

CSCC01 eBeauty System Design Document

Lim Lei,
Allen Chien-Luan Lo,
Jason Chen,
Jin Ting Zhou,
Junxun Liu,
Hyun Woo (Eddie) Shin,
Yuehai Zhou

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CRC Cards

Frontend Classes

| Class: /frontend/src/index.js | |
|--|--|
| Responsibilities | Collaborators |
| <ul style="list-style-type: none">Used to render the app by combining all the components inside App.js into one final web app. | <ul style="list-style-type: none">App.js |

| Class: /frontend/src/App.js | |
|--|---|
| Responsibilities | Collaborators |
| <ul style="list-style-type: none">Manages the components of the app as a root component.Used to render the app. | <ul style="list-style-type: none">/src/index.js |

| Class: /frontend/src/store.js | |
|--|--|
| Responsibilities | Collaborators |
| <ul style="list-style-type: none">A store that combines all the reducers in one root reducer | <ul style="list-style-type: none">index.js |

Action

| Class: /frontend/src/actions/providerAction.js | |
|--|---|
| Responsibilities | Collaborators |
| <ul style="list-style-type: none">• An action file contains two method to list all providers from backend• Fetch data from backend to frontend• Dispatch when needed | <ul style="list-style-type: none">• /components/SearchPage.js |

Components

| Class: /frontend/src/components/AddressForm.js | |
|--|---|
| Responsibilities | Collaborators |
| <ul style="list-style-type: none">• Used to connect to create a form to handle user input for addresses. | <ul style="list-style-type: none">• N/A |

| Class: /frontend/src/components/Alerting.js | |
|--|---|
| Responsibilities | Collaborators |
| <ul style="list-style-type: none">• A helper class to replace alert(). looks more formal and user-friendly | <ul style="list-style-type: none">• N/A |

| Class: /frontend/src/components/Animation.js | |
|---|--|
| Responsibilities | Collaborators |
| <ul style="list-style-type: none">• animate the image inside findJon page | <ul style="list-style-type: none">• findJob.js |

| Class: / frontend/src/components/Footer.js | |
|---|---|
| Responsibilities | Collaborators |
| <ul style="list-style-type: none">• being footer of all pages | <ul style="list-style-type: none">• server.js |

| Class: / frontend/src/components/Loader.js | |
|--|--|
| Responsibilities | Collaborators |
| <ul style="list-style-type: none"> A Loader when processing the data from DB, users will see a spinner. | <ul style="list-style-type: none"> /components/SearchPage.js Could be used to other js files as well |

| Class: /frontend/src/components/MapContainer.js | |
|--|---|
| Responsibilities | Collaborators |
| <ul style="list-style-type: none"> Used to connect to google map API and display a map. | <ul style="list-style-type: none"> N/A |

| Class: /frontend/src/components/Message.js | |
|---|---|
| Responsibilities | Collaborators |
| <ul style="list-style-type: none"> A message alter if errors appears | <ul style="list-style-type: none"> /components/SearchPage.js |

| Class: /frontend/src/components/Navbar.js | |
|--|---|
| Responsibilities | Collaborators |
| <ul style="list-style-type: none"> Allows users to have access to homepage, register the different purpose's accounts and login | <ul style="list-style-type: none"> N/A |

| Class: /frontend/src/components/Paginator.js | |
|---|---|
| Responsibilities | Collaborators |
| <ul style="list-style-type: none"> A pagination when too many data loaded in search page, users can navigate different page to see the results | <ul style="list-style-type: none"> /components/SearchPage.js |

| Class: /frontend/src/components/ProviderCard.js | |
|--|---|
| Responsibilities | Collaborators |
| <ul style="list-style-type: none"> List of task providers that show up in the search page when users search strings | <ul style="list-style-type: none"> /components/SearchPage.js |

| Class: /frontend/src/components/ScrollToTop.js | |
|---|---|
| Responsibilities | Collaborators |
| <ul style="list-style-type: none"> A helper class which resets the position of the client by setting the position of the viewer's location of the page to top after switching pages. | <ul style="list-style-type: none"> N/A |

| Class: /frontend/src/components/SearchBox.js | |
|--|---|
| Responsibilities | Collaborators |
| <ul style="list-style-type: none"> This is the search bar from search result page Used to type strings | <ul style="list-style-type: none"> /components/SearchPage.js |

| Class: / frontend/src/components/ServiceDropdown.js | |
|---|---|
| Responsibilities | Collaborators |
| <ul style="list-style-type: none"> Allows users to specify the service they are searching for. | <ul style="list-style-type: none"> /components/SearchPage.js |

