# PoolCarz Case Study

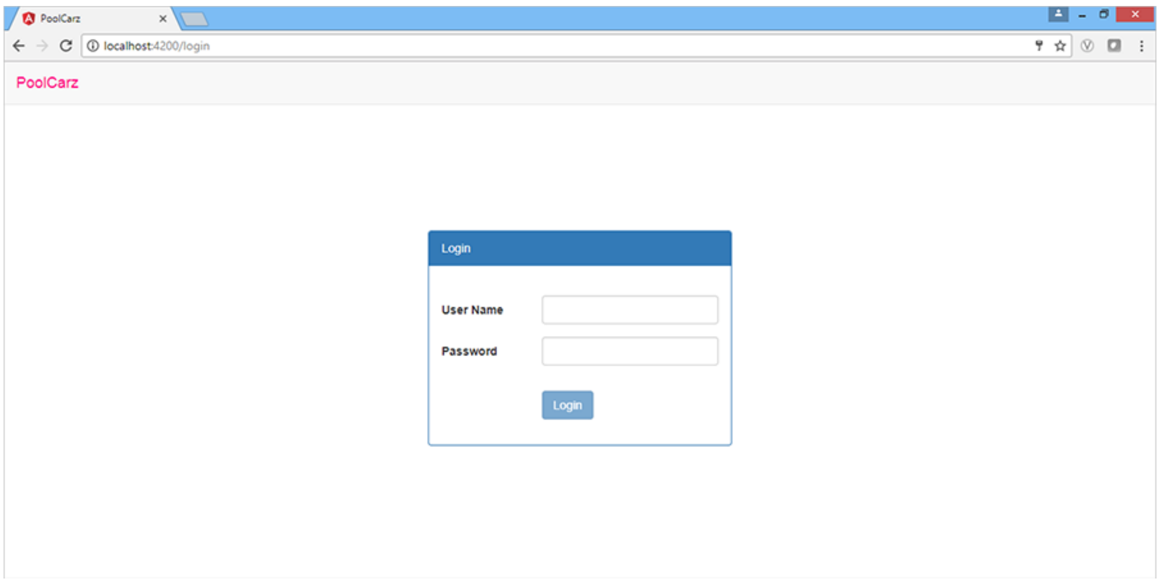
## Problem Statement

**PoolCarz** is a web application for car-pooling. The application allows users to share ride with others. User can either book a ride or offer a ride.

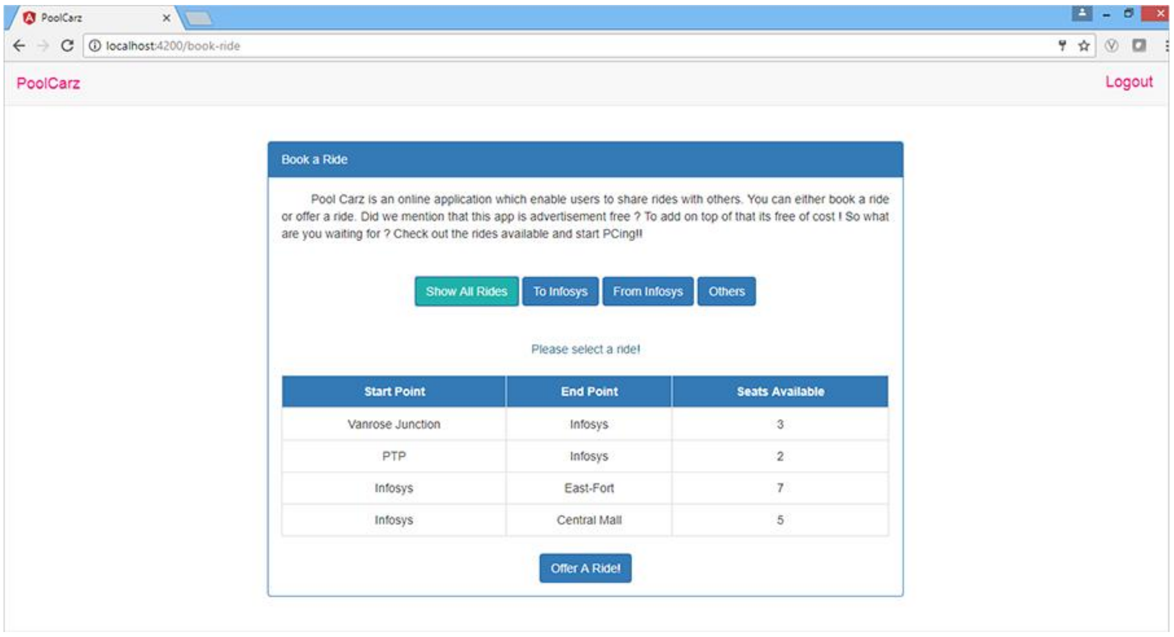
**Use Cases:**

- Login
- Book a ride
- Ride details
- Offer Ride
- Logout

1. **Login:** Login to the application to view ride details



2. **Book a ride:** Renders the rides available and also allows to filter the details based on the start/end point of the rides.

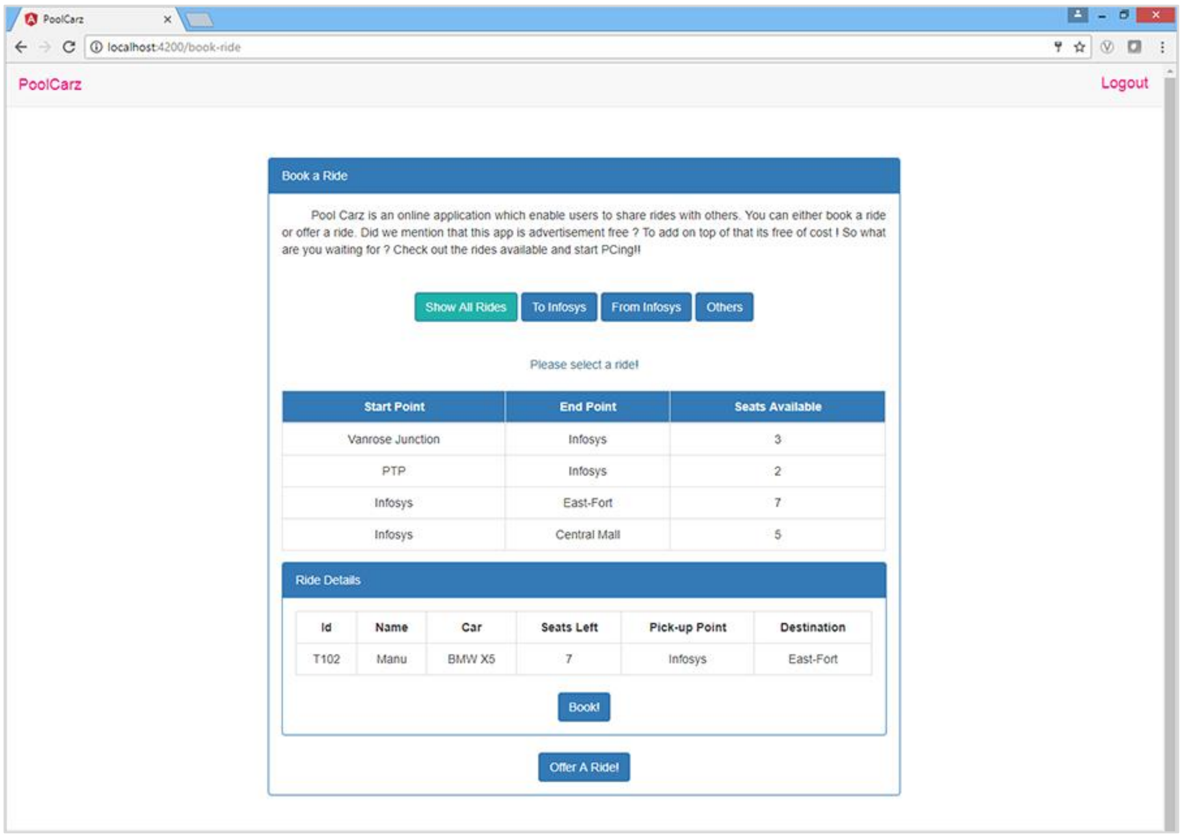


Pool Carz is an online application which enable users to share rides with others. You can either book a ride or offer a ride. Did we mention that this app is advertisement free ? To add on top of that its free of cost ! So what are you waiting for ? Check out the rides available and start PCing!!

