



Requirements and Design Document

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Project overview

The aim of the application “Hobby Corner” is to encourage people to keep in touch with their hobbies, acquire new hobbies and make friends while doing so. The application helps users of similar interests to get together and work on their hobbies and learn from one another. Each user registered/ unregistered can view a list of connections that are created by other users. These connections are gathering events based on categories of Hobbies it belongs to. The application provides a free platform for people to create their connections so that others of similar interests can join them. For example, a user who is interested in Hiking a mountain can post a new connection under the Fitness category, which other interested users can join and they all can go on the hike together.

A user can register into the system by entering his/her basic information like Name, email id, address etc. Once the user has registered he/she can add new connections to their profile with appropriate RSVP options of yes, no and maybe. A user can also create own new connection, update connections and also delete connections created by themselves.

Only a registered user is allowed to create a connection, update a connection, delete a connection and RSVP a connection. Unregistered users can access the application as a guest and can only view the list of available connections, contact info and about contents.

Building Blocks of the Application

The entire application is developed on Node.js platform. Node.js is a platform built on Chrome's JavaScript runtime for easily building fast, scalable network applications. The version of node used for the development of the application is v10.16.3.

The node package manager (npm): npm is a package manager for the JavaScript programming language. It is the default package manager for the JavaScript runtime environment Node.js. The integrated development environment (IDE) used for the application development is Sublime Text editor. Sublime text is a free and open-source text and source code editor for macOS, Linux, and Microsoft Windows.

In order to store application data we use MongoDB. MongoDB is a NoSQL database. MongoDB is an open source database management system (DBMS) that uses a document-oriented database model which supports various forms of data. The version of MongoDB used for the development of the application is v4.2.

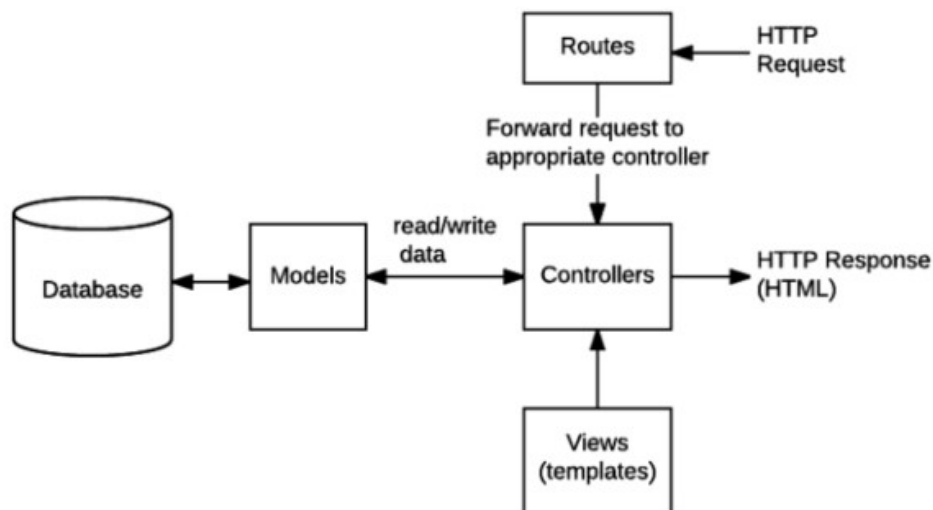
Application Structure

Model–view–controller is an architectural pattern commonly used for developing user interfaces that divides an application into three interconnected parts.

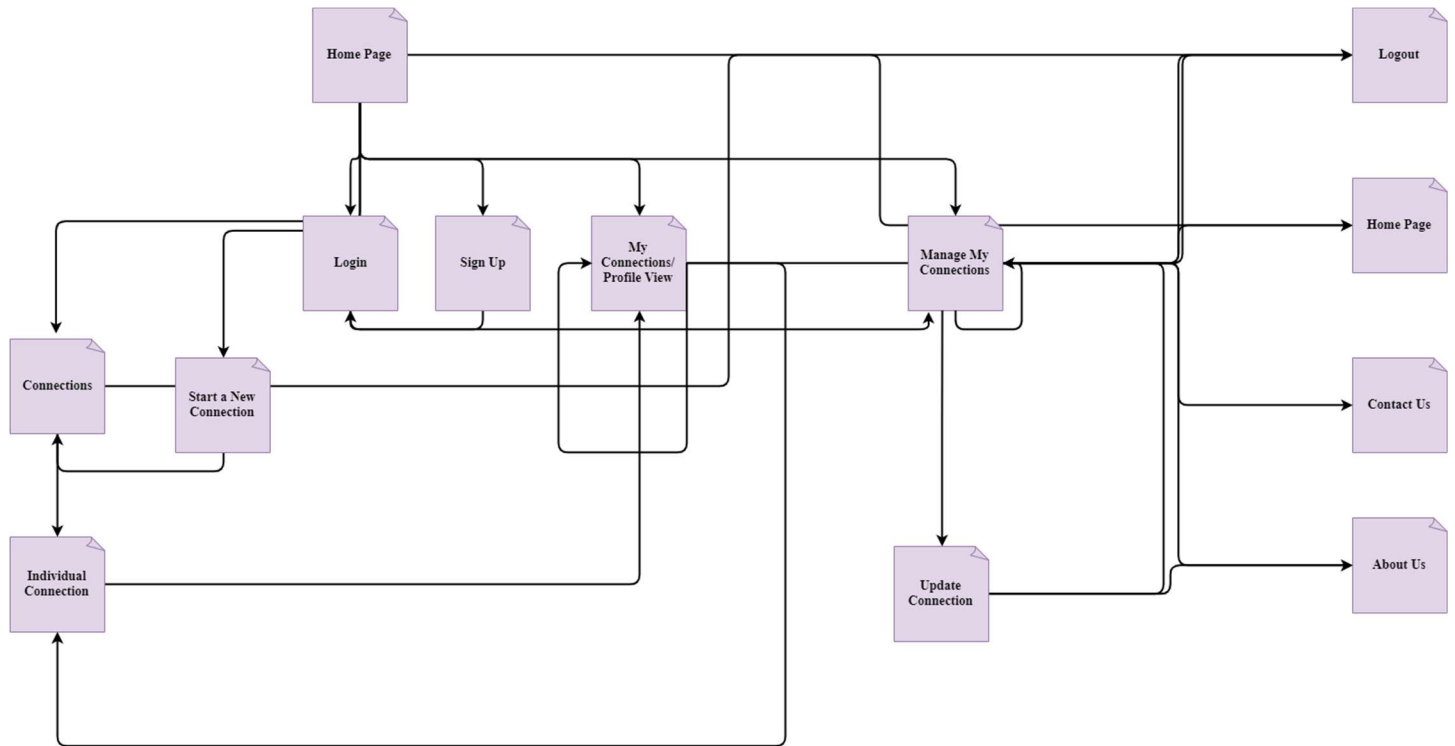
Model: The model is responsible for managing the data of the application. It effectively interacts with the database. It receives user input from the controller.

View: The view is responsible for the presentation of the model in a particular format. The application uses ejs version 2.7.1 for formatting views. This is basically the page that is seen by the user.

Controller: The controller responds to the user input and performs interactions on the data model objects. The controller receives the input, optionally validates it, performs other business logic on the data and then passes the input to the model.



Site Map



The above diagram shows the site map of the Hobby Corner application:

The pages Home Page, Connections, Sign Up, Contact Us and About Us are available for guest users or unregistered users.

The pages mentioned above and all other pages in the diagram are available to registered users.

Page Design

1. Layout Pages:

These pages are used as underlying layer for all the pages in the application.

a. Header

- *The name of the page:* header.ejs
- *Purpose of the page:* This is the header that will be shown on all pages across the application.
- *Audience of page:* The header shown under Without Logging In will be displayed to guest/unregistered user. And the header shown under Logged In will be displayed to the registered user once they log into the application.
- The header contains link to profile view, Home page, creating a new connection and also allows logged in user to Log out. For the user who hasn't logged in it provides Login, Home Page and Sign up links.