Constants

| Class: / frontend/src/constants/providerConstant.js | |
|---|--|
| Responsibilities | Collaborators |
| <ul style="list-style-type: none"> store the provider string constant being used by other classes. | <ul style="list-style-type: none"> /actions/providerAction.js /reducers/providerReducer.js |

Pages

| Class: /frontend/src/pages/AddressPage.js | |
|--|--|
| Responsibilities | Collaborators |
| <ul style="list-style-type: none">Allows users to enter a new address or change address. | <ul style="list-style-type: none">MapContainer.jsFooter.jsAddressForm.js |

| Class: / frontend/src/pages/CheckoutAddressPage.js | |
|--|---|
| Responsibilities | Collaborators |
| <ul style="list-style-type: none">Customers provide their address information for service appointments | <ul style="list-style-type: none">N/A |

| Class: / frontend/src/pages/CheckoutPaymentPage.js | |
|--|---|
| Responsibilities | Collaborators |
| <ul style="list-style-type: none">Customers provide their credit card information for payment of the services they are trying to book. | <ul style="list-style-type: none">N/A |

| Class: / frontend/src/pages/CheckoutReviewPage.js | |
|--|--|
| Responsibilities | Collaborators |
| <ul style="list-style-type: none">This page provides a summary overview of the orders that customers about to submit.If all information are correct, the submitted information will be saved into DB. | <ul style="list-style-type: none">/backend/controllers/orderController.js/backend/models/orderModel.js/backend/server.js |

| Class: / frontend/src/pages/ContactPage.js | |
|---|---|
| Responsibilities | Collaborators |
| <ul style="list-style-type: none">Allows users to contact and email support when they need help/additional information. | <ul style="list-style-type: none">N/A |

| Class: / frontend/src/pages/FindJob.js | |
|--|--|
| Responsibilities | Collaborators |
| <ul style="list-style-type: none">Allows service providers to view the job page and access to their register page. | <ul style="list-style-type: none">/components/Animation.js |

| Class: /frontend/src/pages/HomePage.js | |
|---|---|
| Responsibilities | Collaborators |
| <ul style="list-style-type: none"> Displays general information about the app. Provides a quick search option. Attracts potential users to sign up to the app. | <ul style="list-style-type: none"> N/A |

| Class: / frontend/src/pages/Login.js | |
|--|--|
| Responsibilities | Collaborators |
| <ul style="list-style-type: none"> Allows users and providers to login to their accounts. Receives credential inputs for verification. | <ul style="list-style-type: none"> /css/Login.css |

| Class: /frontend/src/pages/NotFound.js | |
|---|---|
| Responsibilities | Collaborators |
| <ul style="list-style-type: none"> Used to redirect users back to the homepage when they encounter invalid URLs. | <ul style="list-style-type: none"> N/A |

| Class: / frontend/src/pages/ProfileProvider.js | |
|---|---|
| Responsibilities | Collaborators |
| <ul style="list-style-type: none"> Allows service providers to edit their profile data. Allows service providers to edit their account information. | <ul style="list-style-type: none"> N/A |

| Class: / frontend/src/pages/ProviderSchedule.js | |
|--|---|
| Responsibilities | Collaborators |
| <ul style="list-style-type: none"> Show the calendar of the provider with available time. | <ul style="list-style-type: none"> N/A |

| Class: /frontend/src/pages/ReservationCustomer.js | |
|--|---|
| Responsibilities | Collaborators |
| <ul style="list-style-type: none"> Allows the users to view a specific appointment that they have booked or completed | <ul style="list-style-type: none"> N/A |

| Class: /frontend/src/pages/ReviewPage.js | |
|--|--|
| Responsibilities | Collaborators |
| <ul style="list-style-type: none"> Allows users to enter reviews with star ratings to their service providers | <ul style="list-style-type: none"> App.js |

| Class: / frontend/src/pages/SearchPage.js | |
|--|--|
| Responsibilities | Collaborators |
| <ul style="list-style-type: none"> Displays a search result page after users provide search input Allows users to search again and use filters with different attributes Display user's address on file | <ul style="list-style-type: none"> /components/ServiceDropdown.js /components/ViewProfileProvider.js |

| Class: /frontend/src/pages/SignUp.js | |
|--|---|
| Responsibilities | Collaborators |
| <ul style="list-style-type: none"> Allows users to sign up/create new accounts for the app. | <ul style="list-style-type: none"> /css/SignUp.css |

| Class: / frontend/src/pages/SignUpProvider.js | |
|--|---|
| Responsibilities | Collaborators |
| <ul style="list-style-type: none"> Allows service providers to fill in their information and register to the app as a first step. Collect basic information about service providers. | <ul style="list-style-type: none"> N/A |

