

CMPE 273: Enterprise Distributed Systems

Lab 1 Assignment: Using REST (Node.js) and React JS

Due: October 9th, 2020, 2:00 PM

This lab assignment covers developing REST services using Node.js (Express) and ReactJS. This lab assignment is graded based on 30 points and is an individual effort (Teamwork not allowed)

Prerequisite

- You should be able to run the basic node.js and React application discussed in class.
- You must know programming language basics, JavaScript.

Grading

Yelp Application - 30 marks

Questions – 5 marks

Total – 35 marks

Note: Late assignments will be accepted but will be subject to a penalty of -5 points per day late. Submissions received at or before the class on the due date can receive maximum.

Yelp

You need to develop “Prototype of Yelp application”. This prototype will be a web application using React and Node. Refer Yelp website and see how it functions.

The application should have the following persona:

1. Customer
2. Restaurant

You need to implement the following features in your application for the roles given above.

1. Customer Signup (name, email id, password)
2. Restaurant Signup (restaurant name, email id, password, location)
3. Sign in
4. Sign out

A Restaurant should be able to do the following functionalities:

Restaurant page (Dashboard – Landing page):

1. View restaurant profile – having all basic information about restaurant (name, location, description, contact information, pictures of restaurant and dishes, timings)
2. Update restaurant profile (name, location, description, contact information, pictures of restaurant and dishes, timings)
3. Update Contact information
4. Add/Edit Dishes in menu (with Dish name, Main Ingredients, Dish Images, Dish Price, description, dish category – Appetizer, Salads, Main Course , Desserts, Beverages)
5. View list of dishes added by them.
6. View Reviews given by customers

Orders page:

1. View list of orders by customers
2. Click and view profile page of each customer
3. Update the delivery status of each order – Order Received, Preparing,
(If **Delivery option** selected) On the way, Delivered
(If **Pickup option** selected) Pick up Ready, Picked up
4. There should be 3 filters on orders(New Order, Delivered Order, Cancelled Order)

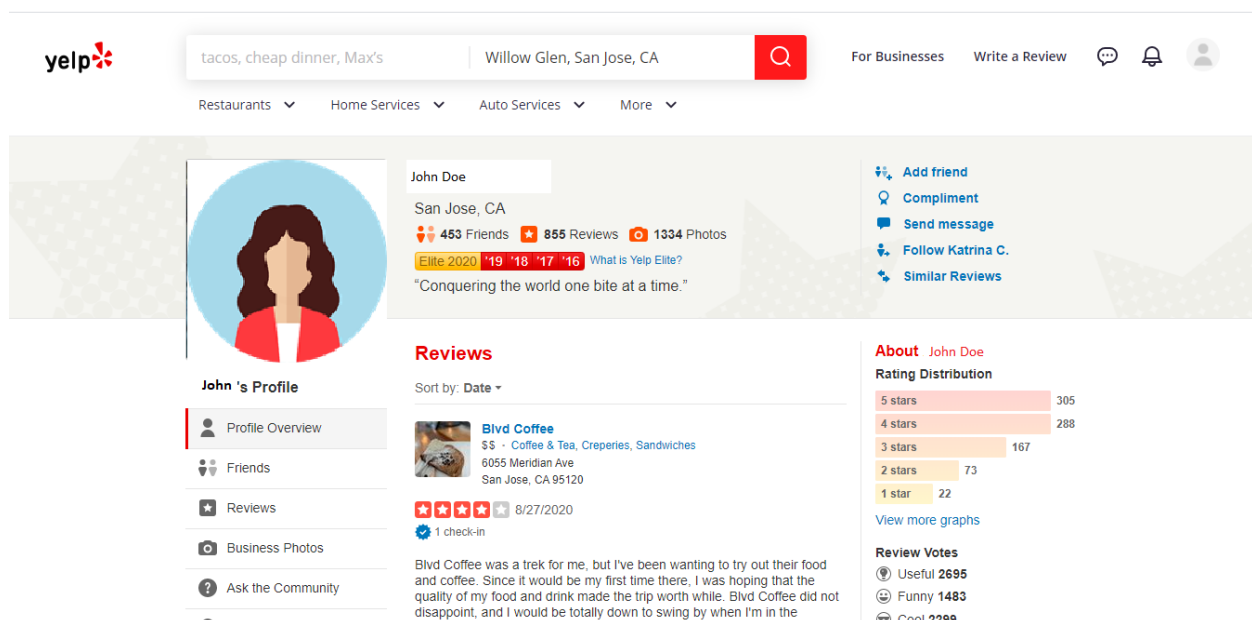
Events Tab:

1. Post events(event name, description, time, date, location, hashtags)
2. View list of people who registered for the events.
3. Click on name and view another’s person profile.

A **Customer** should be able to do the following functionalities:

Profile Page:

1. Display complete profile of a customer (basic details, favorites, about, profile picture)
2. Upload profile picture
3. Update about section(Yelping since, Things I love, Find Me In, My Blog or Website, etc.)
4. Update basic details (name, date of birth, city, state, country, nick name) and headline
5. Update Contact Information (email id, phone number)



Restaurant Search tab (Dashboard – Landing page)

1. Search for Restaurant (using dish names, cuisines, location, mode of delivery)
2. Filter restaurant search results based on food delivery method (Curbside Pickup, Dine In, Yelp Delivery) and location (neighborhoods)
3. Click and view a restaurant page
4. Show each restaurant respective location on map via pins(You can use google map API for this).

Filters

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Suggested

- ☐ Curbside Pickup
- ☐ Open Now 11:39 PM
- ☐ Yelp Delivery

Features

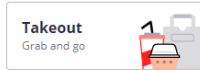
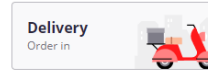
- ☐ Curbside Pickup
- ☐ Accepting Donations
- ☐ Yelp Delivery
- ☐ Yelp Takeout

[See all](#)

[San Jose](#) > [Willow Glen](#) > [Restaurants](#)

The Best 10 Restaurants near Willow Glen, San Jose, CA

Sort: Recommended ▾



Sponsored Results ⓘ



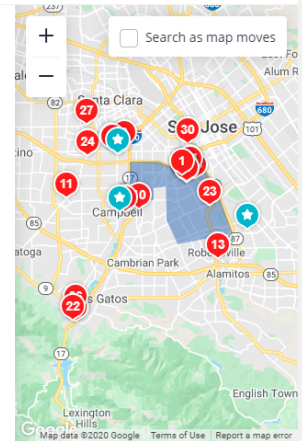
Sauced BBQ & Spirits - San Jose

214

\$\$ • Barbeque, American (Traditional), Burgers

 Outdoor seating

+1-408-564-8048
3055 Olin Ave
West San Jose



- ☐ Curbside Pickup
- ☐ Accepting Donations
- ☐ Yelp Delivery
- ☐ Yelp Takeout

[See all](#)

Neighborhoods

- ☐ Willow Glen
- ☐ Evergreen
- ☐ Alum Rock/East Foothills
- ☐ West San Jose

[See all](#)

Distance

- ☒ Bird's-eye View
- ☐ Driving (5 mi.)
- ☐ Biking (2 mi.)
- ☐ Walking (1 mi.)
- ☐ Within 4 blocks



1. The Table

2891

\$\$ • American (New), Breakfast & Brunch, Salad

✕ Delivery ✓ Takeout ✓ Outdoor Seating

"I finally got the gut to do my round dining at restaurants in the South Bay this past eel on... Since hubby is started traveling g for work again, no longer WFH and I started to work on site too in San Jose... More chance for me to dine out. Safety is our concern, of course. But also having my..." [more](#)