Please select a ride!

| Start Point | End Point | Seats Available |
|---|---|---|
| Vanrose Junction | Infosys | 3 |
| PTP | Infosys | 2 |
| Infosys | East-Fort | 7 |
| Infosys | Central Mall | 5 |

3. **Ride Details:** when user selects a particular ride, it renders complete details about that ride and allows user to book that ride



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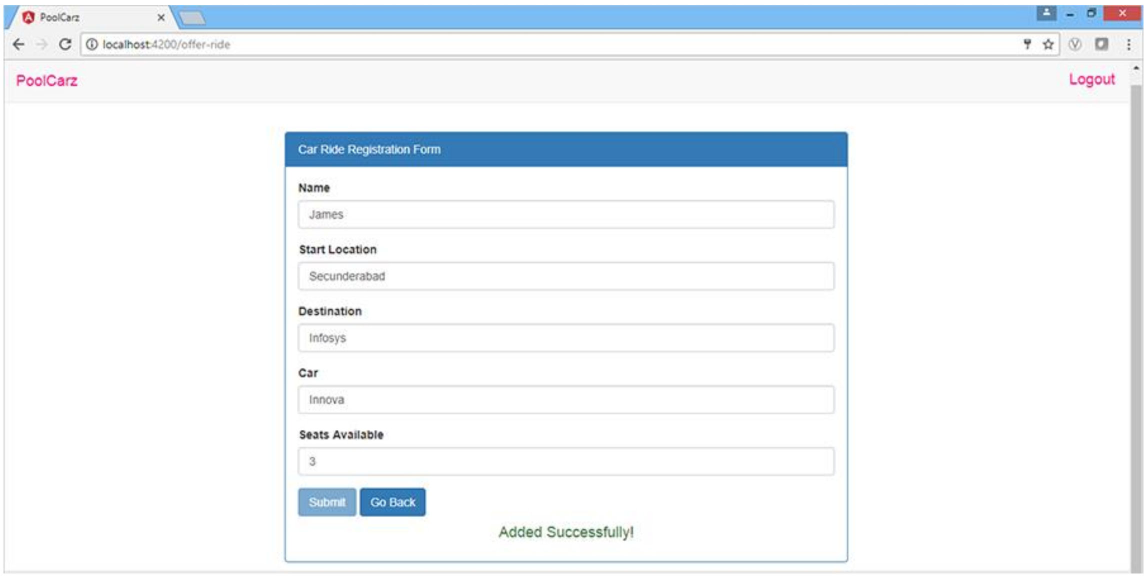
Please select a ride!

| Start Point | End Point | Seats Available |
|---|---|---|
| Vanrose Junction | Infosys | 3 |
| PTP | Infosys | 2 |
| Infosys | East-Fort | 7 |
| Infosys | Central Mall | 5 |

Ride Details

| Id | Name | Car | Seats Left | Pick-up Point | Destination |
|---|---|---|---|---|---|
| T102 | Manu | BMW X5 | 7 | Infosys | East-Fort |

4. **Offer Ride:** Allows user to register his details to offer ride to others


PoolCarz
localhost:4200/offer-ride
PoolCarz
Logout

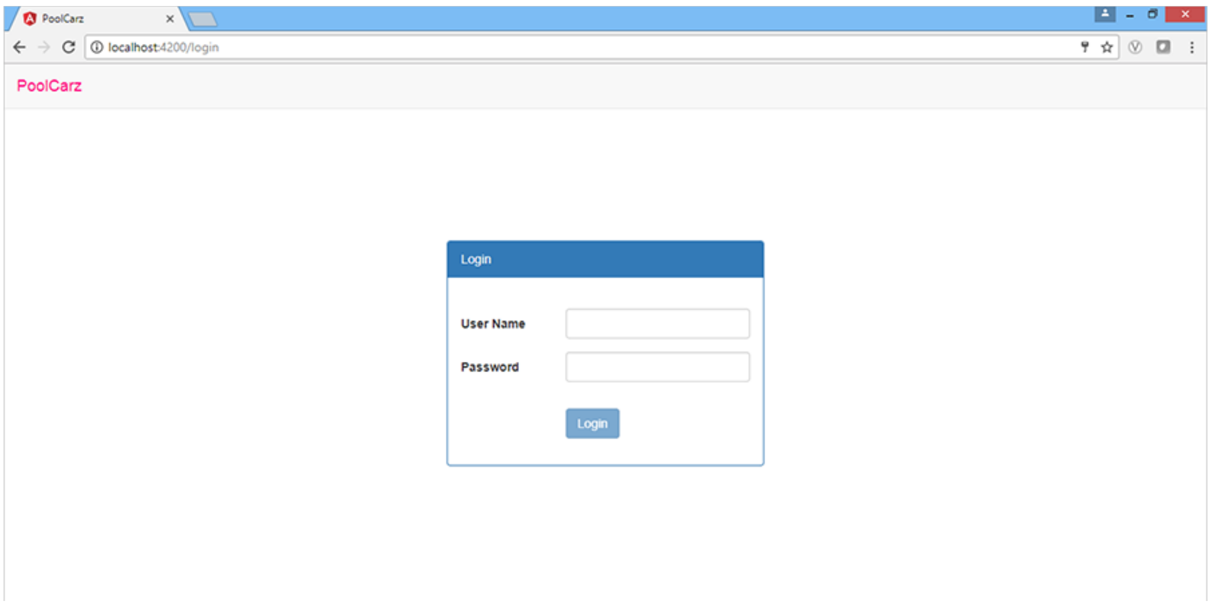
Car Ride Registration Form

| | |
|---|---|
| Name | James |
| Start Location | Secunderabad |
| Destination | Infosys |
| Car | Innova |
| Seats Available | 3 |

Added Successfully!

## Assignment 1: Components in PoolCarz Application

- As a first step, create the folder structure for the application.
- Create a new application named 'PoolCarz' using Angular CLI tool
- Create Login component using Angular CLI
- Write the login template code in login.component.html to render the below screen