| Class: /frontend/src/pages/SignUpProviderTwo.js | |
|--|---|
| Responsibilities | Collaborators |
| <ul style="list-style-type: none"> Allows service providers to view the job page and access their registration page as a second step. Collects additional information about service providers. | <ul style="list-style-type: none"> N/A |

| Class: /frontend/src/pages/SignUpProviderThree.js | |
|--|---|
| Responsibilities | Collaborators |
| <ul style="list-style-type: none"> Allows service providers to upload their profile image and access their registration page as a third step. Collects additional information about service providers. | <ul style="list-style-type: none"> N/A |

| Class: / frontend/src/pages/ViewProfileProvider.js | |
|---|---|
| Responsibilities | Collaborators |
| <ul style="list-style-type: none"> Allows users to view the profiles of service providers. | <ul style="list-style-type: none"> N/A |

| Class: / frontend/src/pages/CheckoutPaypalPage.js | |
|--|---|
| Responsibilities | Collaborators |
| <ul style="list-style-type: none"> Allows users to use paypal accounts to make payment. | <ul style="list-style-type: none"> N/A |

Reducers

| Class: /frontend/src/reducers/providerReducer.js | |
|--|--|
| Responsibilities | Collaborators |
| <ul style="list-style-type: none"> Request reducer for all providers Request reducer for a provider detail | <ul style="list-style-type: none"> store.js |

Backend Classes

Configs

| Class: /backend/config/db.js | |
|---|---|
| Responsibilities | Collaborators |
| <ul style="list-style-type: none">connect server to database, need .env to provide connection url | <ul style="list-style-type: none">server.jsseeder.js |

Controllers

| Class: /backend/controllers/calendarController.js | |
|--|--|
| Responsibilities | Collaborators |
| <ul style="list-style-type: none">create a new timeslot (of calendar) in calendar DBThere are three retrieve methodsGET all calendarsGET all calendars from a providerGET detail of a timeslot | <ul style="list-style-type: none">Server.js/models/calendarModel.js |

| Class: /backend/controllers/customerController.js | |
|---|--|
| Responsibilities | Collaborators |
| <ul style="list-style-type: none">Registers a new customer by creating a new entry and updating it in Customer DBAllows customers log into the app by checking their login credentials with credentials stored in Customer DBRetrieves a single customer or entire customers data from DBDeletes a customer entry from DBUpdates attributes of customer entry in DBRetrieves the customer's address data from the DBUpdates the user's address data in the DB | <ul style="list-style-type: none">Server.js/models/customerModel.js |

| Class: /backend/controllers/orderController.js | |
|---|--|
| Responsibilities | Collaborators |
| <ul style="list-style-type: none"> This page provides a summary overview of the orders that customers about to submit. If all information are correct, the submitted information will be saved into DB. | <ul style="list-style-type: none"> /backend/controllers/orderController.js /backend/models/orderModel.js /backend/server.js |

| Class: /backend/controllers/postController.js | |
|---|---|
| Responsibilities | Collaborators |
| <ul style="list-style-type: none"> Manages post entries of the app Retrieves post entries from DB Creates/Inserts a new post entry into DB Deletes a post entry from DB Updates a post entry in DB | <ul style="list-style-type: none"> Server.js /models/postModel.js |

| Class: /backend/controllers/providerController.js | |
|---|---|
| Responsibilities | Collaborators |
| <ul style="list-style-type: none"> Registers a new service provider by creating a new entry and updating it in DB Allows service providers log into the app by checking their login credentials with credentials stored in DB Retrieves a single provider by Id or entire providers data from DB | <ul style="list-style-type: none"> Server.js /models/providerModel.js |

| Class: /backend/controllers/reviewController.js | |
|---|---|
| Responsibilities | Collaborators |
| <ul style="list-style-type: none"> Manages review entries of the app Retrieves review entries from DB Creates/Inserts a new review into DB Deletes a review entry from DB Updates a review entry in DB | <ul style="list-style-type: none"> Server.js /models/reviewModel.js |

Data

| Class: /backend/data/profile.js | |
|---|---|
| Responsibilities | Collaborators |
| <ul style="list-style-type: none">sample data of profile database | <ul style="list-style-type: none">seeder.js |

| Class: /backend/data/provider.js | |
|--|---|
| Responsibilities | Collaborators |
| <ul style="list-style-type: none">sample data of provider database | <ul style="list-style-type: none">seeder.js |

| Class: /backend/data/service.js | |
|---|---|
| Responsibilities | Collaborators |
| <ul style="list-style-type: none">sample data of profile database | <ul style="list-style-type: none">seeder.js |