(408) 638-7911
1110 Willow St
Willow Glen



2. Vin Santo Ristorante

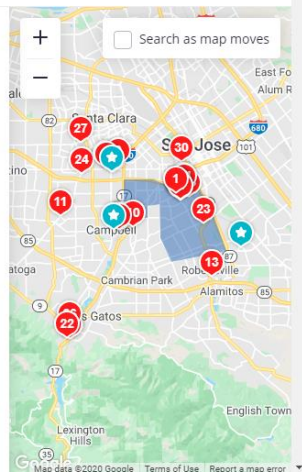
★★★★☆ 599

\$\$ • Italian

✕ Delivery ✓ Takeout ✓ Outdoor Seating

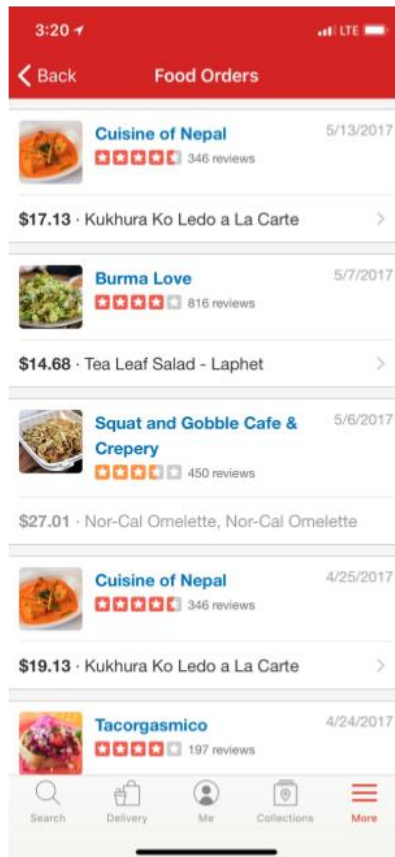
"Wow, just wow. This place is so good. I was extremely pleased with the quality of the food and even more impressed with the

(408) 920-2508
1346 Lincoln Ave
Willow Glen



Orders Tab

1. View list of all the orders placed (along with order Date-Time, order status)
2. Filter the order based on the order status – Order Received, Preparing,
(If Delivery option selected) On the way, Delivered
(If Pickup option selected) Pick up Ready, Picked up



Restaurant Tab


1. View Restaurant Page
2. Add insightful reviews(date, ratings, comments)
3. Order food from the page, select delivery method.

RESTAURANTS

FOOD SERVICES

DRINK SERVICES

MORE



See All 603

Sauced BBQ & Spirits – San Jose

Claimed

★ ★ ★ ★ ★

214 reviews

Details

\$\$\$ • Barbeque, Sports Bars, Burgers

Edit

Closed 11:00 AM - 10:00 PM

Hours updated 1 month ago

★ Write a Review

📷 Add Photo

🔗 Share

🔖 Save

+ Follow

Offering Takeout or Delivery


Order Now

🌐 saucedbbqandspirits.com

📞 (408) 564-8048

📍 Get Directions

COVID-19 Updates



San Jose, CA

👤 453 friends

★ 855 reviews

📷 1334 photos

Elite '2020

★ ★ ★ ★ ★

8/16/2020

While walking around Santana Row recently, I realized that Roots and Rye was replaced with Sauced BBQ and Spirits. I found that Sauced is actually a chain BBQ restaurant albeit a high end one. The food is considerably expensive, but hey, it makes for a nice fit in Santana Row. Sauced piqued my interest enough to try out their food later that same day. They were offering outdoor seating in the midst of the Covid environment, but given this week's heat wave I figured I'd DoorDash instead. The food was so good that even DoorDash did it justice.

My boyfriend and I shared a 2 meats plate consisting of ribs, brisket and 2 sides. We chose mac 'n' cheese and the jalapeno coleslaw with the combo. We also threw on an extra side to our order of some waffle fries with rub (extra \$1 for seasoning). Unfortunately the 1/2 chicken was not part of the DoorDash menu otherwise we would've gotten that as a 3rd meat.

