary or an action made. For example, because red is used to grab attention, continue buttons are immediately evident as press-able buttons. On our day chooser, the active red direction header signals that the user has made an important choice.



Blue

Red: 16
Green: 57
Blue: 115



Yellow/Orange

Red: 255
Green: 172
Blue: 65



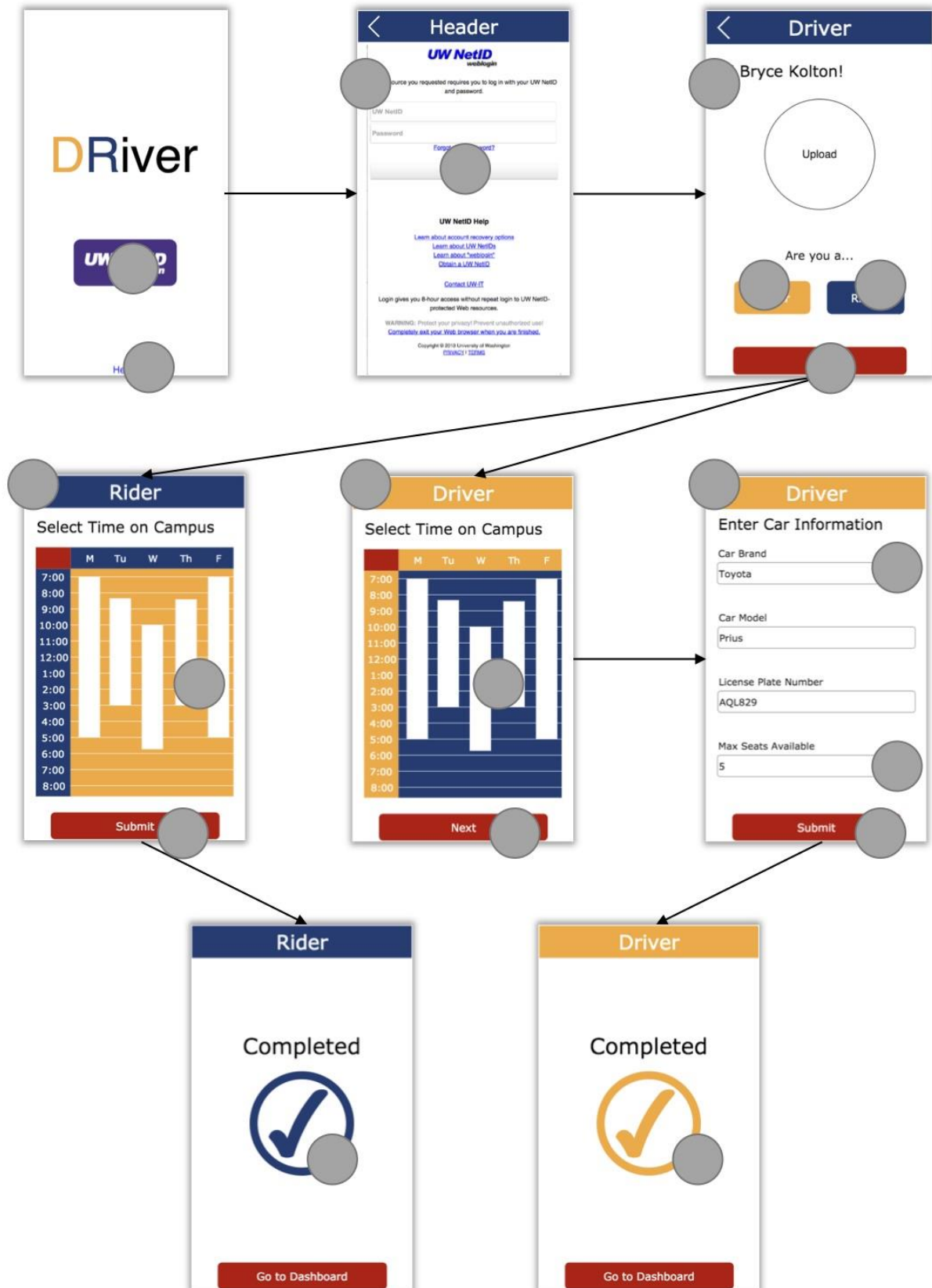
Red

Red: 197
Green: 32
Blue: 16

DRIVER

LOGIN

DRIVER



DRIVER

Name: Launch Page

Description: First launch page the users will encounter when opening the application.

1. **Overall:**

- a. **Description:** The front page of the app is a very minimal design with the title of the app in the center, a large UW NetID Web login button right below it, and a help button for to help answer questions the users may have or resolve login errors.
- b. **Rationale:** We decided on this very simple design for two reasons. First, aesthetically, the login page looks much cleaner and pleasing since it is not overcrowded with unnecessary information. Secondly, we wanted to ensure that the only people with access to the use of the app are current UW Students with a UW NetID. Because of this restriction, no other login options are necessary for our app. It also prevents any other possible errors which may occur from users' actions since there are only two actions available on this page: logging in and finding help.

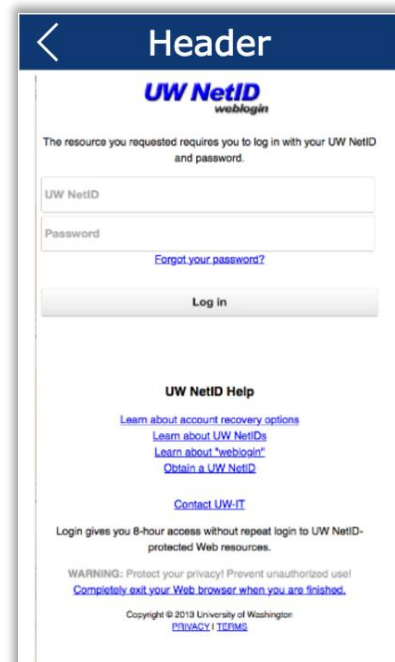


Name: UW NetID Login Page

Description: Login using UW NetID.

1. **Overall:**

- a. **Description:** UW NetID Login page is identical to the one used to log into Canvas and MyUW.
- b. **Rationale:** This page is kept consistent with the login process as Canvas and MyUW because that is the interface UW students use to seeing when logging into different applications using their UW NetID. Because we are staying with the familiar design, the users would not have to relearn the login process.



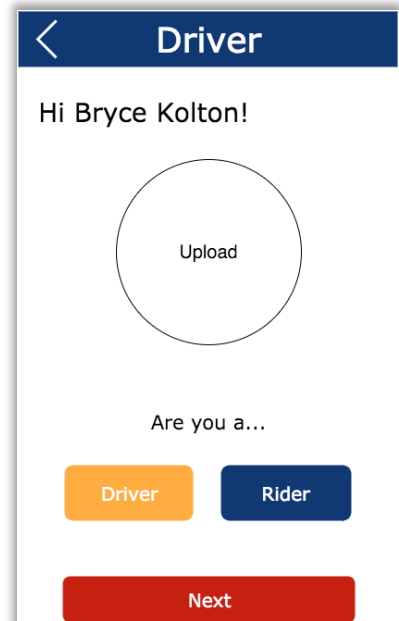
DRIVER

Name: Profile Setup Page

Description: Prompts user for a profile picture and whether they wish to use the app as a driver or rider.

1. **Overall:**

- a. **Description:** The initial setup page only prompts the user for a profile picture and whether they wish to be a driver or rider.
- b. **Rationale:** On this page, we only included things that were necessary for the use of the service and both drivers and riders. Because we are using UW NetID to authenticate the user, there is no need to prompt the user for their name. Since we will be using GPS locations to choose pick up locations, there is no need for the user to input their home address. The app also includes a messaging tool, eliminating the need for a phone number to set up an account. We decided a profile picture was necessary for multiple reasons. First, there could be multiple people with the same name. Second, if you are meeting your carpool mate for the first time, pictures can help identify the driver or rider to ensure security. We also need to know whether the user is going to be using the app as a driver or a ride to determine the next step in their login process.



DRIVER

Name: Time Schedule Setup Page

Description: Prompts user for the time they are in the U-District.