Middlewares

| Class: /backend/middleware/authMiddleware.js | |
|--|--|
| Responsibilities | Collaborators |
| <ul style="list-style-type: none">Checks authentication for access | <ul style="list-style-type: none">Server.js/models/providerModel.js |

| Class: /backend/middleware/errorMiddleware.js | |
|--|---|
| Responsibilities | Collaborators |
| <ul style="list-style-type: none">Handles NotFound and DB query errors | <ul style="list-style-type: none">Server.js |

| Class: /backend/middleware/upload.js | |
|--|--|
| Responsibilities | Collaborators |
| <ul style="list-style-type: none">create a bucket for uploading images. (GRIDFS) | <ul style="list-style-type: none">/routes/imageRoutejs |

Models

| Class: /backend/controllers/calendarModel.js | |
|--|---|
| Responsibilities | Collaborators |
| <ul style="list-style-type: none">Defines MongoDB schema for Calendar DB | <ul style="list-style-type: none">Server.js/models/calendarController.js |

| Class: /backend/models/customerModel.js | |
|--|--|
| Responsibilities | Collaborators |
| <ul style="list-style-type: none">Defines MongoDB schema for Customer DB | <ul style="list-style-type: none">Server.js/controllers/customerController.js |

| Class: /backend/controllers/orderModel.js | |
|---|---|
| Responsibilities | Collaborators |
| <ul style="list-style-type: none">Defines MongoDB schema for order collection | <ul style="list-style-type: none">Server.js/controllers/orderController.js |

| Class: /backend/models/postModel.js | |
|--|--|
| Responsibilities | Collaborators |
| <ul style="list-style-type: none">Defines MongoDB schema for Post DB | <ul style="list-style-type: none">Server.js/controllers/postController.js |

| Class: /backend/models/providerModel.js | |
|--|--|
| Responsibilities | Collaborators |
| <ul style="list-style-type: none">Defines MongoDB schema for Provider DB | <ul style="list-style-type: none">Server.js/controllers/providerController.js |

| Class: /backend/models/reviewModel.js | |
|--|---|
| Responsibilities | Collaborators |
| <ul style="list-style-type: none"> Defines MongoDB schema for Review DB | <ul style="list-style-type: none"> Server.js /controllers/reviewController.js |

| Class: /backend/models/serviceModel.js | |
|---|---|
| Responsibilities | Collaborators |
| <ul style="list-style-type: none"> Defines MongoDB schema for Service DB | <ul style="list-style-type: none"> Server.js |

Routes

| Class: /backend/controllers/calendarRoute.js | |
|--|--|
| Responsibilities | Collaborators |
| <ul style="list-style-type: none"> Defines the endpoints related of /api/calendar route using express Router. | <ul style="list-style-type: none"> Server.js /models/calendarController.js |

| Class: /backend/routes/customerRoute.js | |
|--|---|
| Responsibilities | Collaborators |
| <ul style="list-style-type: none"> Defines endpoints for Customer DB Connects controllers through router | <ul style="list-style-type: none"> Server.js /controllers/customerController.js |

| Class: /backend/routes/imageRoute.js | |
|--|---|
| Responsibilities | Collaborators |
| <ul style="list-style-type: none"> Defines endpoints for image DB does the connection of database on it's own post image, get image, and delete image from DB | <ul style="list-style-type: none"> Server.js |

| Class: /backend/controllers/orderRoute.js | |
|--|--|
| Responsibilities | Collaborators |
| <ul style="list-style-type: none"> Defines the endpoints related or /api/orders route using express Router. | <ul style="list-style-type: none"> Server.js /controllers/orderController.js |

| Class: /backend/routes/postRoute.js | |
|--|---|
| Responsibilities | Collaborators |
| <ul style="list-style-type: none"> Defines endpoints for Post DB Connects controllers through router | <ul style="list-style-type: none"> Server.js /controllers/postController.js |

| Class: /backend/routes/providerRoute.js | |
|--|---|
| Responsibilities | Collaborators |
| <ul style="list-style-type: none"> Defines endpoints for Provider DB Connects controllers through router | <ul style="list-style-type: none"> Server.js /controllers/providerController.js |

| Class: /backend/routes/reviewRoute.js | |
|--|---|
| Responsibilities | Collaborators |
| <ul style="list-style-type: none"> Defines endpoints for Review DB Connects controllers through router | <ul style="list-style-type: none"> Server.js /controllers/reviewController.js |