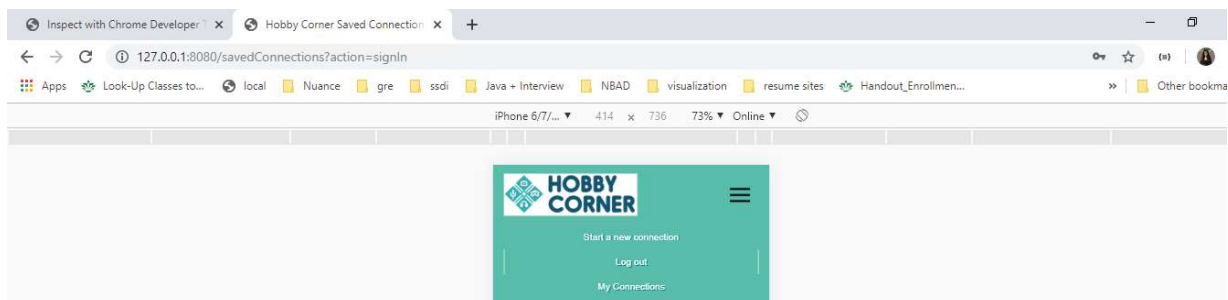
Without Logging In



When user is Logged In



In Responsive view on mobile/tab



b. Footer

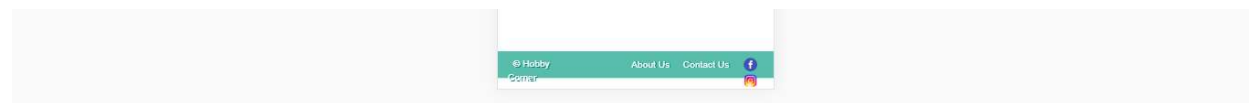
- *The name of the page:* footer.ejs

Hobby Corner

- *Purpose of the page:* This is the footer that will be shown on all pages across the application.
- *Audience of page:* The footer shown will be displayed to guest/unregistered user and registered user.
- The footer contains Copyright text and links to About Us and Contact Us page. It also contains links to Facebook and Instagram links which are currently just placeholders.



In Responsive view on mobile/tab

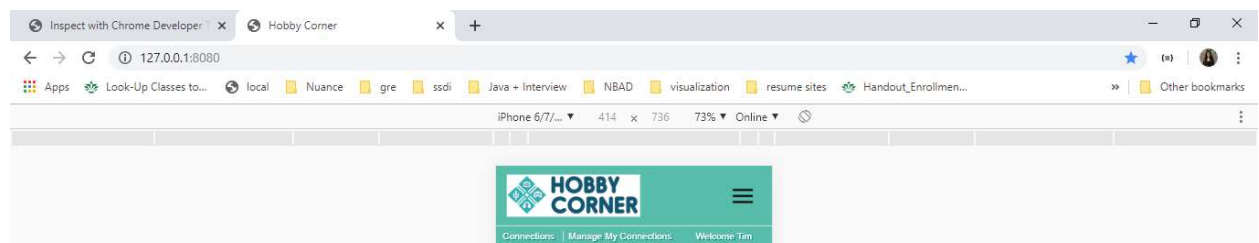


c. Navigation

- *The name of the page:* navigation.ejs
- *Purpose of the page:* This is the navigation that will be shown on all pages across the application.
- *Audience of page:* The navigation shows a *Connections* link which will lead to the connections page display all connections. If the user is logged in it will show a link *Manage My Connections* which will show the connections the user created. It will also display the name of the user who logged in.
- The navigation shows a *Connections* link which will lead to the connections page display all connections. If the user is logged in it will show a link *Manage My Connections* which will show the connections the user created.

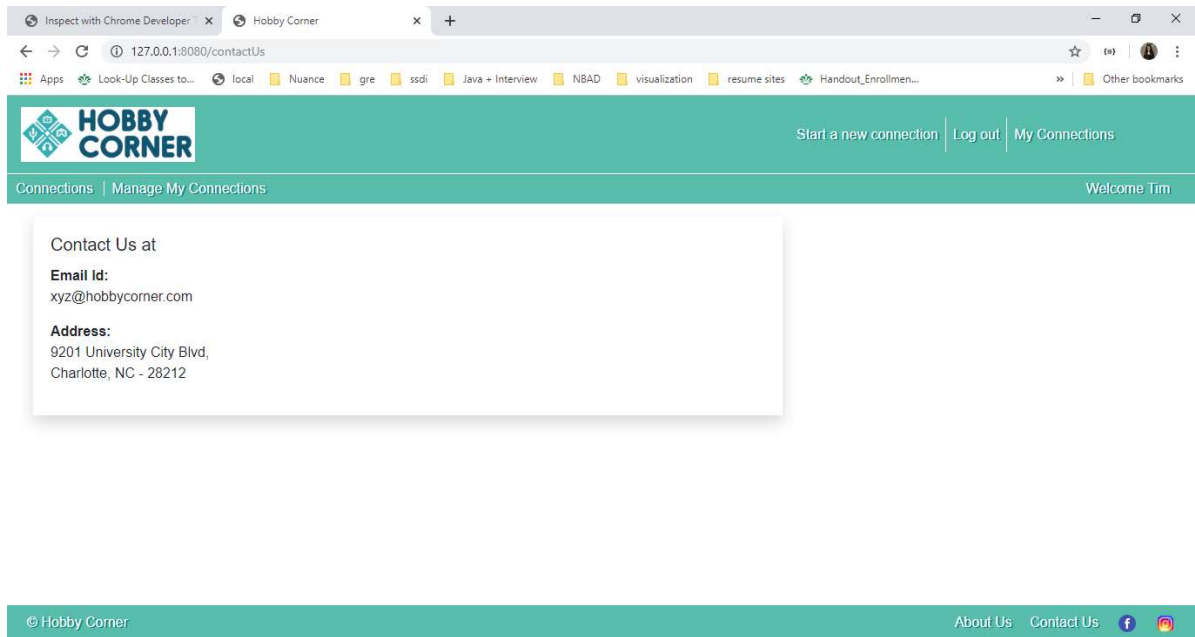


In Responsive view on mobile/tab

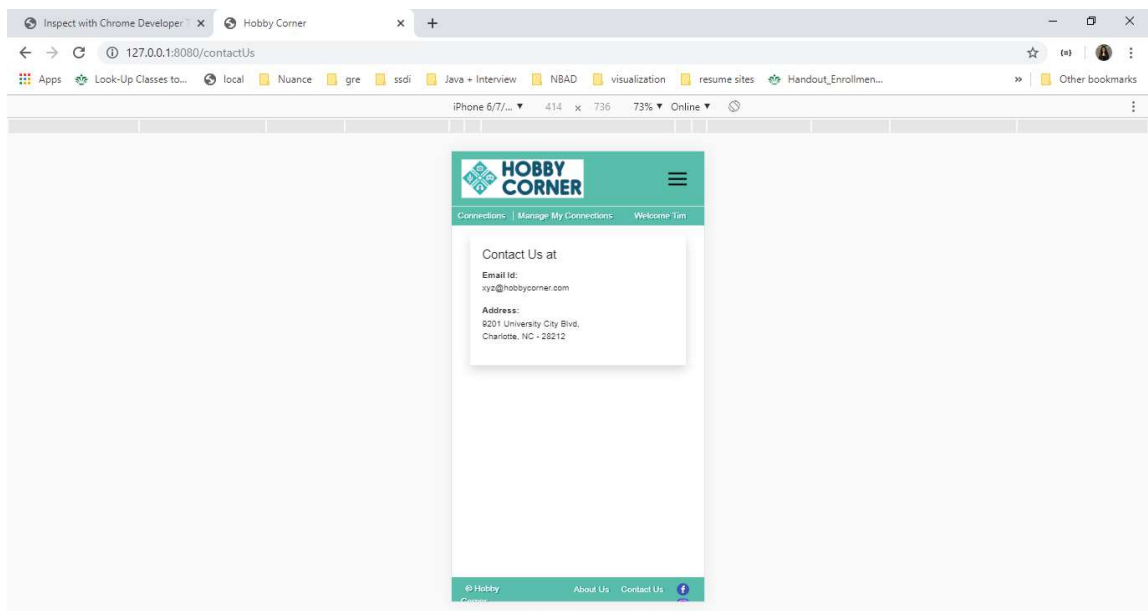


d. Contact Us

- *The name of the page:* contactUs.ejs
- *Purpose of the page:* This page provides contact information for users to contact with the application managers.
- *Audience of page:* The registered as well as unregistered users can view this information.
- The page contains text showing contact information.



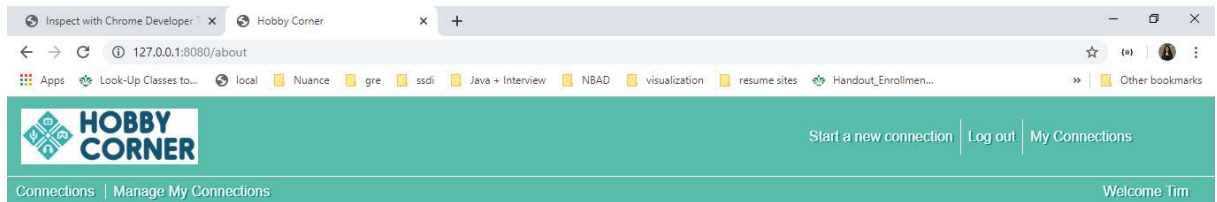
In Responsive view on mobile/tab



Hobby Corner

e. About Us

- *The name of the page:* about.ejs
- *Purpose of the page:* This page provides information about the application for users.
- *Audience of page:* The registered as well as unregistered users can view this information.
- The page contains text showing information about the application.