I enjoyed the sides a lot. The waffle fries with rub were comparable to Wingstop's crack fries, so naturally I loved them. Do I even dare say I liked Sauced's seasoning better? Bold statement. I know. The jalapeno coleslaw was unique, and I liked how light and refreshing it was. The cabbage was crisp and crunchy, and the bursts of spiciness from the thinly sliced jalapeños were the best parts. Sauced has a solid mac 'n' cheese, although I did think it was the least impressive of the 3.

Texas-style brisket is my fav. BBQ. Sauced and I were off to a great start as I picked the fattiest piece from the box. The brisket had a beautiful pink smoke ring, and I could taste the smokiness of the bark. The meat was juicy and tender. It was a hit in my book.

Events Tab

1. View list of upcoming events in the order of increasing date
2. Search for event (using event name)
3. Click and view event details
4. Register for an event.
5. View list of registered events

Upcoming Events



The South Bay's #LocalAdventureChallenge!

Tuesday, Sep 1, 12:00 am – Wednesday, Sep 30, 11:30 pm

Locations across the South Bay — San Jose, CA

Are you ready for adventure? We are too!

Join us for Yelp South Bay's...

Other 40 are interested!



Legendary Orchardist Charlie Olson Shares his Story of The Valley of Hear's Delight

Sunday, Sep 6, 1:30 pm

Saratoga Library — Saratoga

Orchardist Charlie Olson of CJ Olson's Cherries will speak about the Valley of Heart's Delight at the Saratoga Library on October 6 at 1:30 PM. The...

Performing Arts 2 are interested!



Full Moon Ceremony ~ Native Flute Meditation and Drum Journey

Monday, Aug 31, 5:30 pm – 7:30 pm

Online Event Live on ZOOM — Half Moon Bay, CA

The element of Fire is speaking loudly to us through extreme heat and wildfires. What messages do Mother Earth and Grandfather Fire have for us at...

Other 1 is interested!

- Every service should have proper exception handling and every input field should have proper validation.
- Password values should be encrypted.
- ESLint should be used in your code following Airbnb style guide.
- The application should be deployed on cloud (E.g. Heroku, AWS EC2)
- A simple, attractive and responsive client attracts good marks.

Testing

1. Testing of the backend server should be done using JMeter and Mocha.
 2. Enzyme should be used to test at least 3 views/pages.
- Following tasks to be tested using JMeter:
Test the server for **100, 200, 300, 400 and 500 concurrent users** with and without connection pooling. Draw the graph with the average time and include it in the report.
 - Following tasks to be tested using Mocha:
Implement five randomly selected REST web service API calls using Mocha. Display the output in the report.

Questions

1. Compare the results of graphs with and without in-built mysql connection pooling of database. Explain the result in detail and describe the connection pooling algorithm if you need to implement connection pooling on your own. (3 pts)
2. What are the ways to improve SQL Performance? List at least 3 strategies. Explain why those strategies improve the performance. (2 pts)

Git Repository

- In your Git repository, create two sub-folders, one for Frontend and one for Backend. Place all your source code in respective Folders.
- Add a proper description for every commit describing what code changes are added.
- Regular commits to your repository are mandatory. (Penalty of 3 marks if missed).
- Do not submit dependencies or supporting libraries (e.g. node_modules) (including them causes deduction of 2 marks).
- All the dependencies should be included in package.json file.
- Readme file of your repository should contain the steps to run the application.

Project Report

- Introduction: State your goals and purpose of the system
- System Design: Describe your chosen system design
- Results: Screen captures of testing results and important screens of the application.
- Performance: What was performance? Analyze results and explain why you are getting those results.
- Git Commit history – screen capture
- Answers to the questions.

Submission

Please upload your report (John_Lab1_Report.doc) on Canvas before deadline. (Number of pages in Report should be below 30)