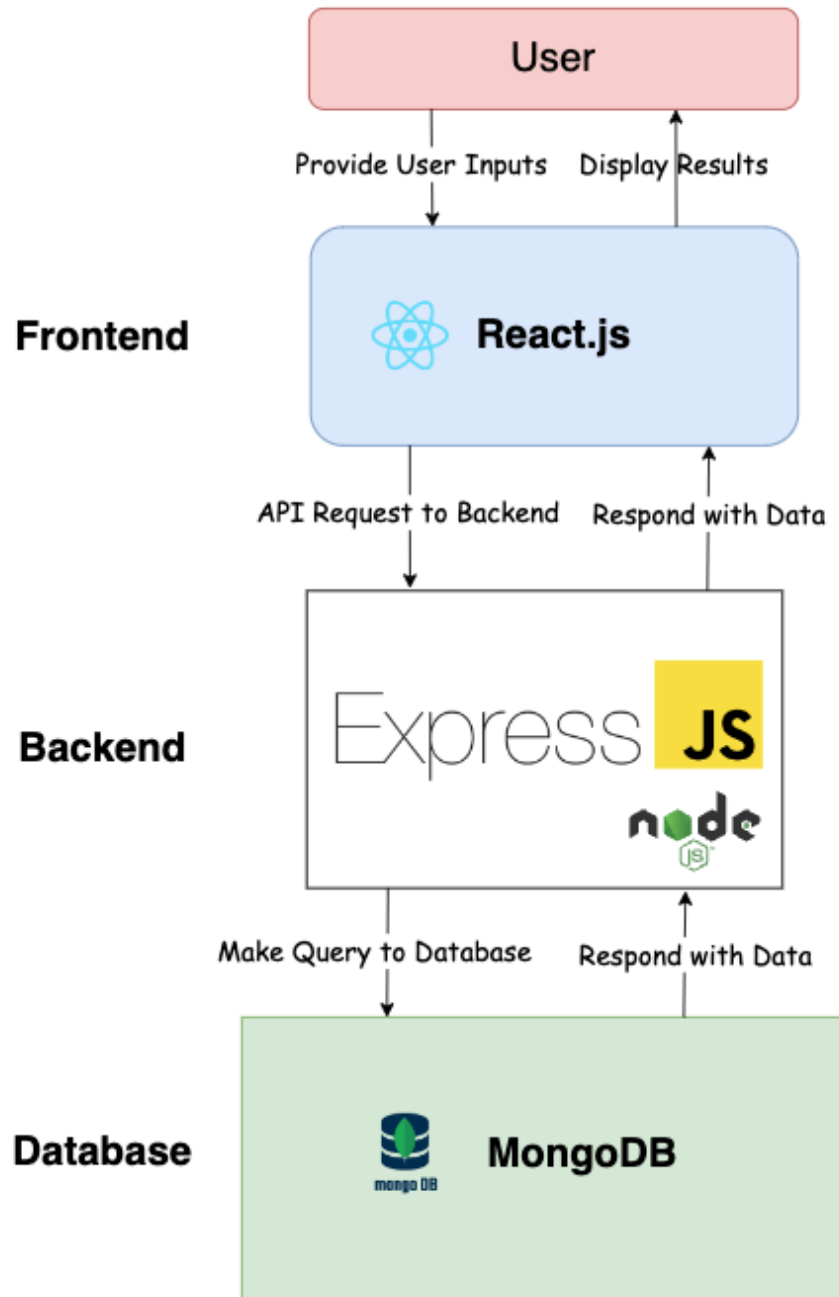
| Class: /backend/server.js | |
|--|--|
| Responsibilities | Collaborators |
| <ul style="list-style-type: none"> settle express, defines endpoints and manages API methods. | <ul style="list-style-type: none"> NA |

| Class: /backend/seeder.js | |
|--|--|
| Responsibilities | Collaborators |
| <ul style="list-style-type: none"> load/delete sample to database | <ul style="list-style-type: none"> NA |

System Architecture Design

MERN Stack

Our web application follows a 3-tier architecture which is composed of frontend, backend, and database using JavaScript and JSON. React.js is responsible for the frontend operations of the app while Express.js and Node.js perform server-side operations. To store the data from the app, we use MongoDB, a document-oriented NoSQL database. This 3-tier architecture is also known as MERN stack which is an abbreviated form of **M**ongoDB, **E**xpress, **R**eact, and **N**ode.



System Flow Decomposition

Users first interact with the UI components of React.js in the web browser. They can browse the different pages of the app and provide inputs for different operations such as login/register, search, comments, or reviews. Since the web page is served by Express.js running on Node.js, whenever users provide inputs, the server-side applications can collect them and send them to the MongoDB database. Also, whenever users request data from the database, Express.js is responsible for retrieving the data from the database through querying.