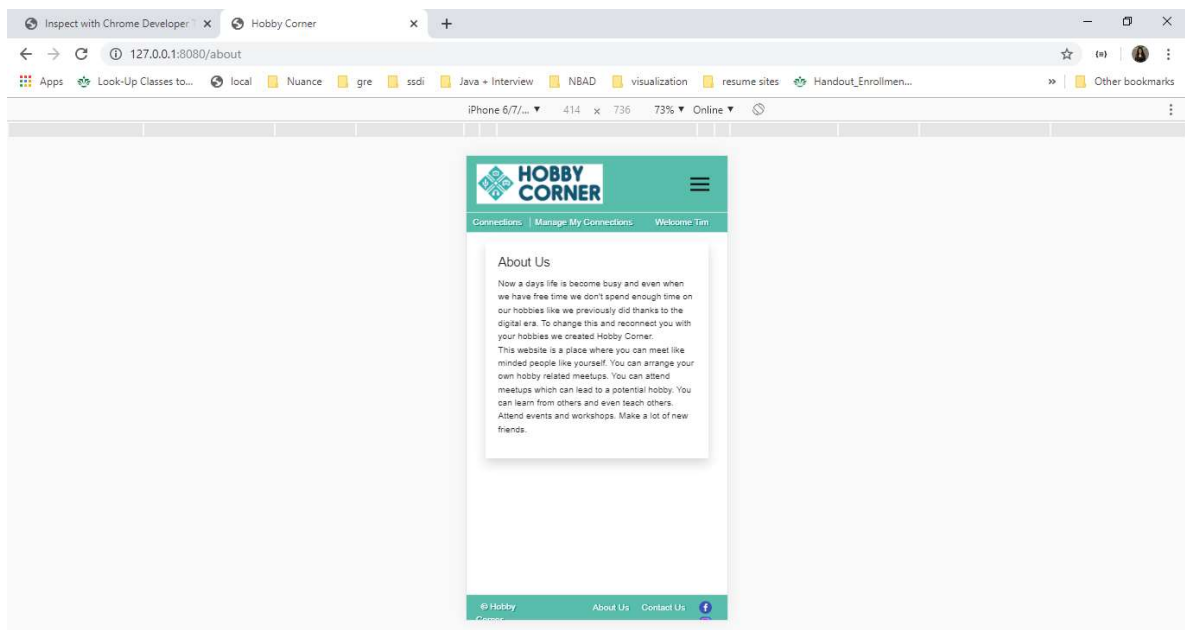
About Us

Now a days life is become busy and even when we have free time we don't spend enough time on our hobbies like we previously did thanks to the digital era. To change this and reconnect you with your hobbies we created Hobby Corner.

This website is a place where you can meet like minded people like yourself. You can arrange your own hobby related meetups. You can attend meetups which can lead to a potential hobby. You can learn from others and even teach others. Attend events and workshops. Make a lot of new friends.