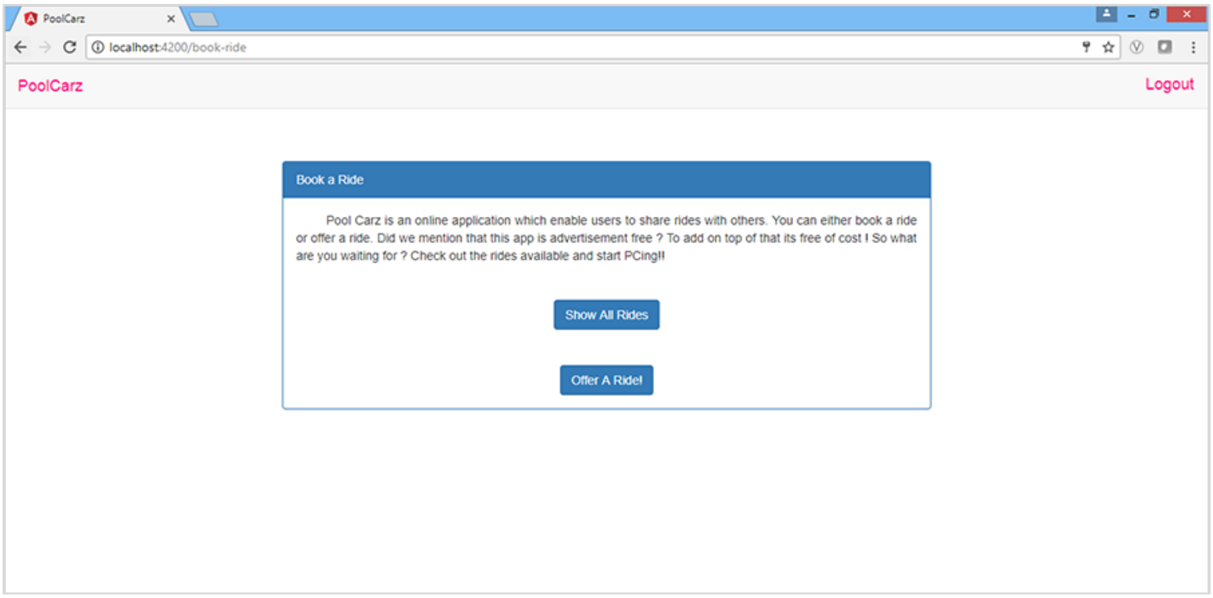

PoolCarz
localhost:4200/login
PoolCarz

Login

| | |
|---|---|
| User Name | |
| Password | |

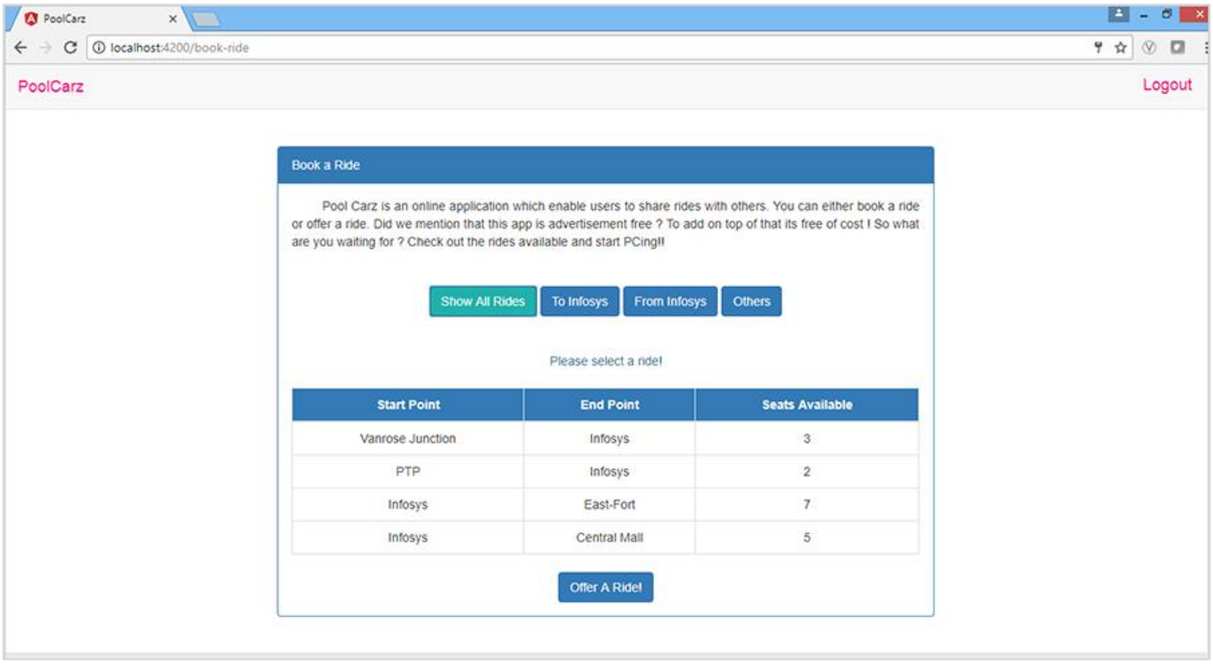
## Assignment 2: Using Directives in PoolCarz Application

- Creating a BookRideComponent in PoolCarz application as shown below



Pool Carz is an online application which enable users to share rides with others. You can either book a ride or offer a ride. Did we mention that this app is advertisement free ? To add on top of that its free of cost ! So what are you waiting for ? Check out the rides available and start PCing!!

- Create BookRideComponent using Angular CLI
- Write the template code in book-ride.component.html which should display the output as shown above
- When the button "Show All Rides" is clicked, it should render the following output



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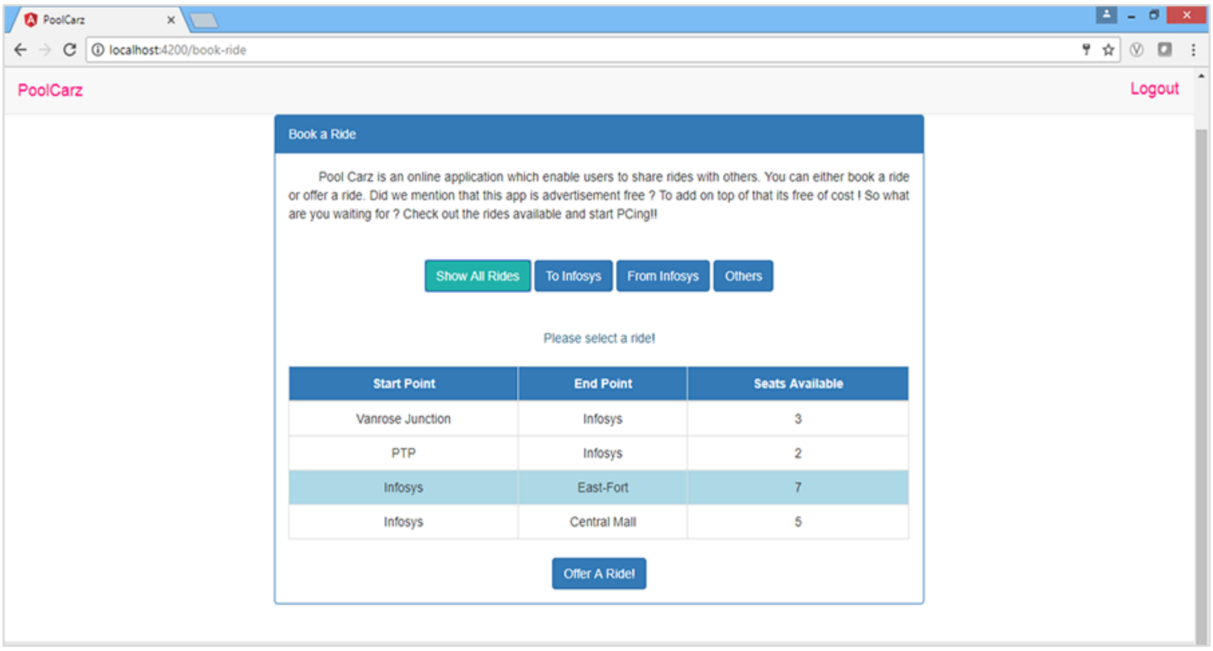
Please select a ride!

| Start Point | End Point | Seats Available |
|---|---|---|
| Vanrose Junction | Infosys | 3 |
| PTP | Infosys | 2 |
| Infosys | East-Fort | 7 |
| Infosys | Central Mall | 5 |

- Display three buttons and a table followed by another button as shown above
- When user again clicks "Show All Rides" button, it should hide the fours buttons and table rendered. This button should act like toggle button to display and hide alternatively
- Store the ride details in an array and render it in a table as shown above. Array should contain the following fields in each object

- id – number
- offerId – string
- name – string
- car – string
- seatsLeft – number
- pickUp – string
- destination – string

- Create a custom attribute directive called MouseHoverDirective and apply it on the table rows. When user hovers mouse on any row, it should highlight the row in green color and when mouse is removed from a row, the color should be removed as shown below


PoolCarz

localhost:4200/book-ride

PoolCarz

Logout

Book a Ride

Pool Carz is an online application which enable users to share rides with others. You can either book a ride or offer a ride. Did we mention that this app is advertisement free ? To add on top of that its free of cost ! So what are you waiting for ? Check out the rides available and start PCing!!