1. **Overall:**

- a. **Description:** User taps and drags to select the times they depart from both locations.
- b. **Rationale:** Our application will be used on phones, which are exclusively touch devices. We decided to use this approach as it was better than the alternatives. Form input is time consuming and makes sense for a keyboard and mouse input style. The visual style also clearly conveys time information. Day abbreviation along the top is immediately recognizable, as are the times on the side. The price in red gives an estimate of how much the carpool would cost at a glance. The horizontal bars assist the user in reading the exact start and end of the bars relative to the times on the side. High contrast colors also help with readability, especially in glare, sunlight, or low screen brightness conditions. Even with Flux and other screen aides, the colors remain vibrant and differentiated.

The image displays two mobile application screens side-by-side. The top screen, titled 'Rider', has a blue header with a back arrow and the title. Below the header is the text 'Select Time on Campus'. The main area features a grid with days of the week (M, Tu, W, Th, F) as columns and times (7:00 to 8:00) as rows. Orange bars represent selected time slots. A red bar at the bottom indicates a price. The bottom screen, titled 'Driver', has an orange header with a back arrow and the title. Below the header is the text 'Select Time on Campus'. The main area features a grid with days of the week (M, Tu, W, Th, F) as columns and times (7:00 to 8:00) as rows. Blue bars represent selected time slots. A red bar at the bottom contains the text 'Next'.

DRIVER

Name: Driver Information Setup Page

Description: Prompts user for information about their car.

1. **Car Brand:**
 - a. **Description:** The users must choose the car brand using a drop down menu instead of a free input.
 - b. **Rationale:** By using a drop down menu versus a free input, the user is restricted from typing in fake answers. It helps ensure that the users are taking this seriously and that they are not making up an imaginary car.
2. **Max Seats Available:**
 - a. **Description:** The users must choose the maximum seats available in their car using a drop down menu instead of a free input.
 - b. **Rationale:** By using a drop down menu versus a free input, the user is restricted from typing in letters or spaces where only numbers should be inputted. It prevents errors which may occur from wrong input from the user.
3. **Driver Only:**
 - a. **Description:** The app does not prompt riders for this information.
 - b. **Rationale:** Riders do not need to enter their car information because they will be riding other people's car and not driving them.

The screenshot shows a mobile app interface for a driver information setup page. The header is orange with a back arrow, the title "Driver", and a grey circle with the number "3". The main title is "Enter Car Information". There are four input fields: "Car Brand" with "Toyota" selected (marked with a grey circle "1"), "Car Model" with "Prius", "License Plate Number" with "AQL829", and "Max Seats Available" with "5" selected (marked with a grey circle "1"). A red "Submit" button is at the bottom.

DRIVER

PROFILE

Rider

Bryce Kolton
 RIDER
 ★★★★★

	M	Tu	W	Th	F
7:00					
8:00					
9:00					
10:00					
11:00					
12:00					
1:00					
2:00					
3:00					
4:00					
5:00					
6:00					
7:00					
8:00					

Driver

Bryce Kolton
 DRIVER
 ★★★★★

	M	Tu	W	Th	F
7:00					
8:00					
9:00					
10:00					
11:00					
12:00					
1:00					
2:00					
3:00					
4:00					
5:00					
6:00					
7:00					
8:00					

Car Info

Car Brand
 Toyota

Car Model
 Prius

License Plate Number
 AQL829

Max Seats Available
 5

Driver

Bryce Kolton

Nickname

	M	Tu	W	Th	F
7:00					
8:00					
9:00					
10:00					
11:00					
12:00					
1:00					
2:00					
3:00					
4:00					
5:00					
6:00					
7:00					
8:00					

Car Brand

Toyota

Car Model

Prius

License Plate Number

AQL829

Max Seats Available

5

Rider

Bryce Kolton

Nickname

	M	Tu	W	Th	F
7:00					
8:00					
9:00					
10:00					
11:00					
12:00					
1:00					
2:00					
3:00					
4:00					
5:00					
6:00					
7:00					
8:00					

Rider

Completed

Go to next screen

Driver

Completed

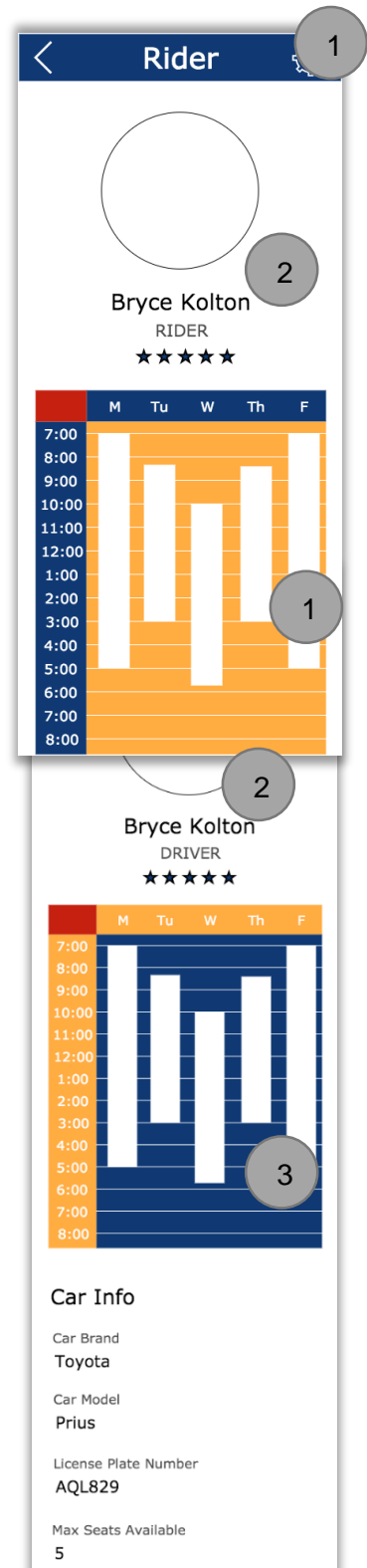
Go to next screen

DRIVER

Name: Profile Page

Description: Displays the user's information.

1. **Edit Button:**
 - a. **Description:** Gear logo represents editing the profile page.
 - b. **Rationale:** We decided to use the gear logo because it is the standard edit button in many mobile apps. In many applications, a gear logo is often used to signify that is where you press in order to edit the content on that page.
2. **Rating System:**
 - a. **Description:** Star rating system represents the quality of the driver or rider.
 - b. **Rationale:** We decided to use a five star rating system to signify the quality of the driver or rider to allows users to pick the quality of their fellow carpool mates as well as an incentive for the users be respectful when carpooling with each other. We decided on a five star system because that is what many people are used to seeing on site like Amazon, Yelp and more. It is the most common rating system we see on many services.
3. **Car Information:**
 - a. **Description:** Includes car information below the user's schedule.
 - b. **Rationale:** We included this information on the profile page because it is specific to the user. It is not included on the rider profile screen because riders do not require a car to use the service.



DRIVER

Name: Edit Profile Page

Description: Allows users to edit their page.

1. **Nickname:**

- Description:** Users have the option to add a nickname for themselves but not the ability to change their name.
- Rationale:** Because we are retrieving the user's name using UWNNetID, the users should not be able to change their name. But we understand that some students have a different name they use. Some students use their middle name instead of their first name. Some students have an English name because their original name is too hard for many people to pronounce. Some students simply grow up using their nickname like "Betty" for "Elizabeth." That is why we decided to add in a nickname feature for those students wishing to be identified using a different name. This nickname will appear above the full name of the user on the user profile page once added.

2. **Car Information Input:**

- Decision:** The input for car information is identical to the one in the initial setup.
- Rationale:** It creates consistency within the app. The users will already be familiar with the process and know how to input the information.