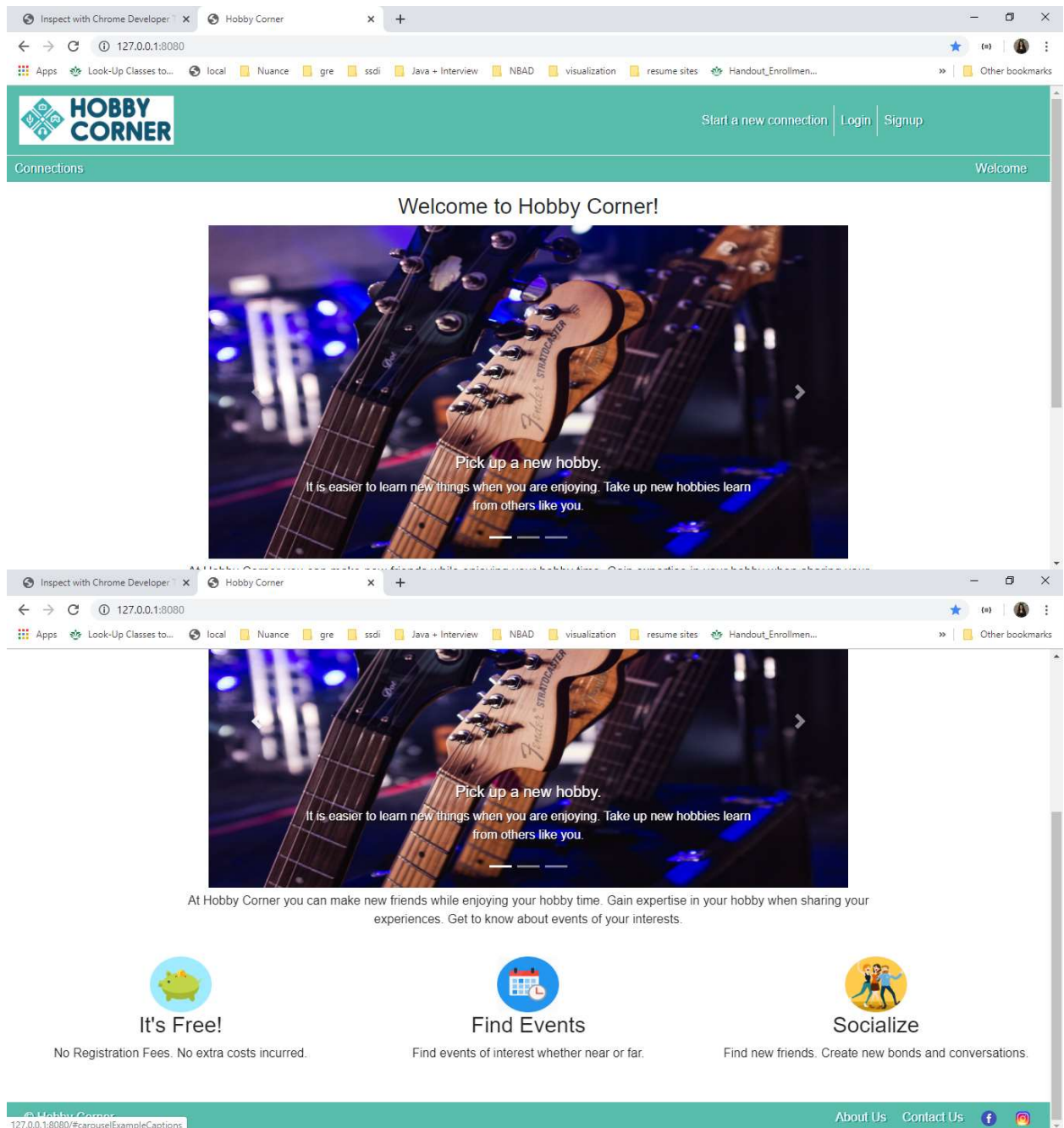


In Responsive view on mobile/tab



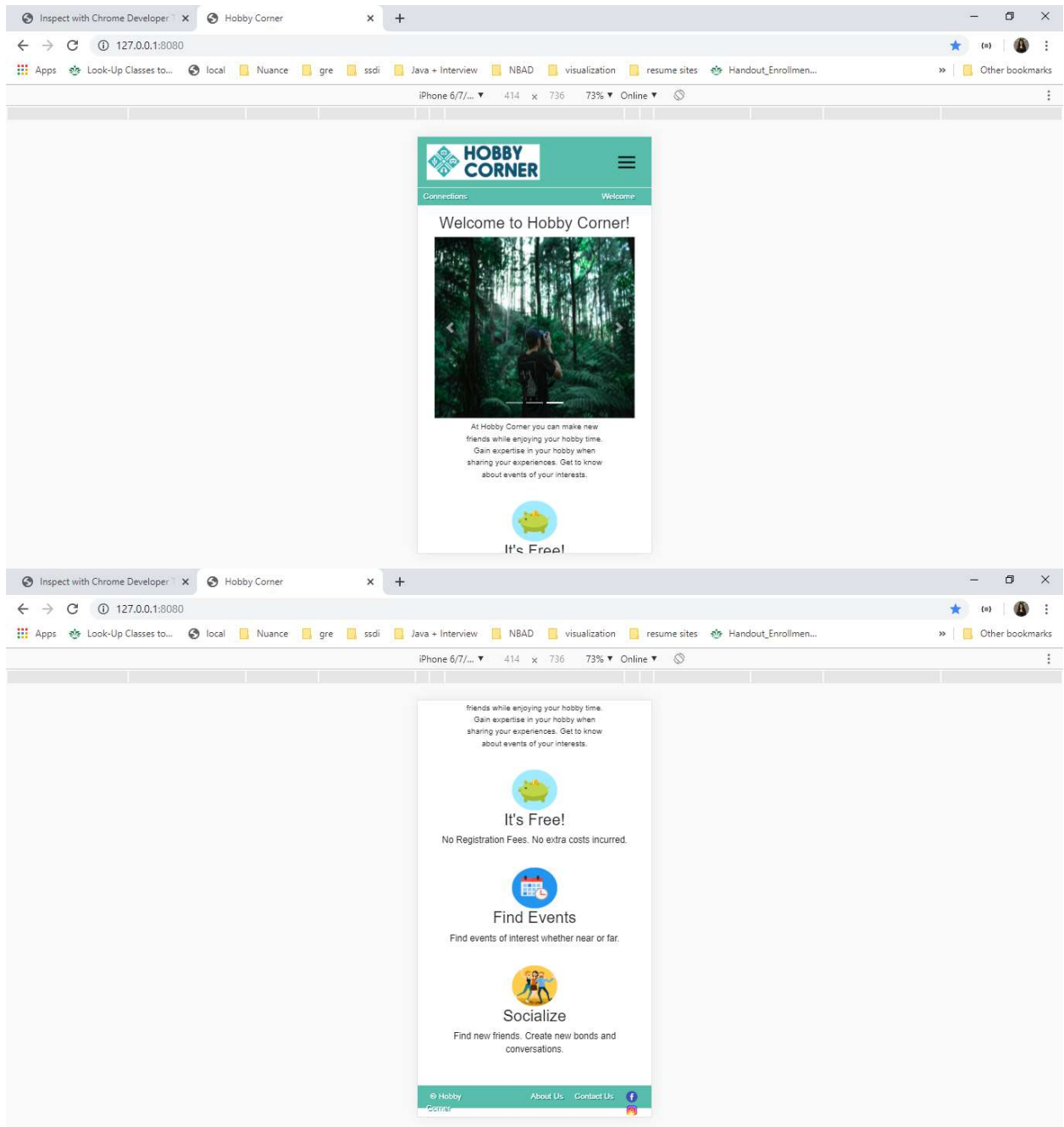
2.Home Page

- *The name of the page:* index.ejs
- *Purpose of the page:* This page is home page which is the start point for the application from where the user navigates to different pages.
- *Audience of page:* Registered and unregistered users both can view this page.
- This page provides links to from the navigation bar and headers and footers. It contains brief information about the application.



Hobby Corner

In Responsive view on mobile/tab

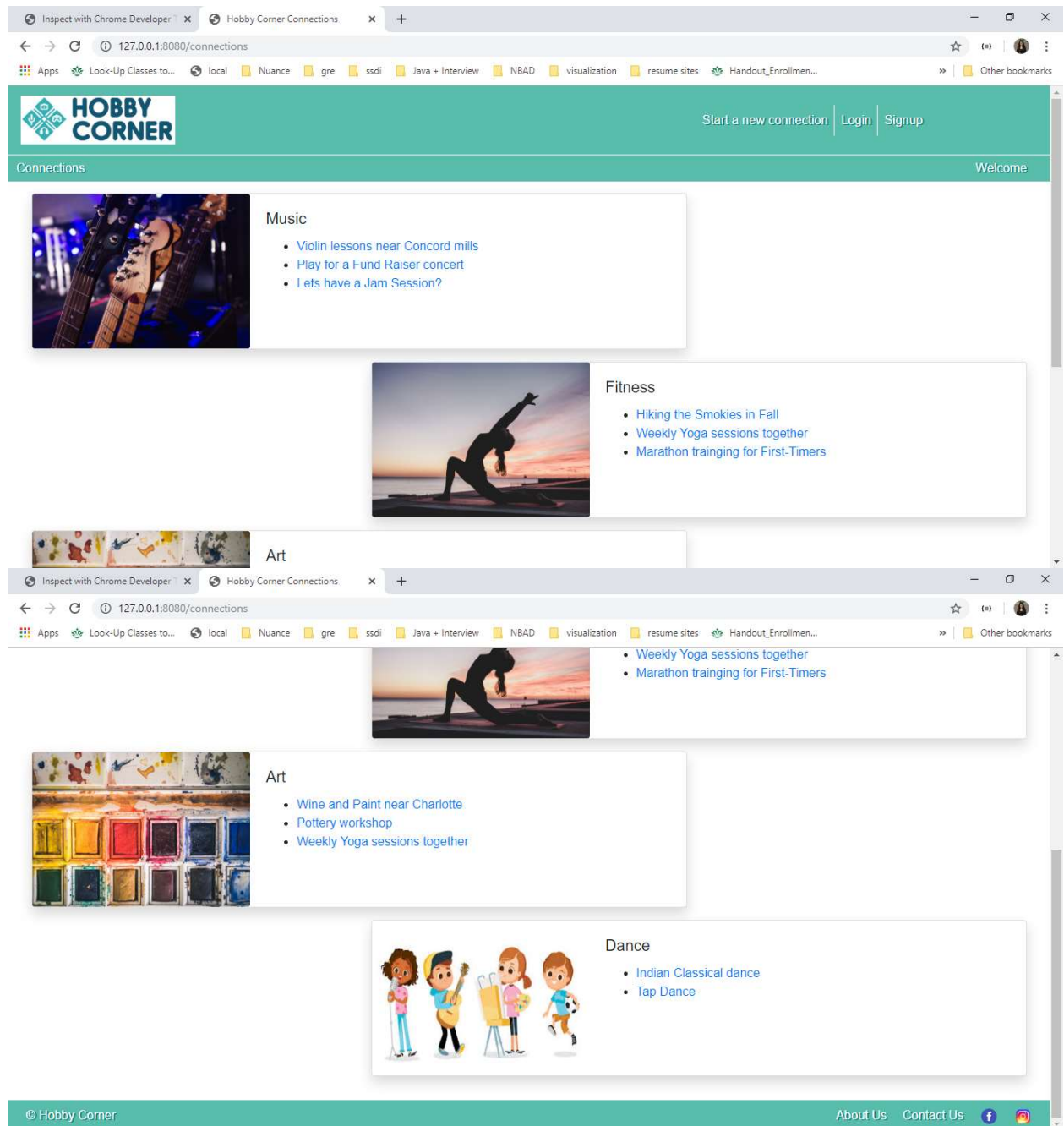


3. Connections Page

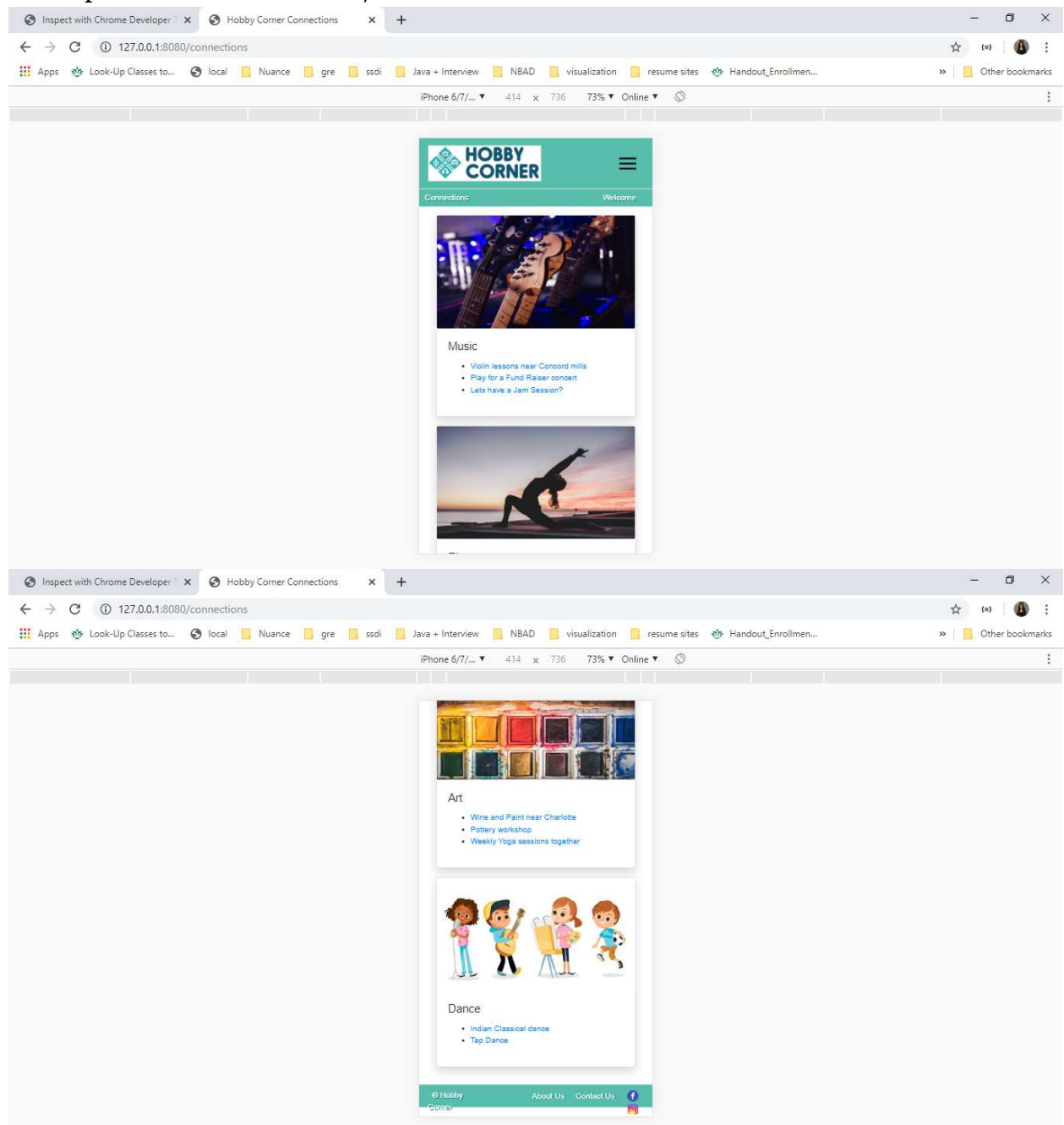
- *The name of the page:* connections.ejs
- *Purpose of the page:* The purpose of this page is to display all the connections available in the application to the user.