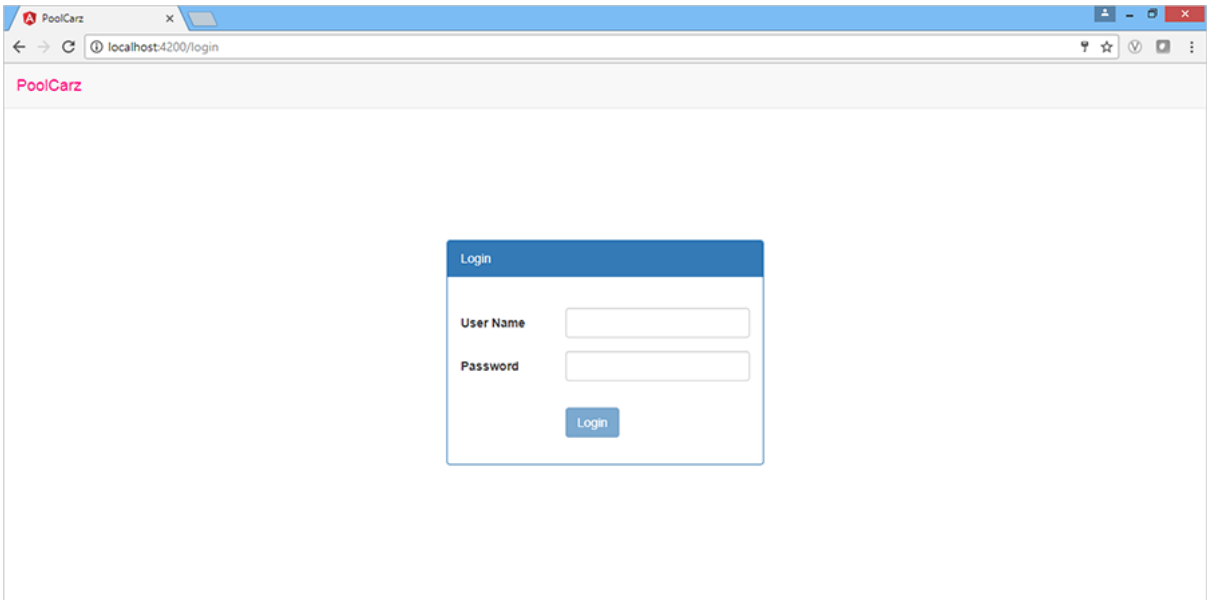
Show All Rides | To Infosys | From Infosys | Others

Please select a ride!

| Start Point | End Point | Seats Available |
|---|---|---|
| Vanrose Junction | Infosys | 3 |
| PTP | Infosys | 2 |
| Infosys | East-Fort | 7 |
| Infosys | Central Mall | 5 |

Offer A Ride!

## Assignment 3: Implementing Data Binding in PoolCarz Application

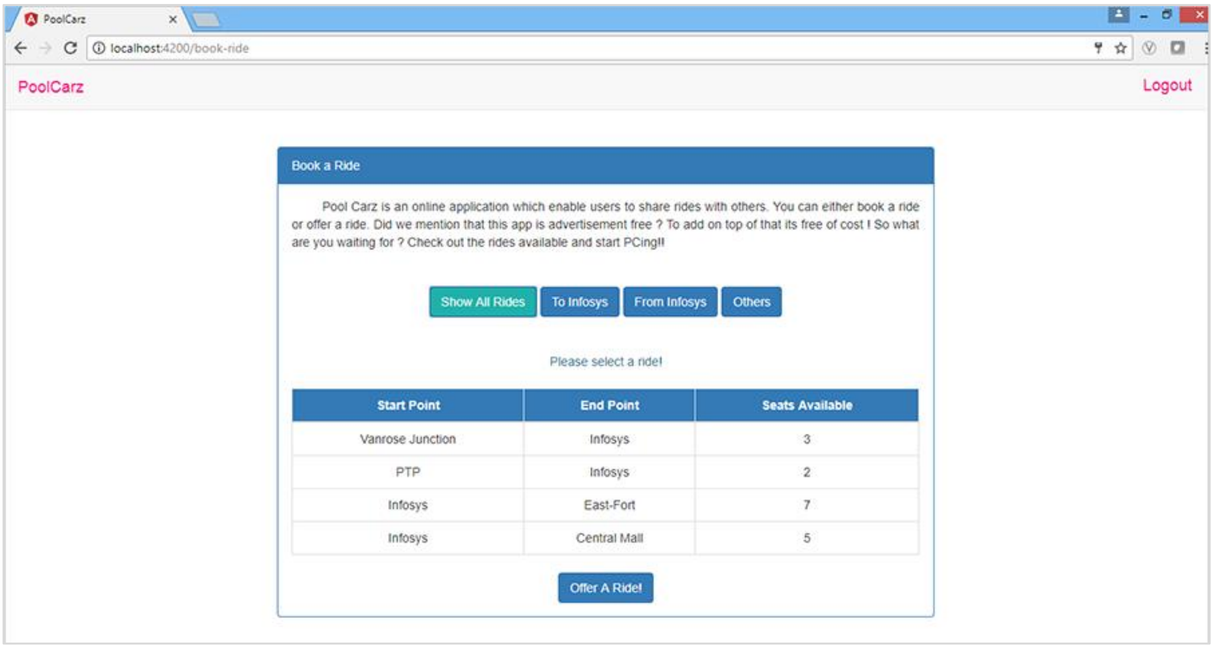


- Create a model class called Login under login folder with username and password properties
- Create an instance of Login class in login component
- Bind username and password properties with the two text boxes using two-way data binding
- Create users array which should contain user details where each object should have username and password values
- When user clicks on Login button after entering the values in text boxes, it should check whether the entered values

  are correct or not by checking with the data in the user's array. Display an alert for successful or failure message accordingly.

## Assignment 4: Using Pipes in PoolCarz Application

- Creating custom pipe and applying it to BookRideComponent.


PoolCarz

localhost:4200/book-ride

PoolCarz Logout

Book a Ride

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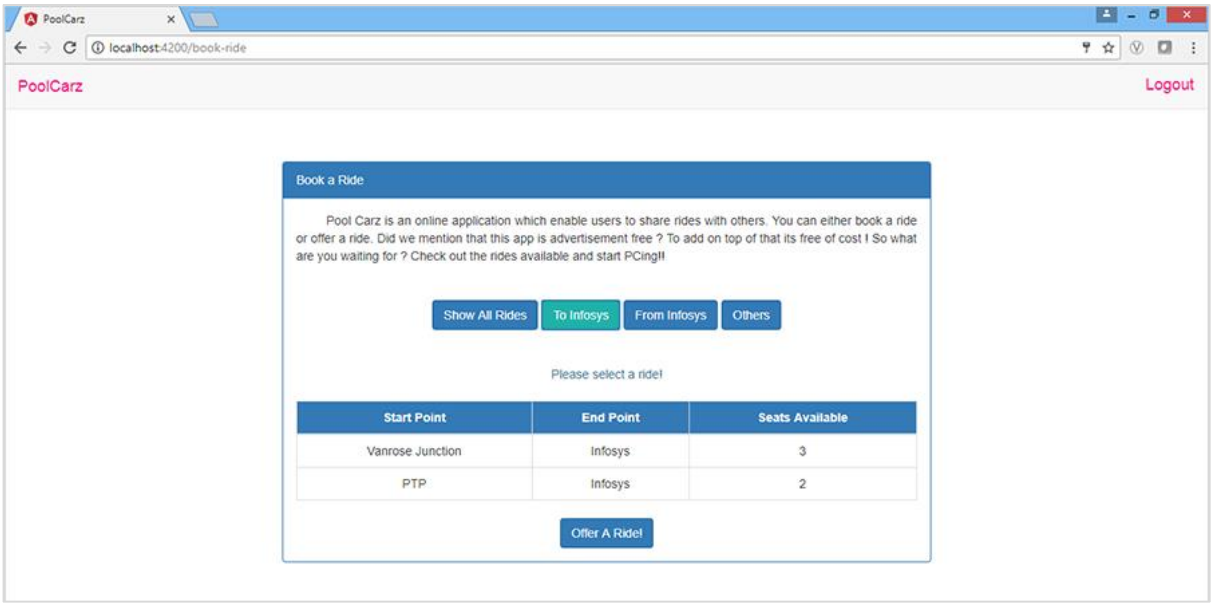
Please select a ride!