Rider

Bryce Kolton

Driver Rider

Nickname

Driver

Bryce Kolton

Driver Rider

Nickname

Car Brand
Toyota

Car Model
Prius

License Plate Number
AQL829

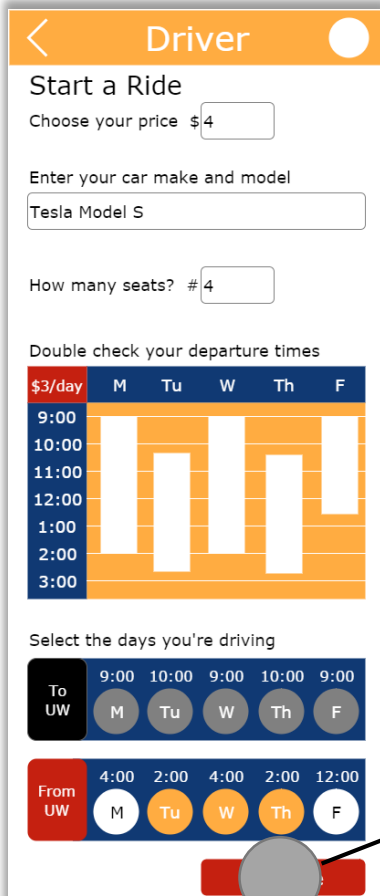
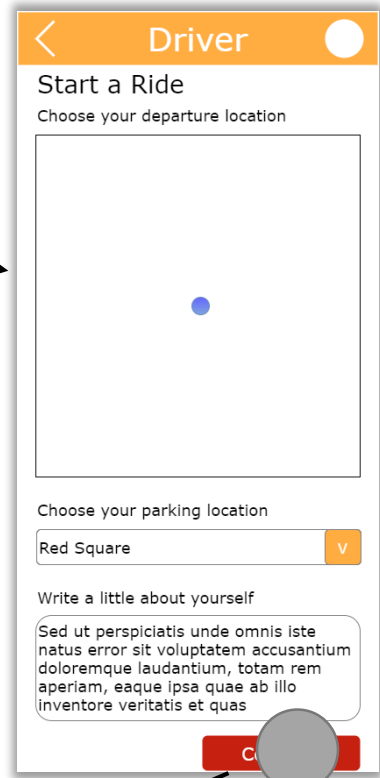
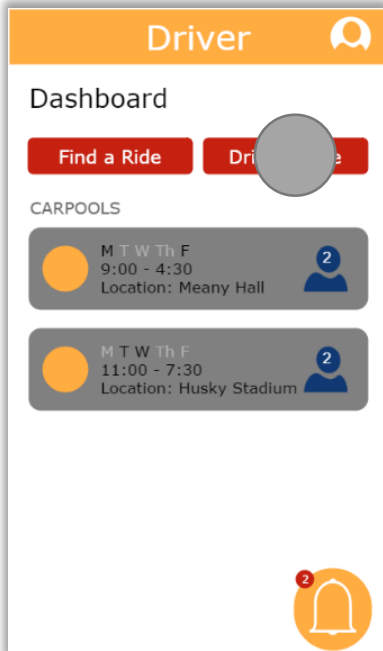
Max Seats Available
5

Submit

DRIVER

CREATING A RIDE

DRIVER



DRIVER

Name: Choose Starting Location

Description: This screen is the first in the thread of a user creating a new ride as a driver. The user is able to select a starting location and a parking location

1. **Map:**

- a. **Description:** The map originally starts at a user's current location, marked as a blue dot. When the user moves away from their current location, a map marker (similar to the ones found in Map Search) appears in the center of the view window. The user may use touch gestures to move the pointer around to place it at their departure point
- b. **Rationale:** The new driver needs to input the location they depart from. Using a map is a lot easier than entering an address, especially if the departure point is a carpool lot or other location other than the user's home.

2. **Parking Location:**

- a. **Description:** This select menu contains all the possible parking lots for students to use. Besides just UW lots, popular off campus locations are also listed.
- b. **Rationale:** The driver needs to have a set location they stop at. This allows for riders to see if a driver will be stopping close to their destination building. As UW is a large campus, this data can be helpful when choosing a carpool as a rider.

3. **About:**

- a. **Description:** This section allows the user to write a little bit of information about them. It is restricted from being too long.
- b. **Rationale:** When we talked with students, one of the big questions was security. Users wanted to be able to check whether drivers and other riders were safe. A great way to break the ice and encourage personal interaction is with small blurbs that explain a little about the person

The screenshot shows a mobile app interface for a driver to start a ride. At the top, there's an orange header with a back arrow, the title 'Driver', and a profile icon. Below the header, the main title is 'Start a Ride'. The first section is 'Choose your departure location', which contains a map (callout 1) with a blue dot in the center. The second section is 'Choose your parking location', which has a dropdown menu showing 'Red Square' (callout 2) and a small orange button with a 'v' icon. The third section is 'Write a little about yourself', which has a text input area with placeholder text (callout 3). At the bottom, there is a red 'Continue' button.

DRIVER

Name: Ride details

Description: Input details about the ride, including the car make and model, price, car capacity, and schedule

1. **Price:**

- Description:** Upon tapping, brings up a number pad that allows the user to input any two digit number. Numbers may have cents attached if below \$10 (e.g. 2.20)
- Rationale:** Paying for the carpool was a concern of students we talked to. Drivers of a carpool wanted to be reimbursed for gas and transportation. Users may charge any price under \$100 that they want, but limited to whole numbers above \$10 to keep from stranger fees like \$12.78

2. **Make and Model:**

- Description:** Driver taps to bring up keyboard. Driver may enter any string for their car make and model.
- Rationale:** Requiring a make and model for the car helps riders identify the car on the first day of the carpool and make decisions based on the car

3. **Capacity:**

- Description:** Driver taps the field to open up a number pad. Driver may enter any number up to 20 to describe their free capacity
- Rationale:** Our system needs to know how many seats are available for riders. Trips that are full are not represented on the map as available.

4. **Schedule Check:**

- Description:** Driver may edit schedule if it has changed. Functionality as described previously
- Rationale:** We ask the driver to check their schedule in case it has changed since they first started the app. During the first few days of the quarter, schedules can change drastically as users move their schedules around. Making sure to have the most up-to-date information will minimize problems later.

5. **Day Chooser:**

- Description:** Driver chooses the days and directions they're free to drive. Functionality as described previously
- Rationale:** We give the driver fine granularity over the directions and time of travel. Although one may assume a driver heads home after leaving UW at night, the reality for many students is that they have part time jobs and other obligations outside campus. Take an example where a driver always drives to UW from home, but after school heads to piano recital; this leaves them unable to carpool home after UW, but shouldn't stop them from carpooling to UW

The screenshot shows the 'Driver' app interface with the following elements and callouts:

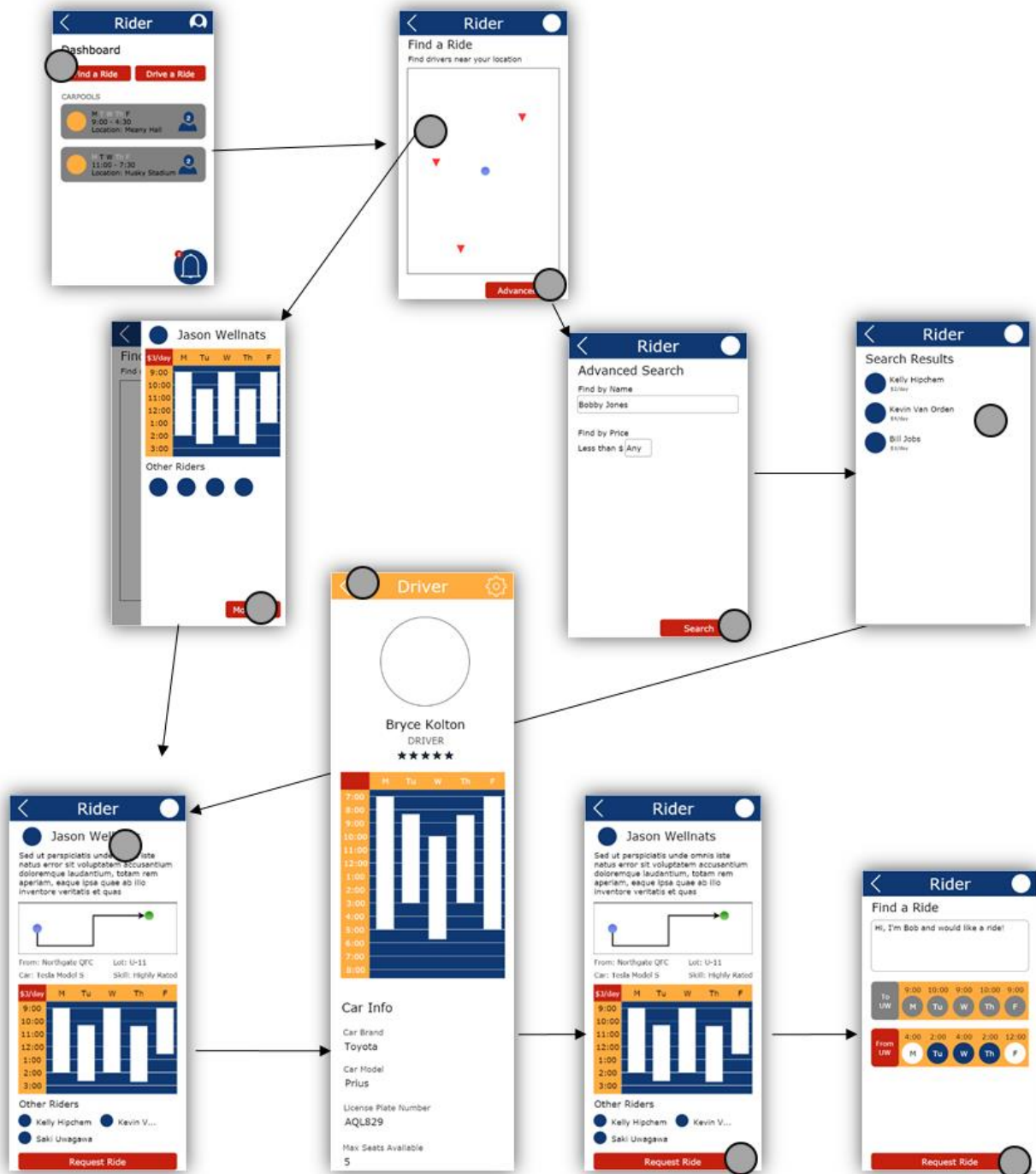
- 1:** 'Choose your price' input field with a value of '\$4'.
- 2:** 'Enter your car make and model' input field with the text 'Tesla Model S'.
- 3:** 'How many seats?' input field with a value of '# 4'.
- 4:** 'Double check your departure times' section showing a grid of times (9:00, 10:00, 11:00, 12:00, 1:00, 2:00, 3:00) and days (M, Tu, W, Th, F). The 'To UW' row is highlighted in red.
- 5:** 'Select the days you're driving' section showing a grid of times (9:00, 10:00, 9:00, 10:00, 9:00) and days (M, Tu, W, Th, F). The 'From UW' row is highlighted in red.

At the bottom of the screen is a red 'Continue' button.

DRIVER

FINDING A RIDE

DRIVER

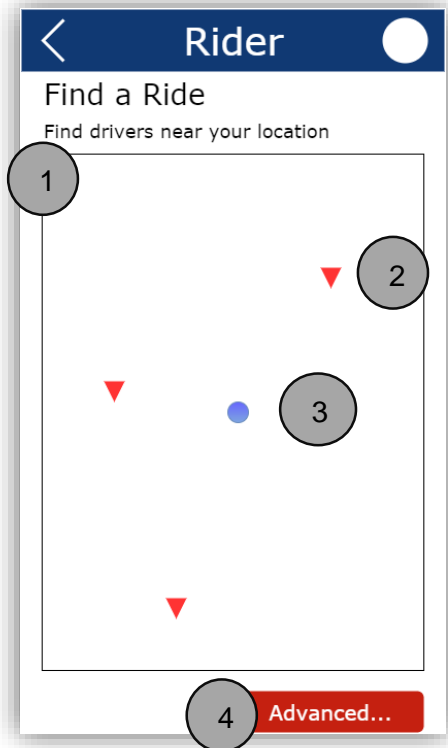


DRIVER

Name: Map Search

Description: Find carpools around the user's current location or a location specified by them.

1. **Map:**
 - a. **Description:** Shows all available carpools in the vicinity of the user's location.
 - b. **Rationale:** Finding a carpool is often about making one's life easier. The easiest thing for most people is to travel as little as possible. Therefore by using this map a user can determine how far they will have to travel to get to the carpool.
2. **Carpool:**
 - a. **Description:** Shows the approximate pick-up location of a carpool. Tapping on the triangle will bring up an overlay with a summary of the carpool.
 - b. **Rationale:** The carpools needed to be easily discerned from the current location so we made them a different color (red) and a different shape (triangle). They are small enough that if there are many carpools on screen it will not overlap too much, but large enough that it is possible to tap on them.
3. **User Location:**
 - a. **Description:** Shows the user's current location or a location specified by them. Uses this point as the basis for the search.
 - b. **Rationale:** While often a user will want to use their current location as the start of the carpool. There is a possibility that they may want to find a carpool from a different place. The ability to move the circle allows for this possibility.
4. **Advanced Search Button:**
 - a. **Description:** Takes the user to the advanced search screen when pressed.
 - b. **Rationale:** If the user cannot find what they need on the map screen we wanted it to be clear that there were other ways to find a carpool. That is why we made the button bright red. It is very clear that this button takes the user to advanced setting for searching.

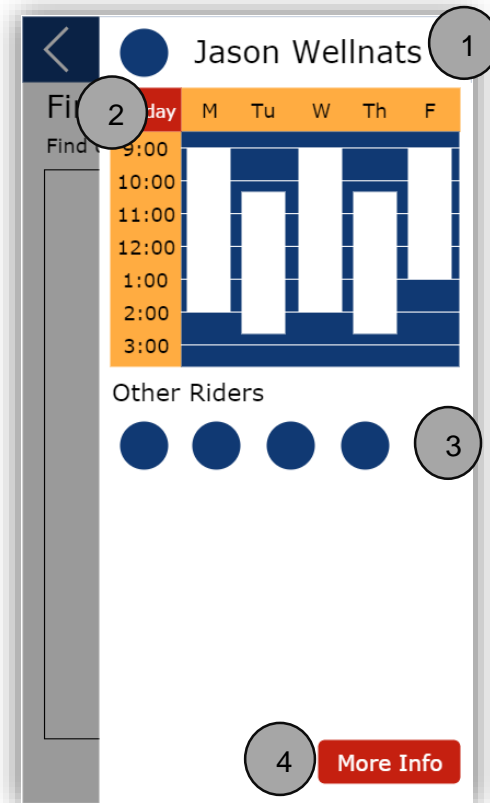


DRIVER

Name: Map Search Overlay

Description: Shows summary information about a selected carpool from the map.

1. **Driver:**
 - a. **Description:** Shows who the driver is of the carpool. Tapping the name will take the user to a profile screen of the driver.
 - b. **Rationale:** Again we believe the user will want to know who the driver of the carpool is so that they can find someone they are looking for. They may also want to inspect the driver profile to see if they have good ratings
2. **Schedule:**
 - a. **Description:** A visual depiction of the times that the carpool runs. Shows the days of the week, time of day, and price.
 - b. **Rationale:** Users need to be able to determine if the carpools runs at the times they need on various days of the week. This allows them to visually see this information.
3. **Other Riders:**
 - a. **Description:** Shows other riders currently in the carpool.
 - b. **Rationale:** Allows the user to determine if the carpool has any other people they might find desirable or undesirable.
4. **More Info Button:**
 - a. **Description:** Takes the user to the carpool information screen when pressed.
 - b. **Rationale:** While this overlay provides most information, there is still a lot that must be left out due to space restrictions. This button allows the user to get more information directly from this screen.



DRIVER

Name: Advanced Search

Description: This screen is for riders trying to find a carpool to join.

1. Search by Name:

- a. **Description:** This text area is for finding carpool by names of people running them.
- b. **Rationale:** We determined that many people in car pools will want to do so with people they know. This feature allows for them to find their specific desired carpool.

2. Search by Price:

- a. **Description:** Allows all queried carpools to be filtered by price.
- b. **Rationale:** For many college students, money is very tight. We decided that allowing them to filter by price would decrease the amount of carpools that did not fit their needs that they would need to look through.

3. Search Button:

- a. **Description:** Searches the available carpools for the specific inputs by the user.
- b. **Rationale:** The button is in red to be very visible to the user. It is the only thing on the screen red so we felt it would be hard for the user to miss it.

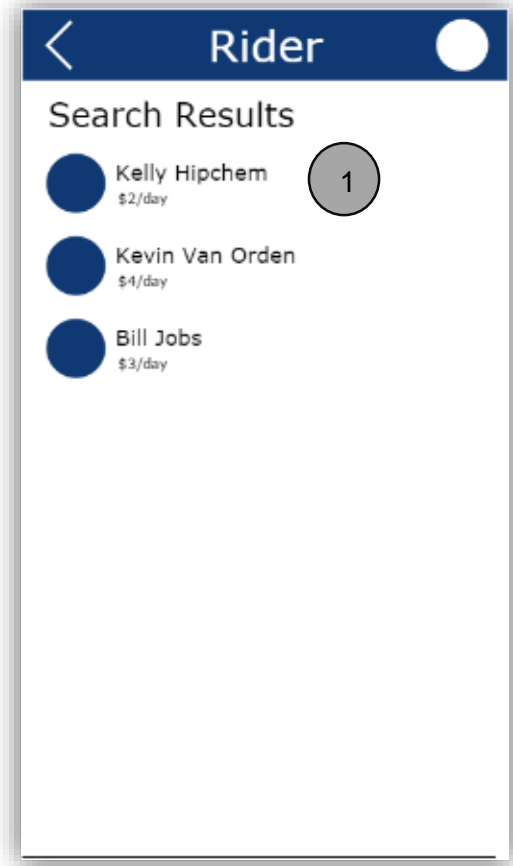
DRIVER

Name: Search Results

Description: Shows all available carpools that match the search

1. **Search Result:**

- a. **Description:** Shows basic information about the carpool. Tapping it will take the user to the carpool's information page. It shows the carpool's owner and the price per day.
- b. **Rationale:** We determined that the only things necessary to show to user in the results page was the name and price because these are the two most important things to the users. They would like to know if they have found the correct carpool (name) and if they can afford it (price).

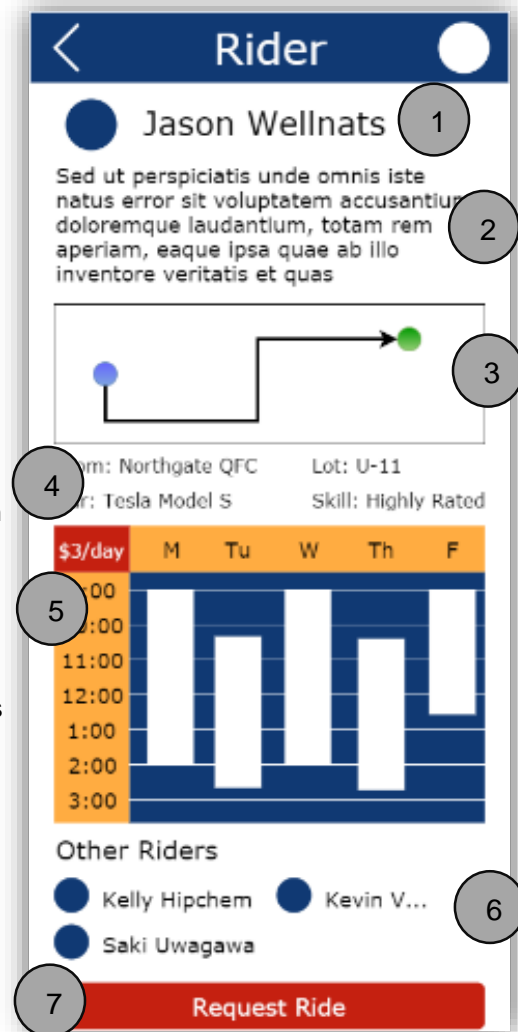


DRIVER

Name: Carpool Information

Description: From this screen the user can see all the information about the carpool they have selected.

1. **Driver:**
 - a. **Description:** Shows who the driver is of the carpool. Tapping the name will take the user to a profile screen of the driver.
 - b. **Rationale:** Again we believe the user will want to know who the driver of the carpool is so that they can find someone they are looking for. They may also want to inspect the driver profile to see if they have good ratings.
2. **Description:**
 - a. **Description:** A description of the carpool with any information that is not already present in the rest of page.
 - b. **Rationale:** It is very possible there are other things a driver might need to let a potential rider know that we have not included in our design. This allows for any extra information to be included. It will also let the rider know the kind of culture the carpool has.
3. **Map:**
 - a. **Description:** A map showing the current route of the carpool
 - b. **Rationale:** This allows the user to determine if the route fits their needs. For example if the rider has a child they would need to drop off. They can check to see if the carpool drives near the child's school.
4. **Misc. Information:**
 - a. **Description:** Shows miscellaneous information about the carpool. Shows pickup location, Parking lot to be used, car type and model, and skill of the driver.
 - b. **Rationale:** The user needs to know where the carpool picks up and drops off so that they can determine if it meets their needs. The car models lets them determine if that kind of car is fuel efficient enough or safe enough. The skill lets them determine if they should feel safe driving with that person.
5. **Schedule:**
 - a. **Description:** A visual depiction of the times that the carpool runs. Shows the days of the week, time of day, and price.
 - b. **Rationale:** Users need to be able to determine if the carpool runs at the times they need on various days of the week. This allows them to visually see this information.
6. **Other Riders:**
 - a. **Description:** Shows other riders currently in the carpool.
 - b. **Rationale:** Allows the user to determine if the carpool has any other people they might find desirable or undesirable.
7. **Request Ride Button:**
 - a. **Description:** Takes user to the request a ride page for this specific carpool
 - b. **Rationale:** It was made red to stand out and be visible to the user.

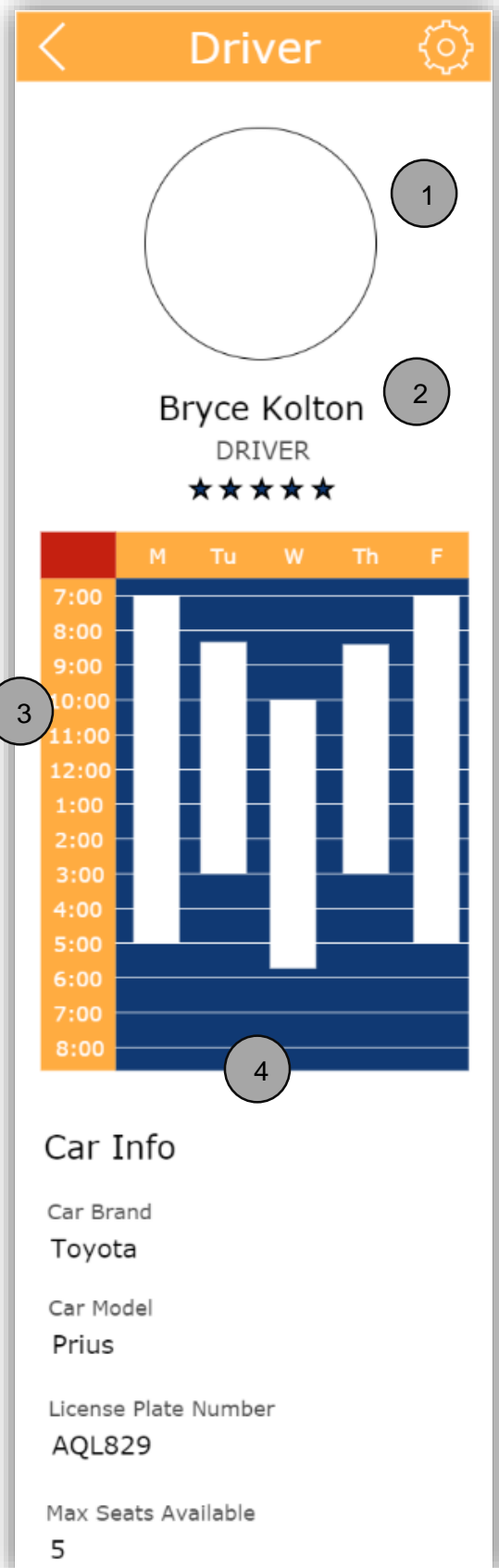


DRIVER

Name: Driver Profile

Description: Shows information about the selected driver.