Hobby Corner

- *Audience of page:* Both the registered and unregistered users have access to this page.
- This page contains a list of links which lead to the detailed view of that connection. These connections are grouped under categories for easy access. When a new connection is added with a new category a new card with the newly added connection will be created on this page.



In Responsive view on mobile/tab

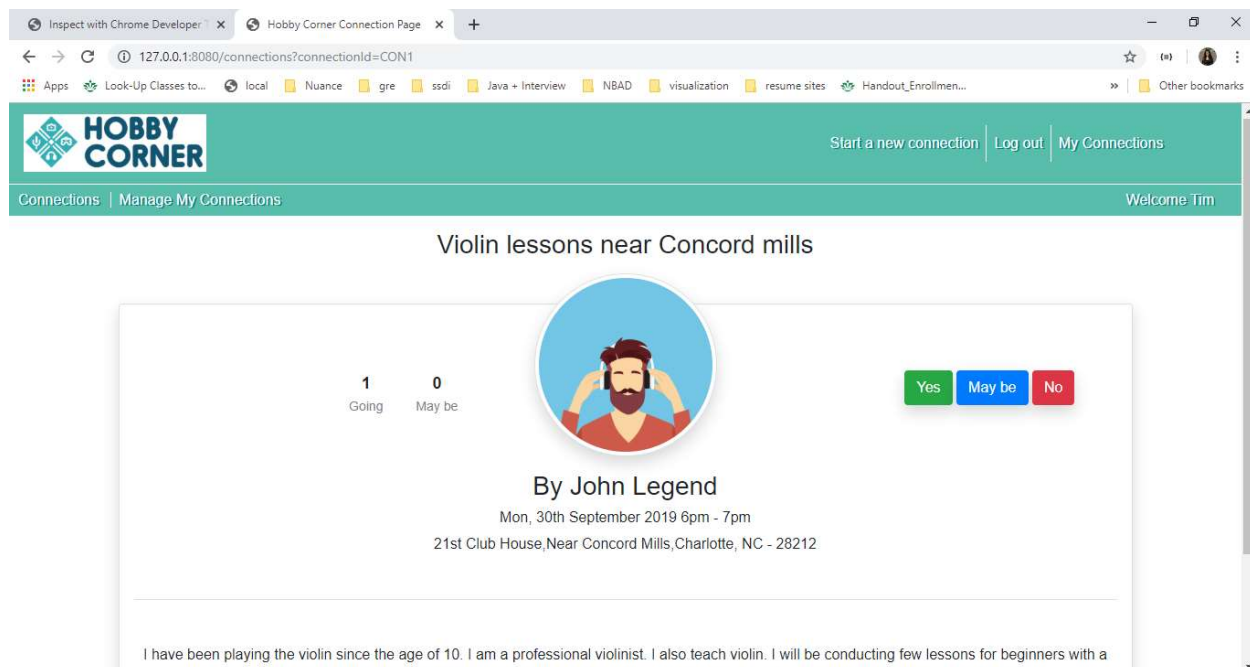


4. Connection Page

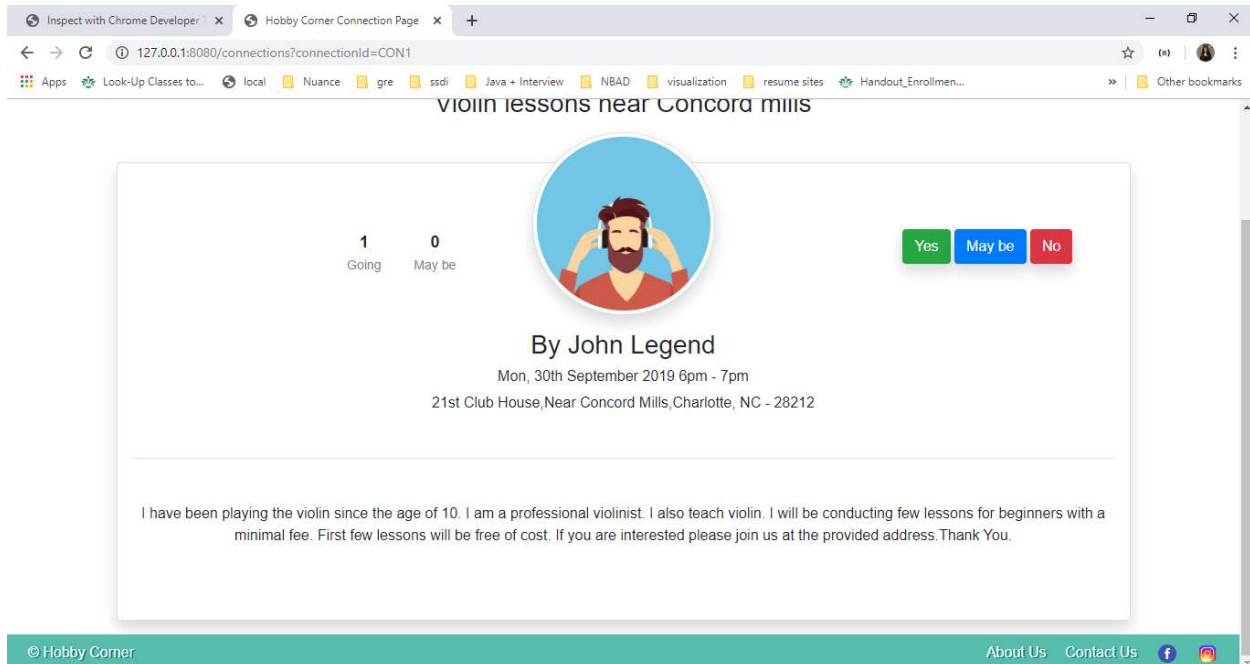
- *The name of the page:* connection.ejs
- *Purpose of the page:* This page provides a detailed view of each connection. It shows details like venue, time, how many people are going etc. which might help the user to make a decision on whether they want to attend the event.

Hobby Corner

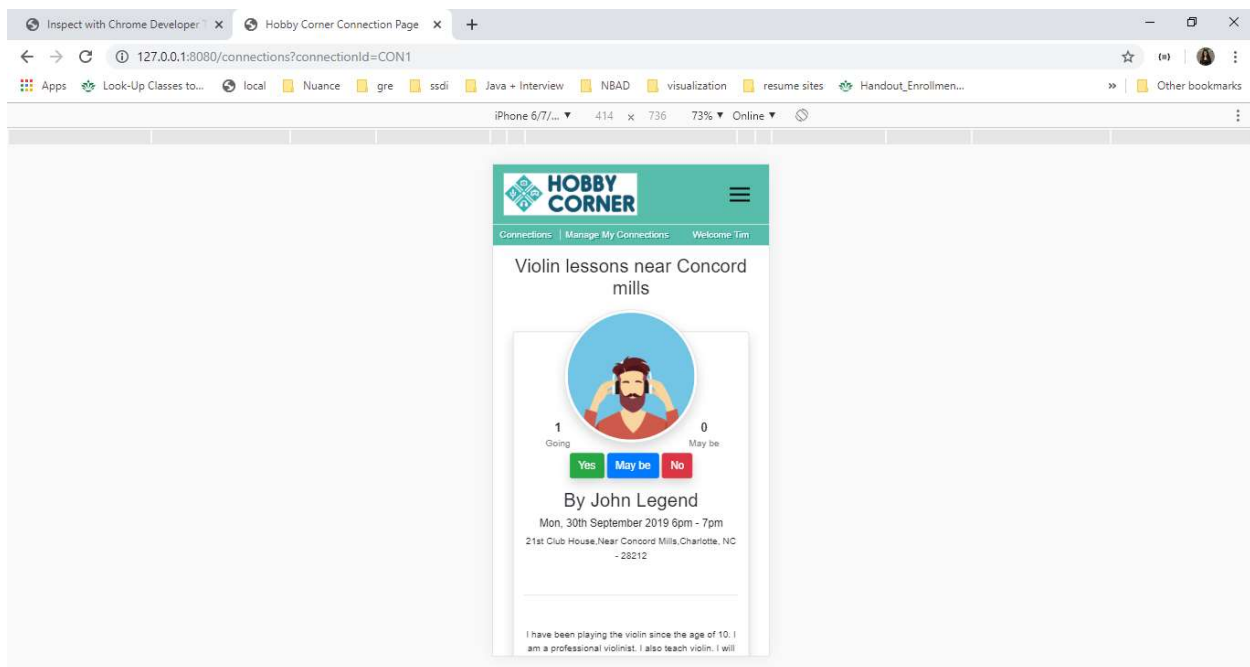
- *Audience of page:* Both the registered and unregistered users have access to this page. But when an unregistered user clicks on any of the RSVP buttons he is re-directed to the Login Page.
- It shows details like venue, time, how many people are going, details about the event, details about the host and RSVP buttons.
- This page has 3 RSVP buttons namely, Yes, No and Maybe. When an unregistered user clicks on any of the RSVP buttons he is re-directed to the Login Page. When a registered & Logged in user clicks on any of the RSVP buttons he is re-directed to the Profile/Saved Connections Page. The connection that the user added will be added (if new) /updated (if already existing) in the users profile.
- Also the Going and Maybe Counts will be updated based on users' RSVP.