| Start Point | End Point | Seats Available |
|---|---|---|
| Vanrose Junction | Infosys | 3 |
| PTP | Infosys | 2 |
| Infosys | East-Fort | 7 |
| Infosys | Central Mall | 5 |

- In BookRideComponent, when user clicks on "Show All Rides" button, it is rendering three button called "To Infosys", "From Infosys" and "Others"
- When user clicks on any of these three buttons, the table below the three buttons should show only those rides
- For implementing this, create a custom pipe, RideFilterPipe and bind it with the table so that when user clicks on any of the three buttons, it should filter the table
- For Example, when user clicks on "To Infosys", it should display the following output


PoolCarz

localhost:4200/book-ride

PoolCarz Logout

Book a Ride

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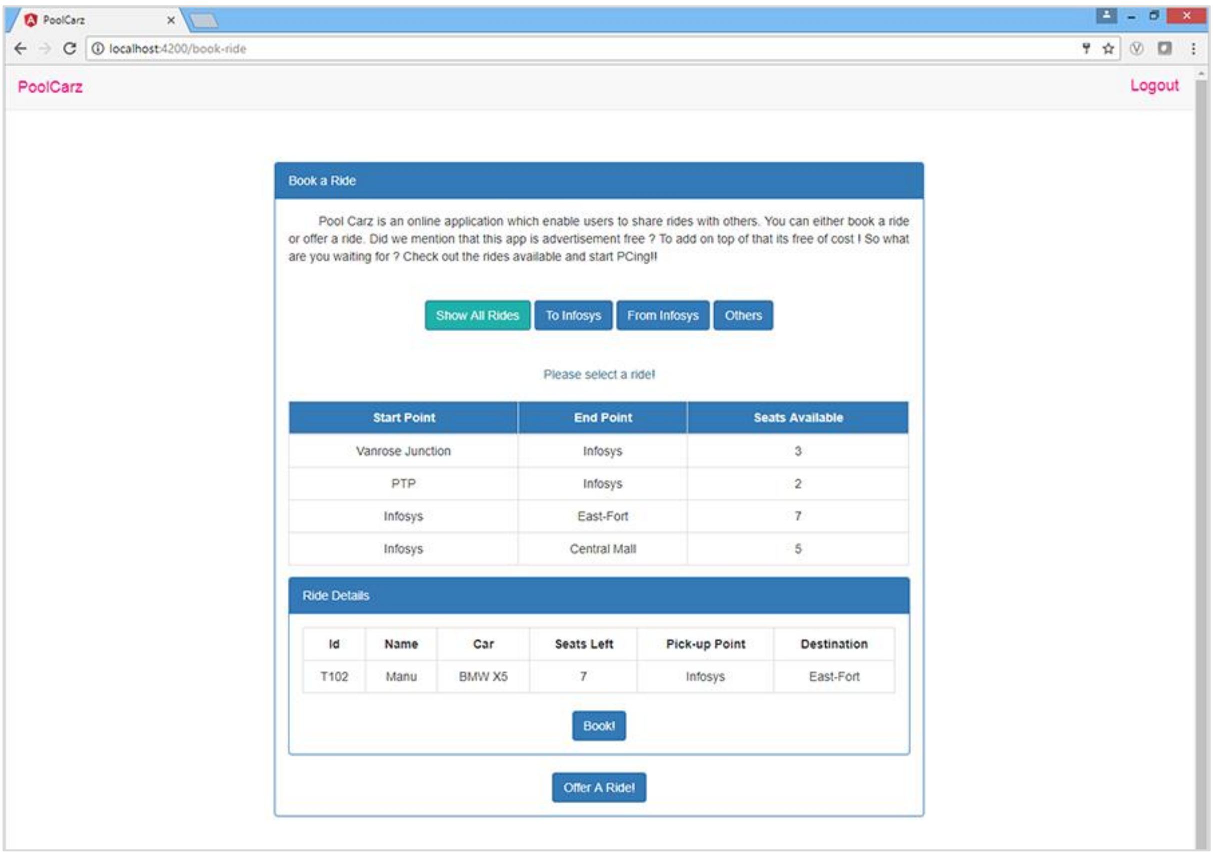
Please select a ride!

| Start Point | End Point | Seats Available |
|---|---|---|
| Vanrose Junction | Infosys | 3 |
| PTP | Infosys | 2 |

## Assignment 5: Creating Nested Components and sharing data between them in PoolCarz

- Creating nested component called RideDetailsComponent and loading it in BookRideComponent
- Sharing data between RideDetails and BookRide components



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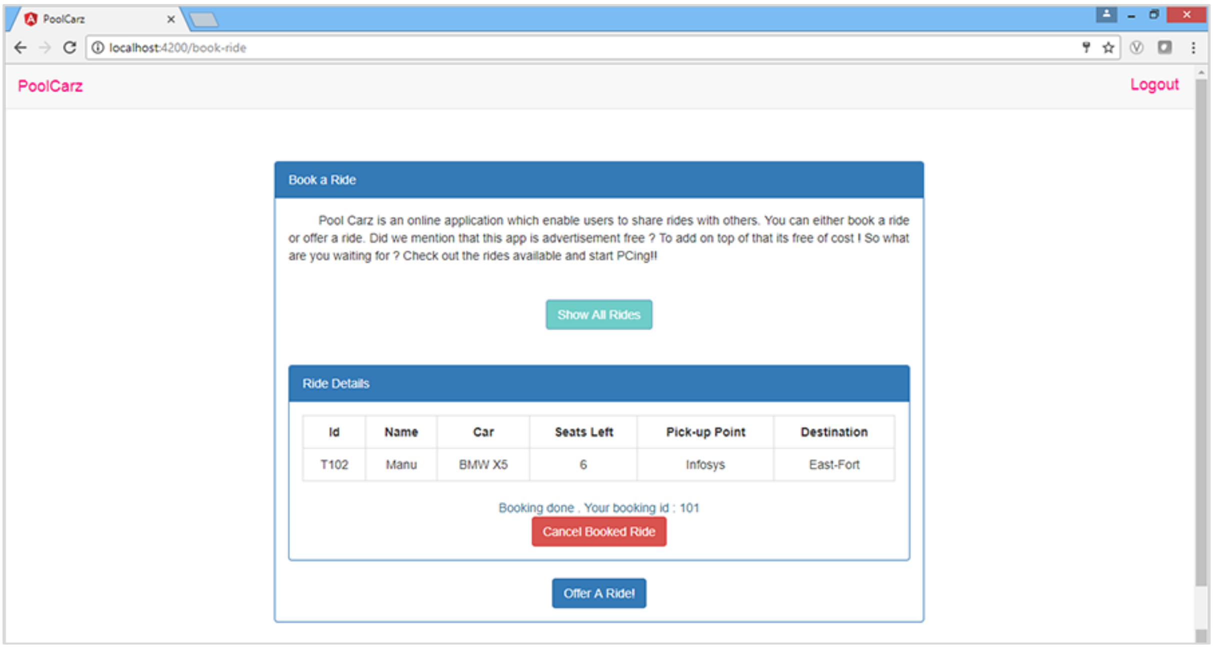
Please select a ride!

| Start Point | End Point | Seats Available |
|---|---|---|
| Vanrose Junction | Infosys | 3 |
| PTP | Infosys | 2 |
| Infosys | East-Fort | 7 |
| Infosys | Central Mall | 5 |

| Id | Name | Car | Seats Left | Pick-up Point | Destination |
|---|---|---|---|---|---|
| T102 | Manu | BMW X5 | 7 | Infosys | East-Fort |

- Create RideDetailsComponent using Angular CLI
- Load RideDetailsComponent in BookRideComponent after the table.
- When user selects a specific ride in the table, it should send that object to RideDetailsComponent
- RideDetailsComponent should receive that data and should render that ride details in the template along with Book button (Use @Input () for receiving the data)
- When user clicks on Book button, it should display the output as shown below



Book a Ride

Pool Carz is an online application which enable users to share rides with others. You can either book a ride or offer a ride. Did we mention that this app is advertisement free ? To add on top of that its free of cost ! So what are you waiting for ? Check out the rides available and start PCing!!