1. **Profile Picture:**
 - a. **Description:** A picture of the user of the current profile. It is gathered from their UW NetId.
 - b. **Rationale:** We felt that if the user was coming to this page it was likely because they did recognize the name so a prominent picture at the top of the screen was most appropriate.
2. **Basic Driver Info:**
 - a. **Description:** Shows the name, type, and rating of the selected user.
 - b. **Rationale:** The name is a very important identifier so it needs to be easily found. Determining what type of person (Driver or Rider) is also important for making sure that they can help the user out. Ratings are extremely important for choosing drivers. So here they are large stars that are easy to see.
3. **Schedule:**
 - a. **Description:** Shows what times the Driver has scheduled to drive a carpool.
 - b. **Rationale:** This helps the user determine if the Driver has the time to work around whatever schedule might be needed.
4. **Car Info:**
 - a. **Description:** Shows all major information about the car.
 - b. **Rationale:** As a rider the user may want to know what kind of car they will be riding in for various reasons. It will also help the user identify the car when it shows up to pick them up.



DRIVER

Name: Carpool Request

Description: Allows the user to send a request to the driver of the carpool to join the carpool.

1. **Request Message:**

- Description:** Allows the user to send a message along with the request to communicate anything they might deem necessary.
- Rationale:** The message box is at the top of the screen so that the user does not forget to fill it out. It is comparatively large so that multiple lines can be read at once.

2. **To UW Schedule:**

- Description:** Shows what days the carpool is driving to UW. If they are grey out then it does not run on that day. If they are white they can be selected, which turns them blue, to indicate that the user would like to be part of the carpool on those days.
- Rationale:** The schedule is bright orange so the user will easily be able to see it. Each day has a time above it to show when the carpool leaves. Selections are clearly defined by the color change. This lets the user pick which days work best for them.

3. **From UW Schedule:**

- Description:** Shows what days the carpool is driving from UW. If they are grey out then it does not run on that day. If they are white they can be selected, which turns them blue, to indicate that the user would like to be part of the carpool on those days.
- Rationale:** The schedule is bright orange so the user will easily be able to see it. Each day has a time above it to show when the carpool leaves. Selections are clearly defined by the color change. This lets the user pick which days work best for them.

4. **Request Ride Button:**

- Description:** Sends the request made above to the driver of the carpool so that they can determine if they would like to add the user to the carpool.
- Rationale:** It is the largest button on the screen and is separated so that it is easy to find. It clearly indicates that it will "Request Ride" so the user know what it will do.

Rider

Find a Ride

Hi, I'm Bob and would like a ride!

To UW	9:00	10:00	9:00	10:00	9:00
M	Tu	W	Th	F	

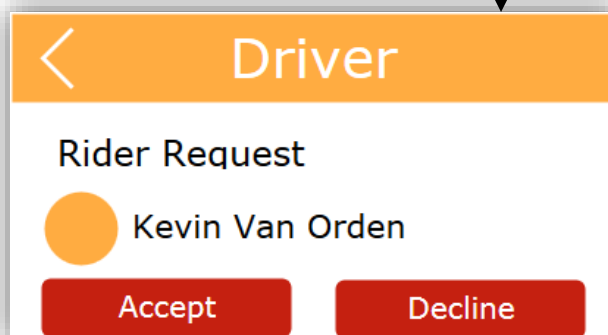
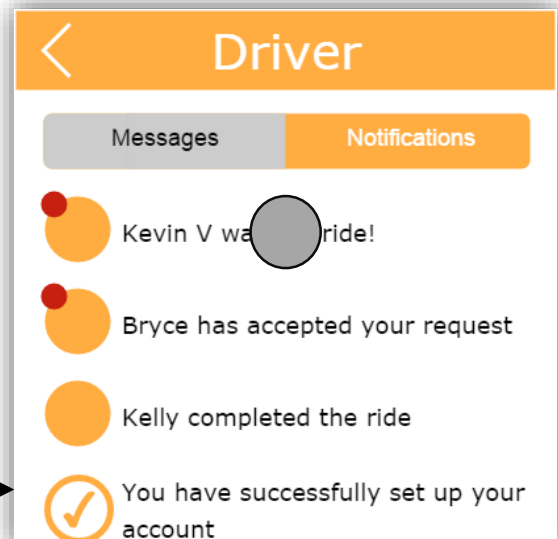
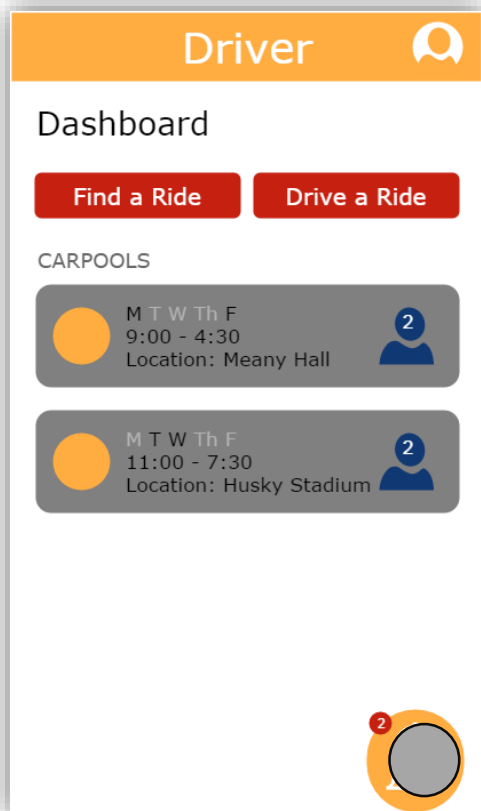
From UW	4:00	2:00	4:00	2:00	12:00
M	Tu	W	Th	F	

Request Ride

DRIVER

ACCEPTING RIDERS

DRIVER



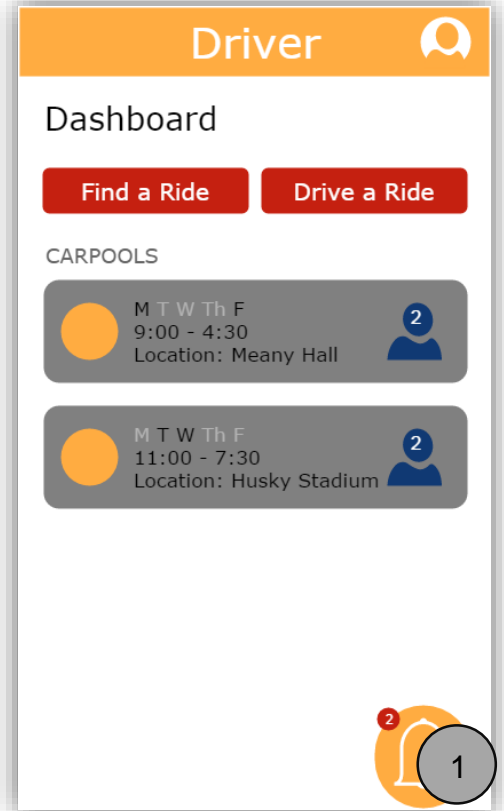
DRIVER

Name: Dashboard

Description: Allows the user to quickly check prearranged carpool and alerts.

1. Alert:

- a. **Decision:** The user taps the alert button to check notifications.
- b. **Rationale:** A bell is used to symbolize notifications which have been used on other applications before for easier recognition. The top left circle with in red with a number indicates how many notification need to be check, the reasoning behind this is because it is an very iconic marker of notification that need to be check. The colors are changed depending on which dashboard is being viewed to keep consistency.