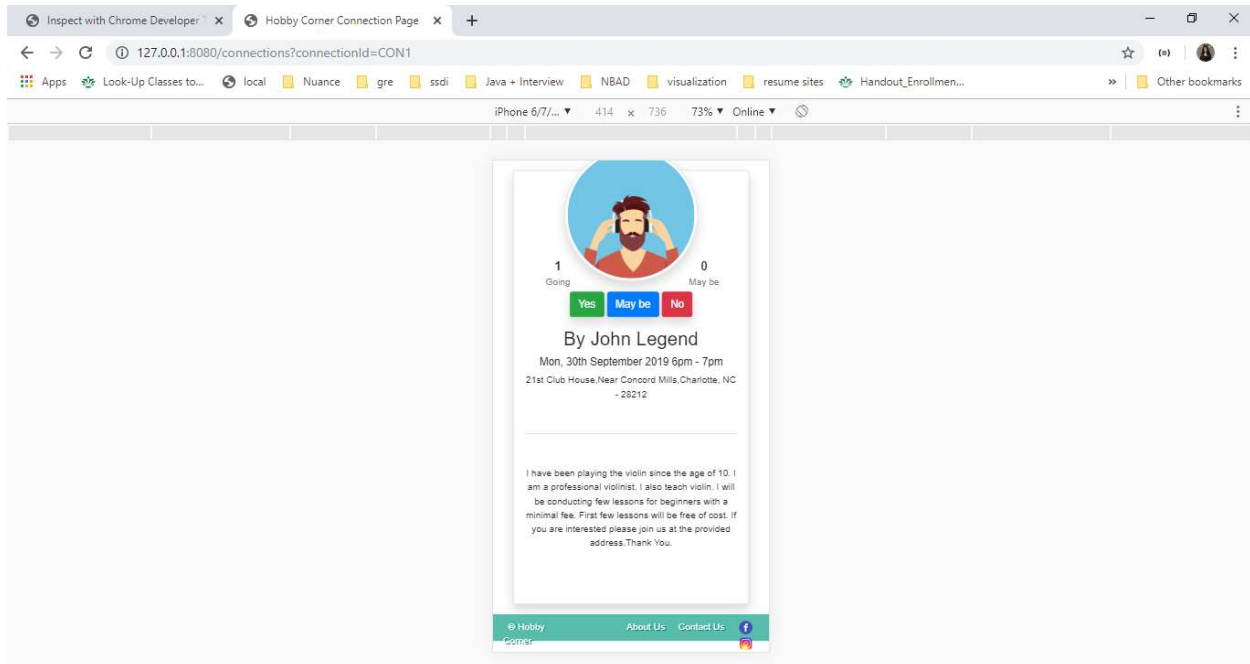
Hobby Corner



In Responsive view on mobile/tab



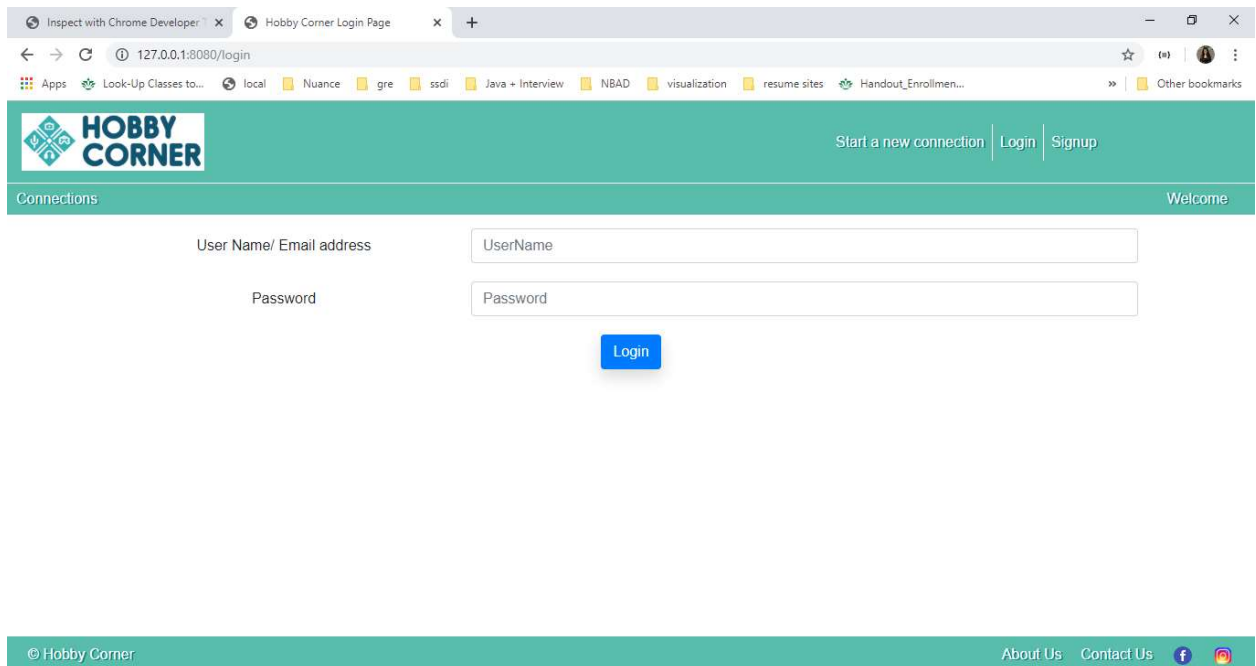
Hobby Corner



5. Login

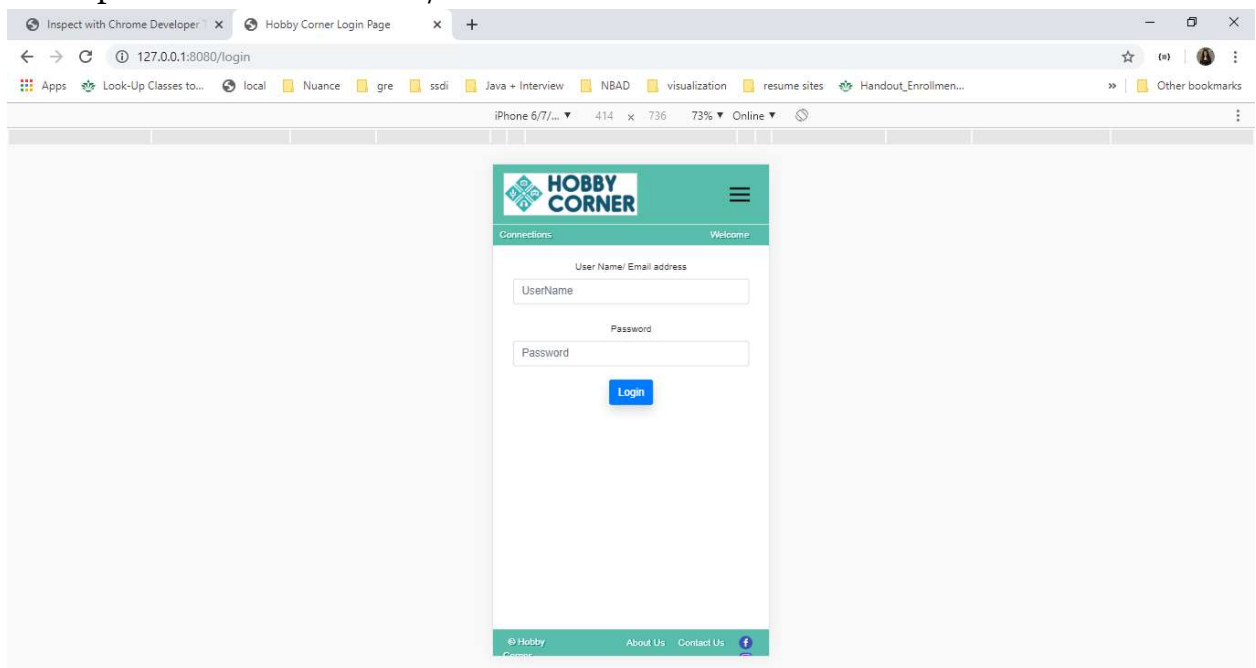
- *The name of the page:* login.ejs
- *Purpose of the page:* This is the login page of the application where a user once registered can login and continue new actions.
- *Audience of page:* This page can be viewed by both registered and unregistered users.
- The page contains 2 fields namely, Username and Password.
- The username should be a valid email id and the password should be atleast 8 characters long with a combination of atleast one number, one special character, one capital letter and one small letter. No spaces are allowed.
- The page contains a Login button. Which when clicked validates the fields and if the email and password match to the one in the database the user is redirected to the saved connections page. If there is an error the Login page is loaded again showing appropriate error.
- The password entered by the user is hashed using the salt from the database for the specific user. This hashed password is compared to the hashed password saved in database.