Ride Details

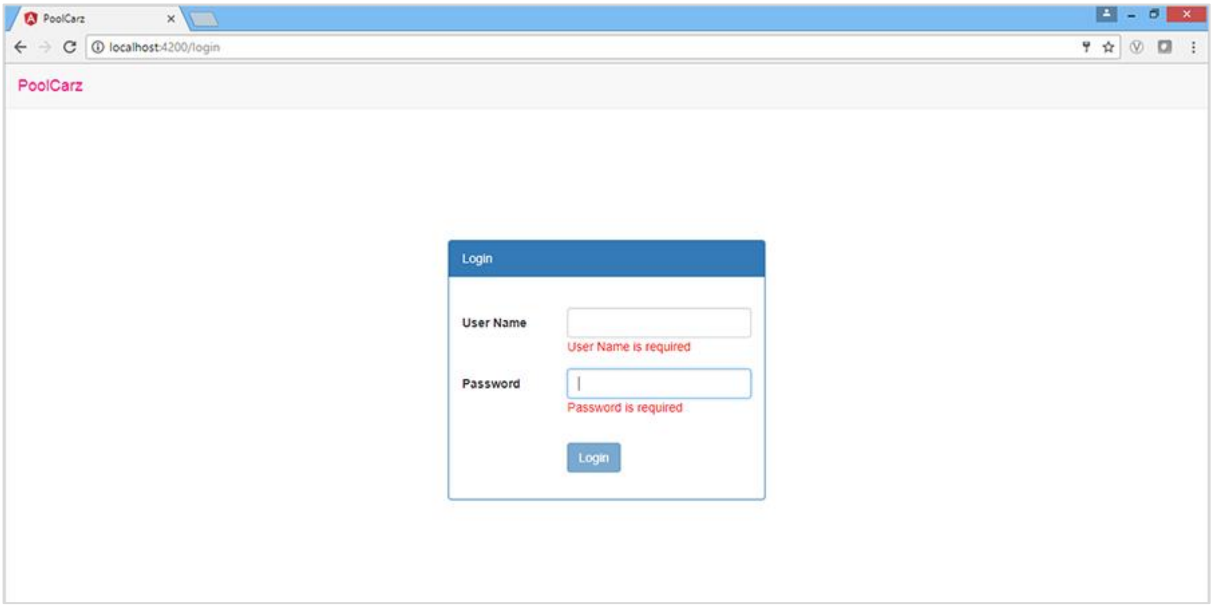
| Id | Name | Car | Seats Left | Pick-up Point | Destination |
|---|---|---|---|---|---|
| T102 | Manu | BMW X5 | 6 | Infosys | East-Fort |

Booking done . Your booking id : 101

- It should render the booking done message along with booking id and the button caption should change to Cancel booking and color to red.
- In the same fashion, it should hide the table so that user cannot book another ride.
- For hiding the table, send an event to BookRideComponent and hide the table (use @Output () decorator)

## Assignment 6: Adding Validations to Forms in PoolCarz Application

- Adding validations to LoginComponent as shown below



User Name

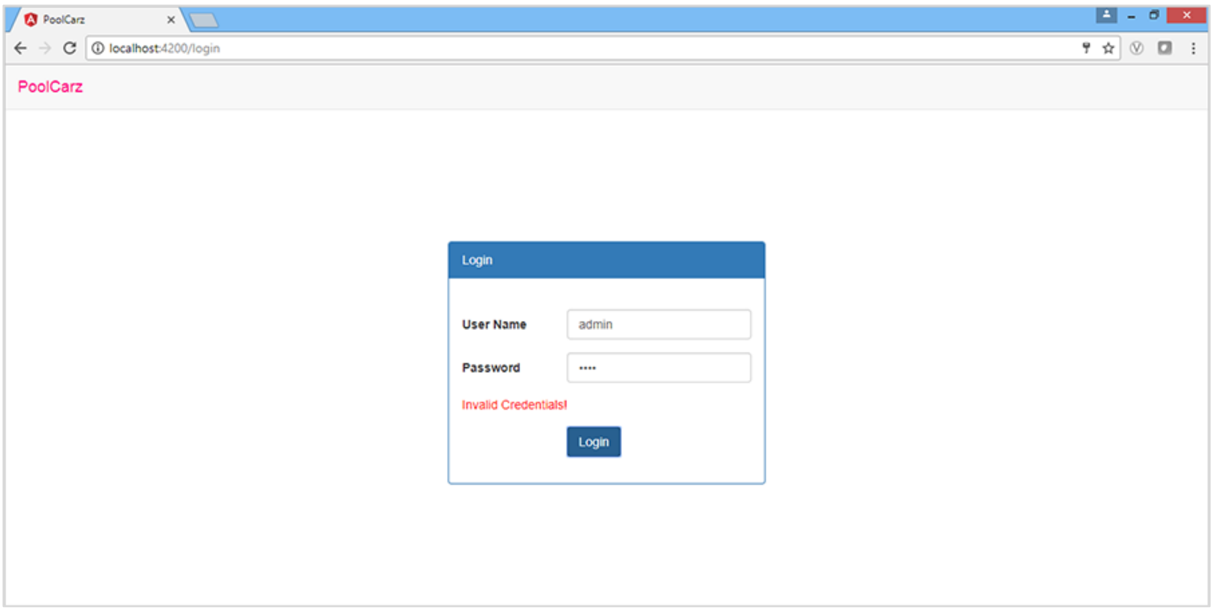
User Name is required

Password

Password is required

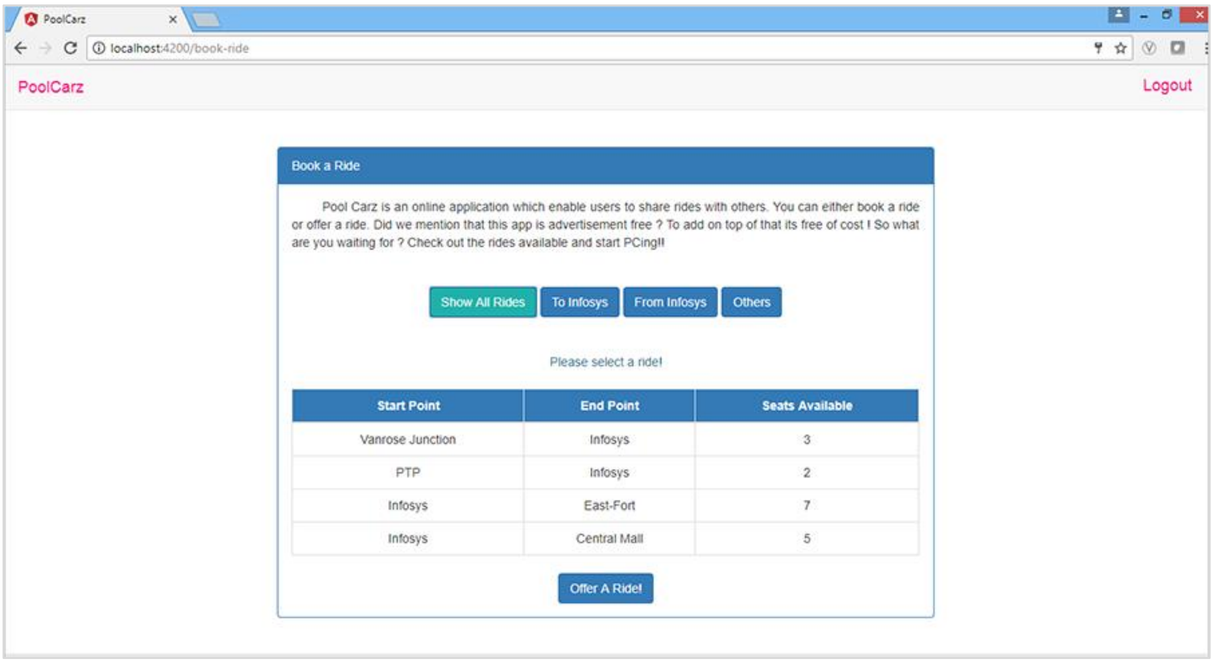
- Add required validation to username and password textboxes in LoginComponent and display appropriate error messages when validation fails as shown below

- Also check for the data validity using data stored in user's array and render appropriate failure message as shown below



## Assignment 7: Creating Services in PoolCarz Application

- Creating a custom service and making http calls to fetch data



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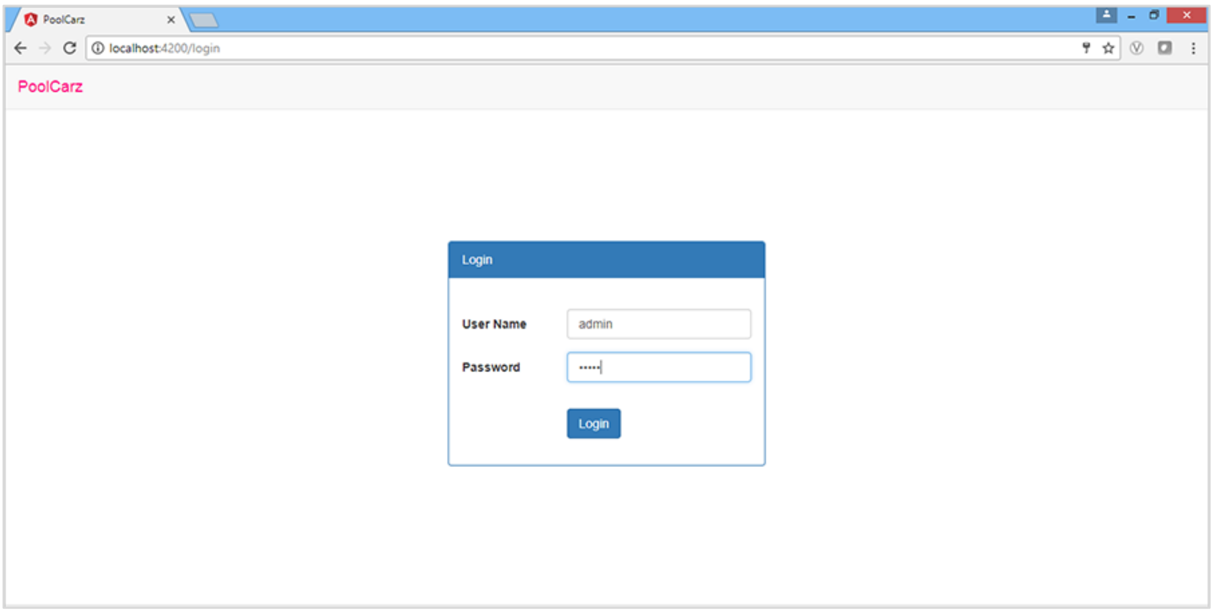
Please select a ride!

| Start Point | End Point | Seats Available |
|---|---|---|
| Vanrose Junction | Infosys | 3 |
| PTP | Infosys | 2 |
| Infosys | East-Fort | 7 |
| Infosys | Central Mall | 5 |

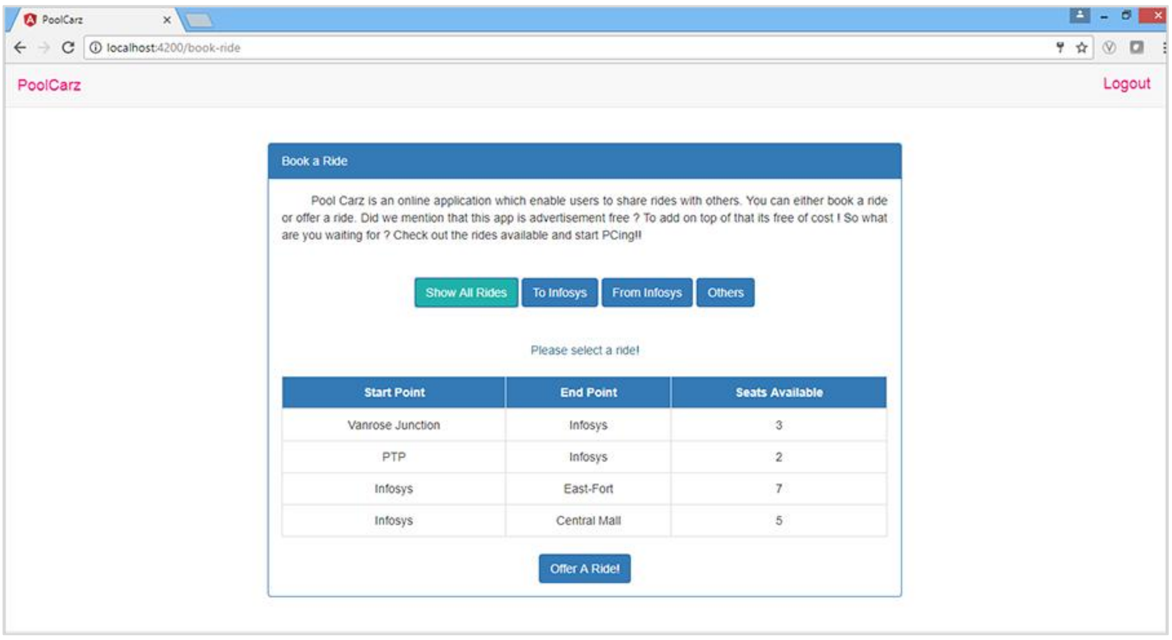
- Create a json file called rides.json and move rides data array from BookRideComponent to it. Create another json file called users.json and move users array from LoginComponent to it.
- Create a custom service class called RestService and write code for Http calls

- Make a http call to offers data from JSON file and render the ride details in the table as shown above
- In LoginComponent, add http call to users.json file to check for the data validity