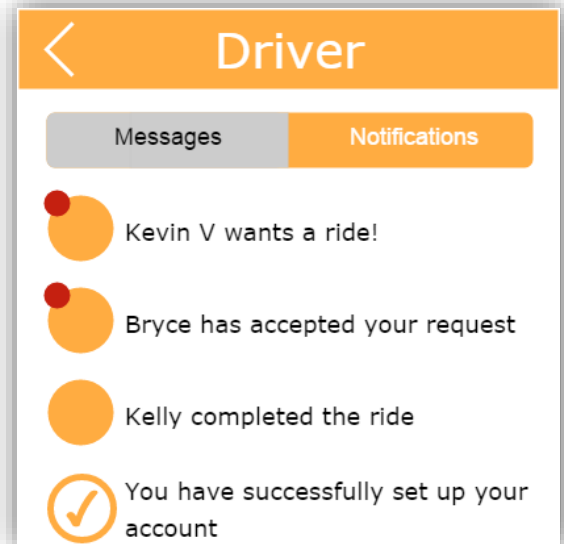


DRIVER

Name: Notification Page

Description: Allows the user to view application notification with the newest untouched alerted notifications appearing at the top.

Rationale: Notifications needed to be separate from other Messages because messaging is a feature that tends to get a lot of activity. A separate area would make user get the information more quickly, rather than scrolling through all messages and notifications. We decided to have new notifications appear first the user would need to have the ability to just tap the first row rather than scrolling down and tapping any other rows. The red circle is indication of newest notification received that have not been checked. This is a very familiar iconic symbol which is why it was chosen. The colors are kept the same to keep consistence with the theme.

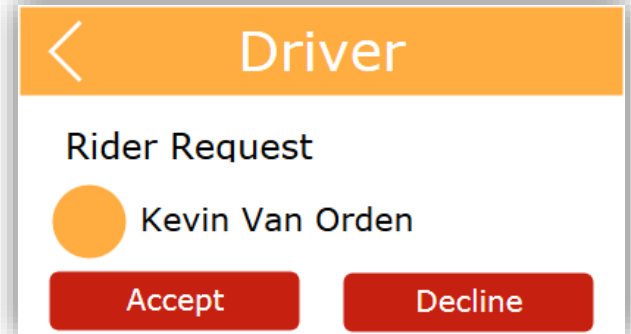


DRIVER

Name: Accepting Rider

Description: The driver is able to accept any requests for a ride through the notifications menu.

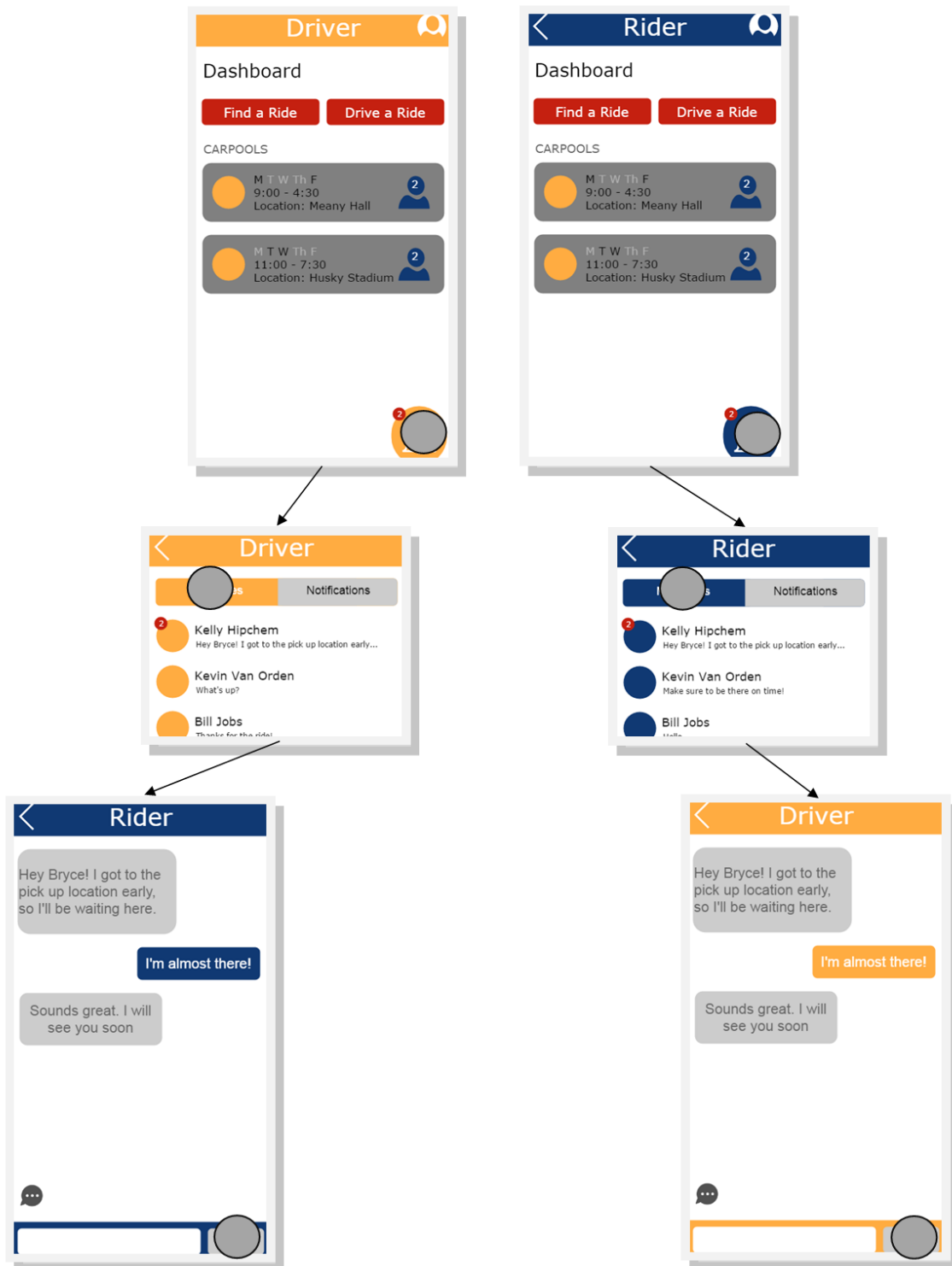
Rationale: We decided to have the accept button on the left side because most users are right handed so they might accidentally accept as default giving false hope to riders. Both options are red because it give the user an indication that it is an urgent option needed user input. The color choices are made to keep in line with the theme of the application.