Hobby Corner



The screenshot shows a web browser window with the address bar displaying "127.0.0.1:8080/login". The page has a teal header with the "HOBBY CORNER" logo on the left and links for "Start a new connection", "Login", and "Signup" on the right. Below the header, there's a teal bar with "Connections" on the left and "Welcome" on the right. The main content area contains a login form with two input fields: "User Name/ Email address" (containing "UserName") and "Password" (containing "Password"). A blue "Login" button is positioned below the password field. At the bottom, there's a teal footer with "© Hobby Corner" on the left and links for "About Us", "Contact Us", and social media icons on the right.

In Responsive view on mobile/tab



The screenshot shows the same Hobby Corner Login Page in a responsive mobile view. The page is displayed within a simulated iPhone 6/7/8 frame. The layout is adapted for a smaller screen, with the "HOBBY CORNER" logo and navigation links at the top. The login form fields and the "Login" button are centered and scaled appropriately for the mobile interface. The footer remains at the bottom of the page.

6. Sign Up

- *The name of the page:* userRegistration.ejs
- *Purpose of the page:* The purpose of this page is allow a new user to signup and use the application.

Hobby Corner

- *Audience of page:* This page can be viewed by both registered and unregistered users.
- The *fields* on this page intend to capture the basic information about the user. The main fields are Username and password which will be used for login. Other than these it contains address fields.
- The *validations* include that the username should be a valid unique email id which is not already in use in the database of the application. The password should be atleast 8 characters long with a combination of atleast one number, one special character, one capital letter and one small letter. No spaces are allowed. The confirm password needs to match the password exactly. Rest of the validation are address related basic validations.
- The *buttons* shown on the page include a Register button on click of which all the fields are validated and if everything is fine the record is saved to the database and the user is redirected to the Login page. If there is an error the same page is reloaded displaying appropriate errors. A random string of length 16 is generated known as salt. The password entered by the user is hashed using the salt generated. This hashed password and the salt is stored against the users record in the database.

Inspect with Chrome Developer 127.0.0.1:8080/userRegistration

Apps Look-Up Classes to... local Nuance gre ssdi Java + Interview NBAD visualization resume sites Handout_Enrollmen... Other bookmarks

HOBBY CORNER Start a new connection | Login | Signup

Connections Welcome

User Name/ Email address

Password Confirm Password

First Name Last Name

Address

Address 2

City State Zip

Hobby Corner

The screenshot shows a web browser window with the address bar displaying "127.0.0.1:8080/userRegistration". The page contains a registration form with the following fields:

- Password**: A text input field.
- Confirm Password**: A text input field.
- First Name**: A text input field.
- Last Name**: A text input field.
- Address**: A text input field containing "1234 Main St".
- Address 2**: A text input field.
- City**: A text input field.
- State**: A text input field.
- Zip**: A text input field.
- Country**: A text input field.

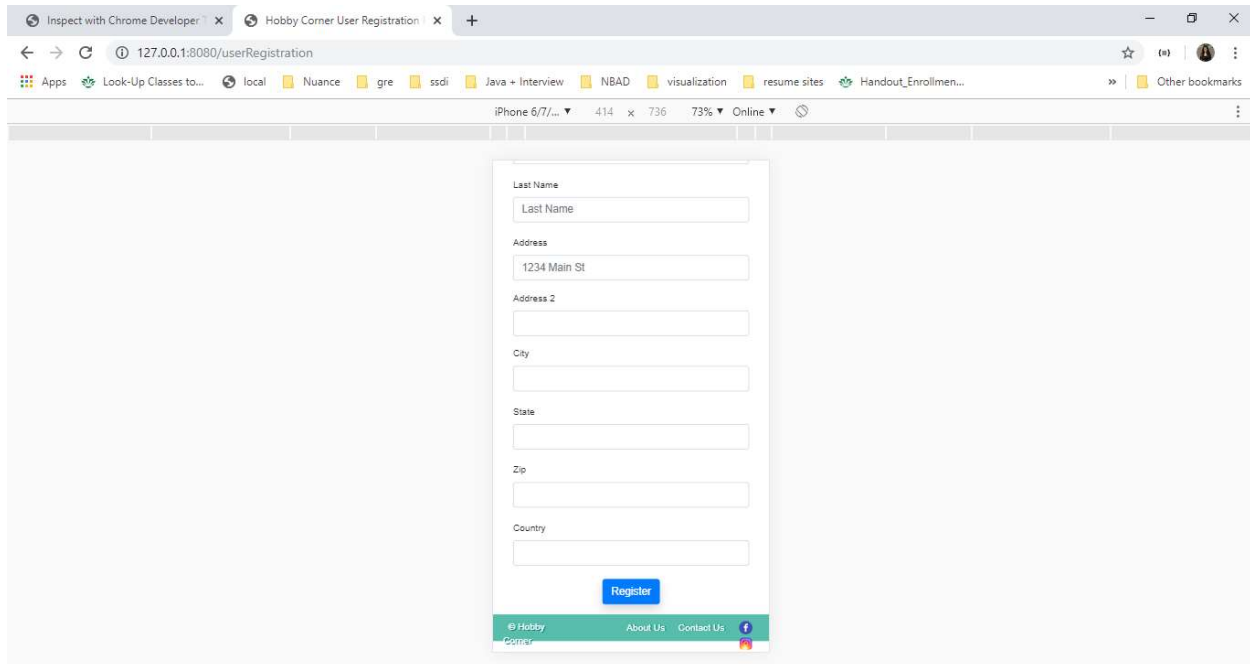
Below the form is a blue **Register** button. At the bottom of the page, there is a green footer bar with the text "© Hobby Corner" on the left and "About Us Contact Us" with social media icons on the right.

In Responsive view on mobile/tab

The screenshot shows the same registration form as above, but rendered in a responsive mobile view. The form is displayed as a vertical stack of input fields within a white container. The container has a green header with the "HOBBY CORNER" logo and a hamburger menu icon. The form fields are labeled as follows:

- User Name/ Email address**: A text input field labeled "UserName".
- Password**: A text input field.
- Confirm Password**: A text input field.
- First Name**: A text input field.
- Last Name**: A text input field.
- Address**: A text input field containing "1234 Main St".
- Address 2**: A text input field.

The browser's developer tools at the top indicate the device is an "iPhone 6/7/..." with a width of 414px and a zoom level of 73%.



7. Start a New Connection

- *The name of the page:* newConnection.ejs
- *Purpose of the page:* This page allows a logged in user to create a new connection.
- *Audience of page:* Only registered/logged in user can view this page. The unregistered user is redirected to Login page.
- The *fields* include Topic under which the connection/hobby falls. Other fields include details like venue and time which is selected using a date time picker.
- The **Topic field** on the add a new connection form is a **select and input field** which provides a list of existing topics. The **user can either select a topic from the existing list or enter a topic of his/her choice. This entered topic will be added to the database.**
- A new Connection Id is generated automatically when a new connection is added.
- All the fields are validated so as to allow appropriate values only.
- On click of the Create Connection button if all the fields contain valid data a new connection is created and the user is redirected to the connections page. If there are errors they are displayed on the new connections page itself. When a new connection is added with a new category a new card with the newly added connection will be created on this page.

Hobby Corner

The screenshot shows the Hobby Corner web application interface. The header includes the logo and navigation links: "Start a new connection", "Log out", and "My Connections". The main content area is titled "Connections | Manage My Connections" and "Welcome Tim". The form for creating a new connection includes the following fields:

- Topic: Music
- Name: Name
- Details: Description
- Address: 1234 Main St
- Address 2:
- City:
- State:
- Zip:

A date and time picker is also visible, showing the date December 4, 2019, and the time 12 am. The picker includes a "Now" button and a "Done" button. Below the date and time picker is a "Create Connection" button.

In Responsive view on mobile/tab

Hobby Corner

The screenshot shows a web browser window with the address bar displaying "127.0.0.1:8080/newConnection". The page has a green header with the "HOBBY CORNER" logo and a hamburger menu icon. Below the header, there are three tabs: "Connections", "Manage My Connections", and "Welcome Tim". The main content area contains a form with the following fields: "Topic" (with "Music" entered), "Name" (with "Name" entered), "Details" (with "Description" entered), "Address" (with "1234 Main St" entered), "Address 2", "City", and "State".

This screenshot shows the same form as the previous one, but with the "Create Connection" button highlighted in blue. The form fields are: "Description" (with "Description" entered), "Address" (with "1234 Main St" entered), "Address 2", "City", "State", "Zip", and "When" (with "Date & Time" entered). The footer of the page includes the text "© Hobby Corner", "About Us", and "Contact Us".