## Assignment 8: Adding Routing to PoolCarz Application

- Adding routing to the PoolCarz Application as shown in the url



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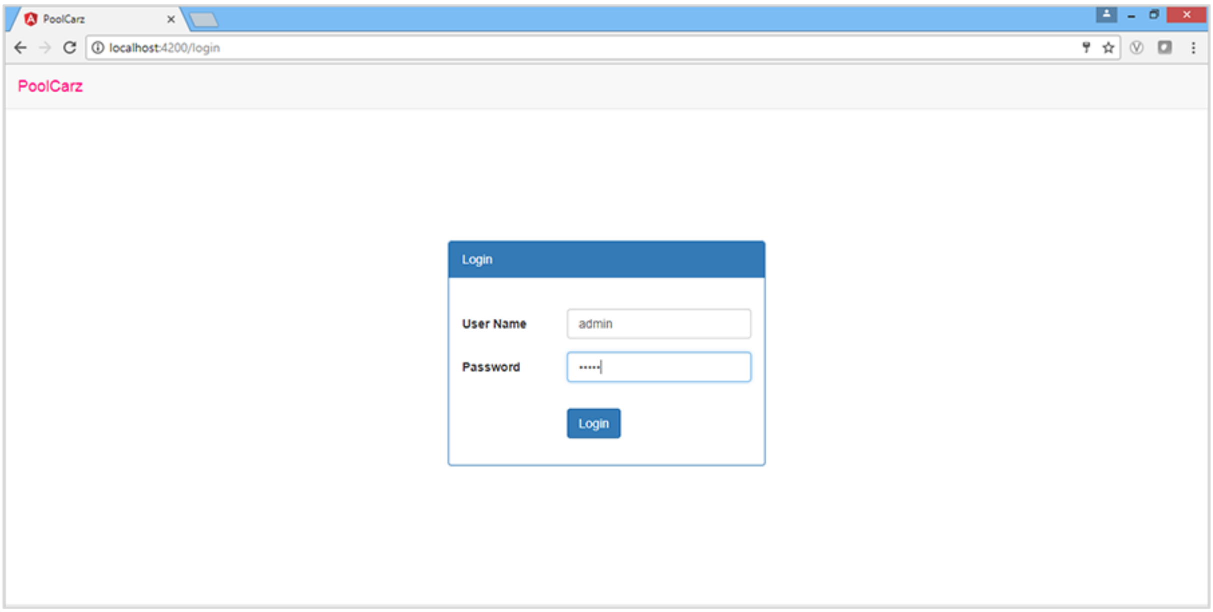
Please select a ride!

| Start Point | End Point | Seats Available |
|---|---|---|
| Vanrose Junction | Infosys | 3 |
| PTP | Infosys | 2 |
| Infosys | East-Fort | 7 |
| Infosys | Central Mall | 5 |

- Create AppRouting class and add the following paths for routing to appropriate components

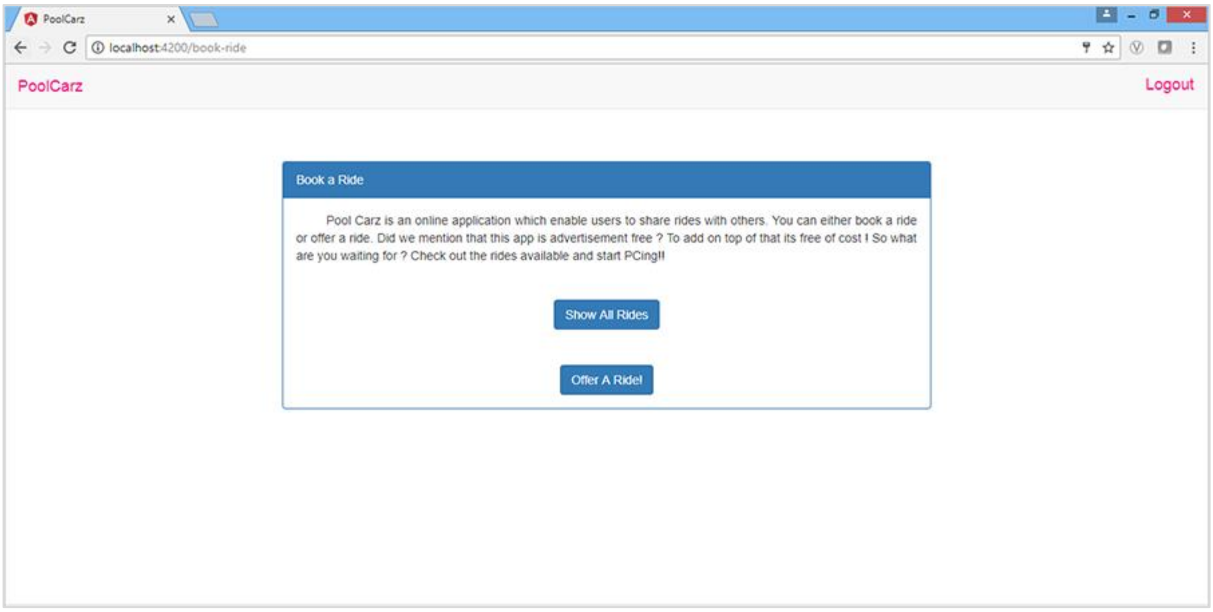
| Routing Path | Component |
|---|---|
| /login | LoginComponent |
| /book-ride | BookRideComponent |
| /ride-details | RideDetailsComponent |
| /offer-ride | OfferRideComponent |
| / | LoginComponent |

- The default path should redirect to LoginComponent. When user clicks on Login button, it should navigate to BookRideComponent. Add the respective code for routing in LoginComponent



User Name: admin
Password: •••••

- In BookRideComponent, when user clicks on button "Offer a ride" it should navigate to OfferRideComponent. Add the appropriate routing code in BookRideComponent


PoolCarz

localhost:4200/book-ride

PoolCarz

Logout

Book a Ride

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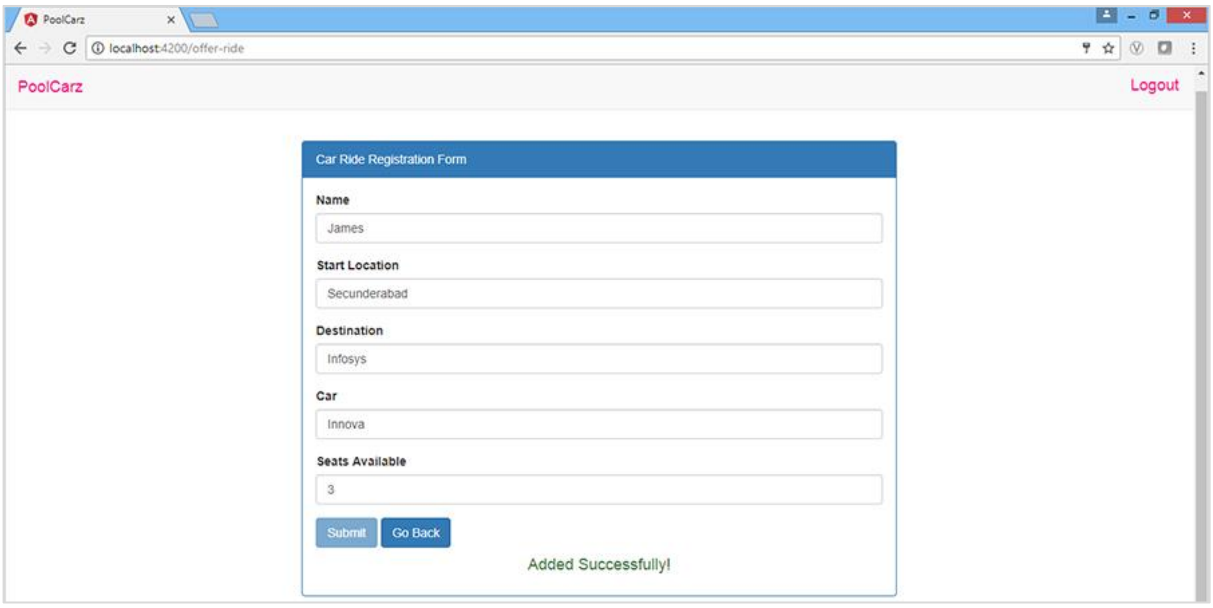
Show All Rides

Offer A Ride!

- In OfferRideComponent, when user clicks on "Go Back" button, it should navigate back to BookRideComponent. Add appropriate routing code in OfferRideComponent


PoolCarz

localhost:4200/offer-ride

PoolCarz

Logout

Car Ride Registration Form

| | |
|---|---|
| Name | James |
| Start Location | Secunderabad |
| Destination | Infosys |
| Car | Innova |
| Seats Available | 3 |

Submit Go Back

Added Successfully!