DRIVER

MESSAGING

DRIVER



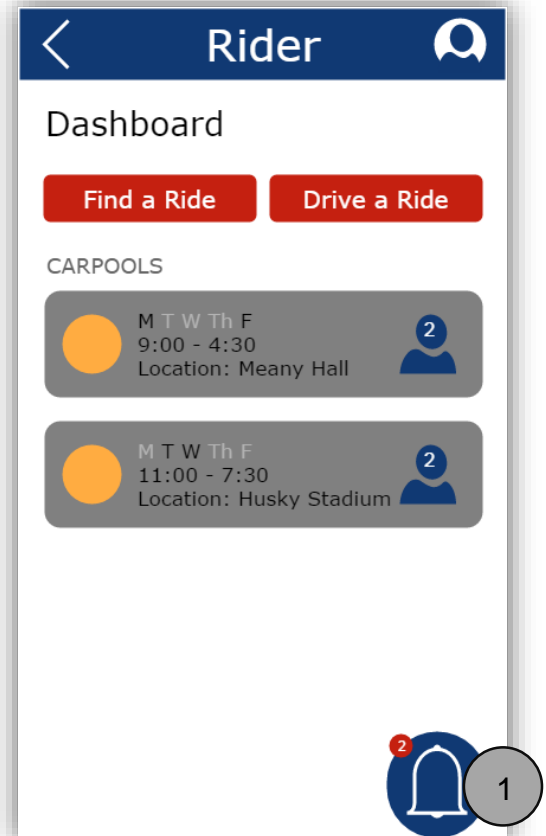
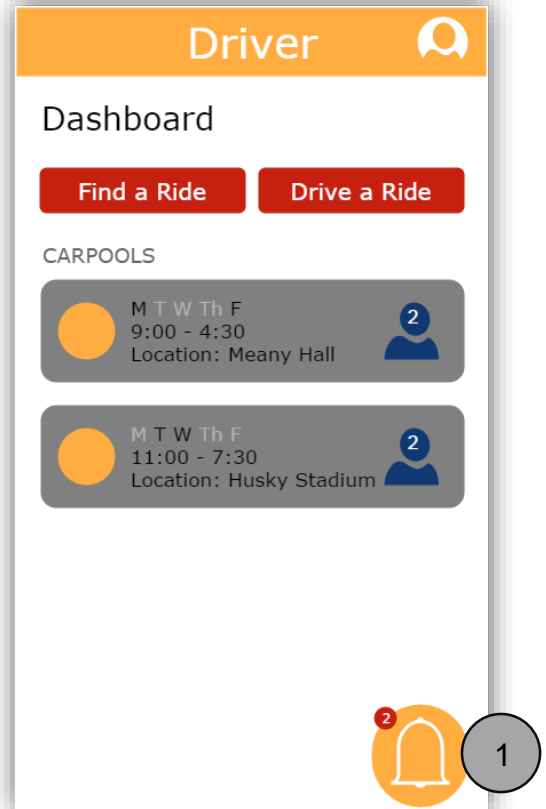
DRIVER

Name: Dashboard

Description: Allows the user to quickly check prearranged carpool and alerts.

1. **Alert:**

- a. **Description:** The user taps the alert button to check notifications.
- b. **Rationale:** A bell is used to symbolize notifications which have been used on other applications before for easier recognition. The top left circle with in red with a number indicates how many notification need to be check, the reasoning behind this is because it is an very iconic marker of notification that need to be check. The colors are changed depending on which dashboard is being viewed to keep consistency.

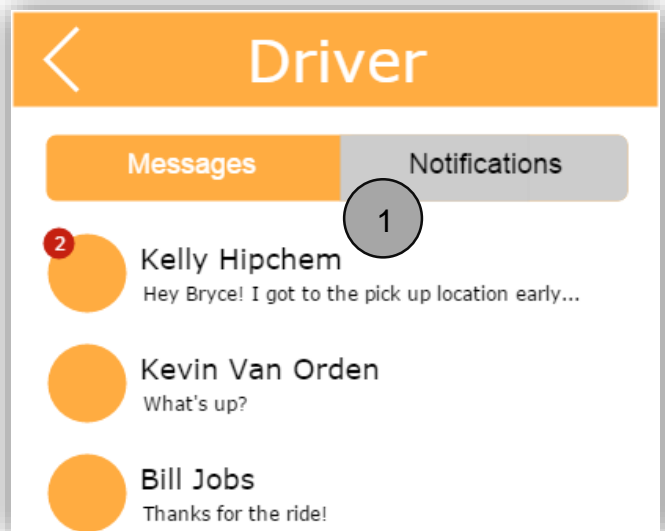
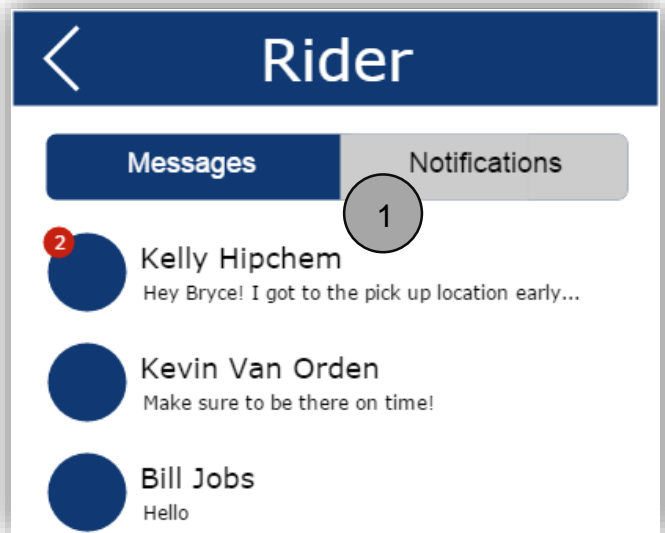


DRIVER

Name: Notification Messages Page

Description: Allows the user to view messages with the newest untouched alerted message appearing at the top.

Rationale: Messaging needed to be separate from other notifications because it is a feature that tends to get a lot of activity. A separate area would make user get the information more quickly. We decided to have new messages appear first because the urgency of contacting your carpool. The user would need to have the ability to just tap the first row rather than scrolling down and tapping any other rows. The red circle with a number is indication the amount of messages received that have not been checked. This is a very familiar iconic symbol which is why it was chosen. The colors are kept the same to keep consistence with the theme.

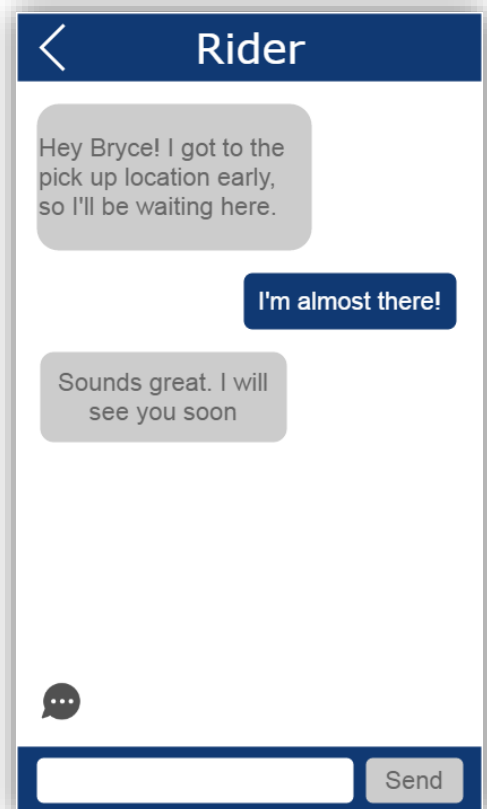
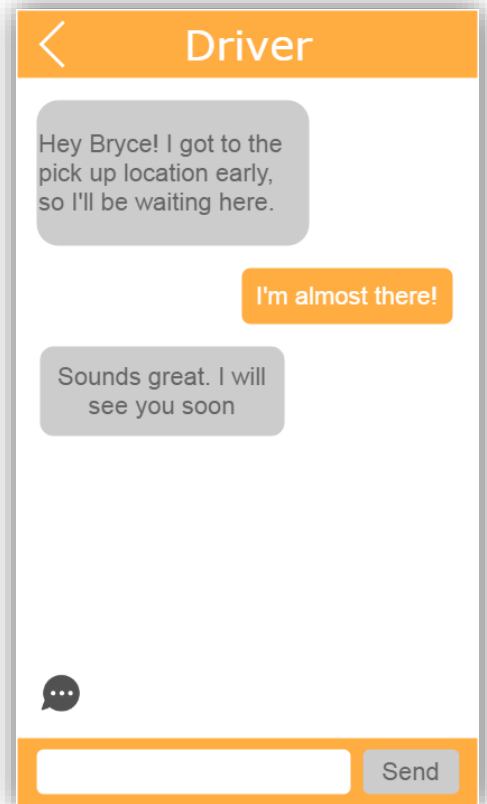


DRIVER

Name: Messaging Page

Description: Allows the user to chat with other carpool users.

Rationale: The reasoning for the layout of this chat box is this is a very common layout that many other applications use. We decided to have the lower left chat bubble appear to let the user know that someone is typing because time is a sensitive matter when it comes to carpooling. The user call the user if chatting bubble does not come up and the user urgently needs to make contact. The colors are picked to keep the theme constant.



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Pearson. "Pearson Student Mobile Device Survey 2014." Pearsoned. Pearson, 16 May 2014. Web. Mar. 2016.