8. Manage My Connections

- *The name of the page:* manageMyConnections.ejs
- *Purpose of the page:* This page shows the connections that are created by the logged in user. The user can update the connection details or even delete the connections that are created by him/her.
- *Audience of page:* Only Logged in users have access to this page.

Hobby Corner

- This page contains a Table showing the connections created by the user. Each connection has an Update and Delete button.
- When the Update button is clicked the user is redirected to the Update connection page. The user can updated the fields of choice.
- The Delete button removes the connection from the connections and also from all the user profiles which had added that connection. After delete the same page is refreshed.

Inspect with Chrome Developer x Hobby Corner Manage My Conn x +

127.0.0.1:8080/manageMyConnections

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HOBBY CORNER Start a new connection Log out My Connections

Connections | Manage My Connections Welcome Tim

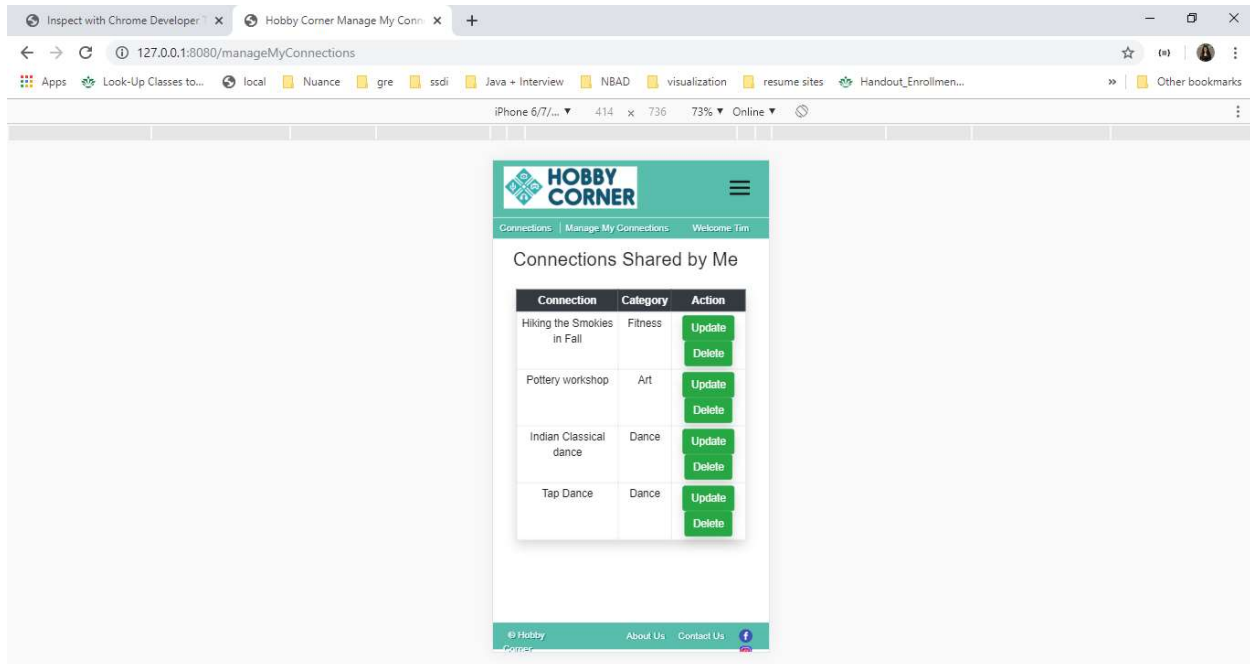
Connections Shared by Me

Connection	Category	Action
Hiking the Smokies in Fall	Fitness	Update Delete
Pottery workshop	Art	Update Delete
Indian Classical dance	Dance	Update Delete
Tap Dance	Dance	Update Delete

© Hobby Corner About Us Contact Us f

In Responsive view on mobile/tab

Hobby Corner



9. Update Connection

- *The name of the page:* updateConnection.ejs
- *Purpose of the page:* Allows the user to update the connection he/she created.
- *Audience of page:* Only logged in users have access to this page.
- The fields on this page come with pre-populated values which were previously entered by the user.
- Validations are similar to new connections page.
- On click of the Update Connection button, the fields are validated and if all fields are fine the record is updated in the database and the user is redirected to the Manage My Connections page.

Hobby Corner

Inspect with Chrome Developer x Hobby Corner Connection Page x +

127.0.0.1:8080/manageMyConnections?action=update&connectionId=CON10

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HOBBY CORNER Start a new connection Log out My Connections

Connections | Manage My Connections Welcome Tim

Topic Dance

Name Indian Classical dance

Details Dance

Address 12 main st., #123, Charlotte, North Carolina, 28233

When Tue 03 December 2019 06:40 pm

Update Connection

© Hobby Corner About Us Contact Us f

Inspect with Chrome Developer x Hobby Corner Connection Page x +

127.0.0.1:8080/manageMyConnections?action=update&connectionId=CON10

Apps Look-Up Classes to... local Nuance gre ssdi Java + Interview NBAD visualization resume sites Handout_Enrollmen... Other bookmarks

HOBBY CORNER Start a new connection Log out My Connections

Connections | Manage My Connections Welcome Tim

Topic Dance

Name Indian Classical dance

Details Dance

Address 12 main st., #123, Charlotte, North Carolina, 28233

When Tue 03 December 2019 06:40 pm

Update Connection

© Hobby Corner About Us Contact Us f

10. My Connections

- *The name of the page:* savedConnections.ejs
- *Purpose of the page:* Allows the user to update the RSVP for the connections he/she has already.
- *Audience of page:* Only logged in users have access to this page.

Hobby Corner

- This page contains a Table showing the connections that the user has added/rsvp already to. Each connection has an Update and Delete button.
- When the Update button is clicked the user is redirected to the Connection page where the user can reselect the RSVP. The user is then redirected to the savedConnections page. This re-selected RSVP is updated against the connection in the table.
- The Delete button removes the connection from the table that is the users profile. After delete the same page is refreshed.

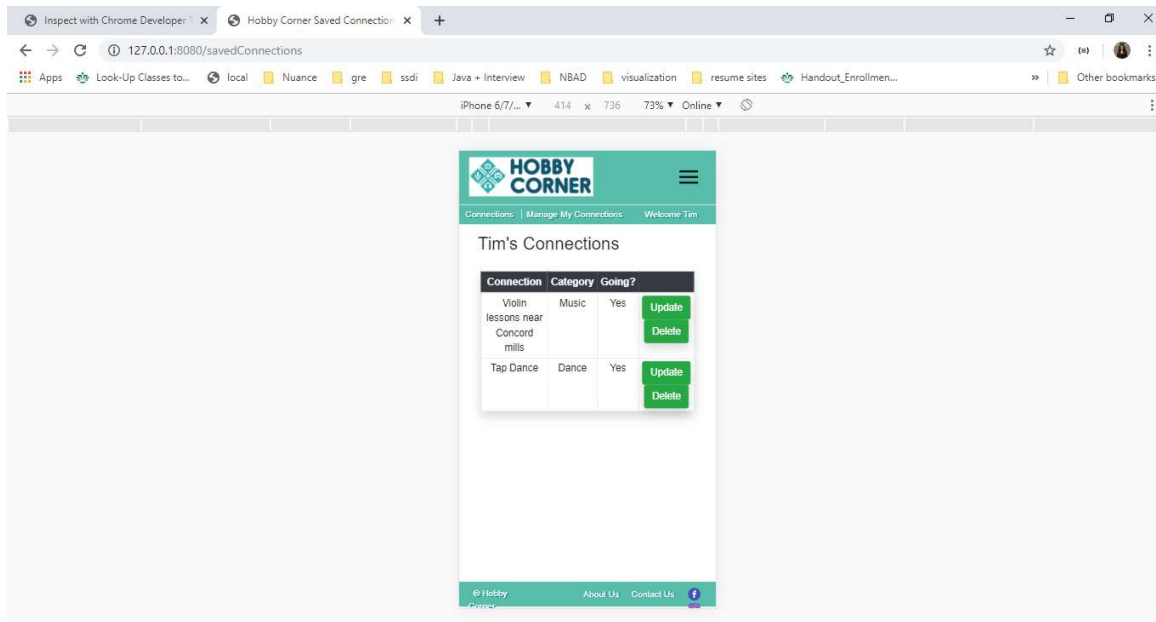
The screenshot shows a web browser window with the address bar displaying '127.0.0.1:8080/savedConnections'. The page has a teal header with the 'HOBBY CORNER' logo on the left and navigation links 'Start a new connection', 'Log out', and 'My Connections' on the right. Below the header, a teal bar contains 'Connections | Manage My Connections' and 'Welcome Tim'. The main content area is titled 'Tim's Connections' and features a table with the following data:

Connection	Category	Going?	
Violin lessons near Concord mills	Music	Yes	<button>Update</button> <button>Delete</button>
Tap Dance	Dance	Yes	<button>Update</button> <button>Delete</button>

The footer of the page is teal and contains '© Hobby Corner' on the left and 'About Us', 'Contact Us', and social media icons on the right.

In Responsive view on mobile/tab

Hobby Corner



ER Diagram:

