Requirement and Design Document
HTA (Huntersville Tennis Association)

Project overview:

Goal: The goal of this project is to develop a dynamic web application for Huntersville Tennis Association. The main idea behind this application development is to help Huntersville Tennis Association managing their users and tennis match events more efficiently. This application facilitates following activities:

- ✓ Users can register their details in order to access their profiles.
- ✓ Users can login to the website using valid credentials.
- ✓ Users can explore their profiles and verify a list of tennis matches they did RSVP for.
- ✓ Users can explore all the match events and add to their profiles by doing RSVP for these match events.
- ✓ Users can update the list of added match events to their profiles and change RSVP for these match events.
- ✓ Users can delete an added match event from their profile for which they did RSVP in the past.
- ✓ Users can create a new tennis match event and provide all the details about this new match event.
- ✓ Users can update the match event details they created in the past.
- ✓ Users can delete the match event they created in the past.

Target audience:

Huntersville Tennis Association is a website developed for tennis professionals and for people who are passionate about tennis in Huntersville area. Website was designed based on the need finding survey carried out on a large population in Huntersville area. The results of the need finding survey led to a conclusion that people find it difficult to manage different tennis matches and the tennis matches they are hosting. Huntersville Tennis Association website provides a platform to keep track of the matches in an efficient way.

Detailed requirements description: Following is the detailed description of Huntersville Tennis Association website:

Users can register their details in order to access their profiles: Users can click on the signup link and users will be navigated to signup page. On this webpage users can enter their valid details and register themselves in order to create a profile.

Users can login to the website using valid credentials: After successfully creating a user profile through signup, users can login using the credentials that they used while registering for the website. After successful validation of the details, users will able to view their profile.

Users can explore their profiles and verify a list of tennis matches they did RSVP for: After logging in, users can view the list of match events they did RSVP for in the past. They can see match event topic and the value for RSVP.

Users can explore all the match events and add to their profiles by doing RSVP for these match events: Users can follow the connections link and they will be redirected to the list of match events. All the match events present in the system can be viewed on this webpage categorized by different categories.

Users can update the list of added match events to their profiles and change RSVP for these match events: Users can follow the update button present on the profile page and they can update the value of RSVP and save new value of RSVP for any connection.

Users can delete an added match event from their profile for which they did RSVP in the past: Users can delete any RSVP value corresponding to any specific match event they did RSVP for in the past. They can use delete button present on the profile page corresponding to the match event.
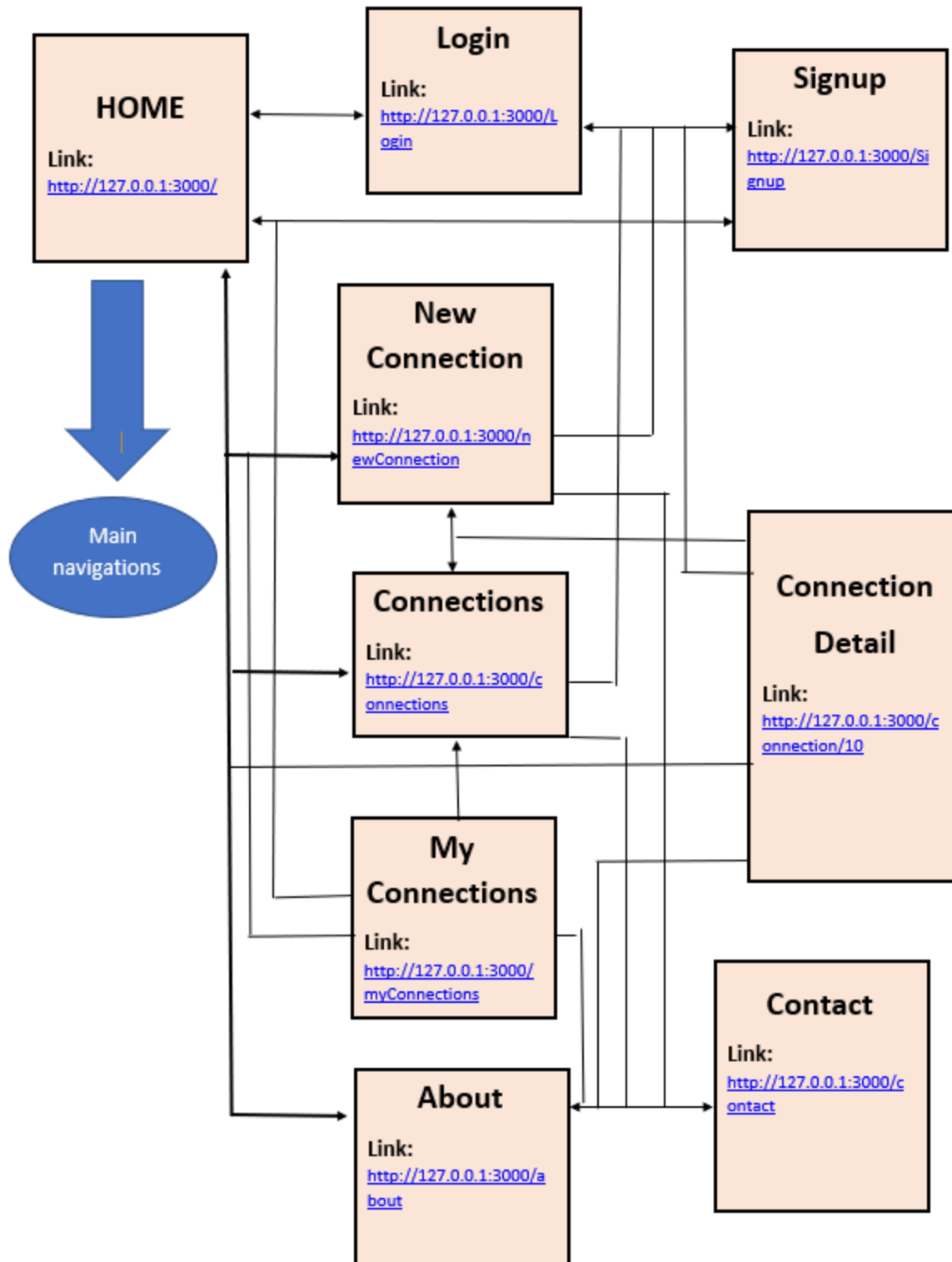
Users can create a new tennis match event and provide all the details about this new match event: Users can navigate to "start a new connection" and they will be redirected to a webpage where hey can insert details about new match event. Users can create a new match event successfully if all the details are present and valid in the form.

Users can update the match event details they created in the past: Users can update the details about the match event they created in the past. Users can use update connection button for this functionality.

Users can delete the match event they created in the past: Users can delete the match event they created in the past. Users can use delete connection button for this functionality.

Site Map:

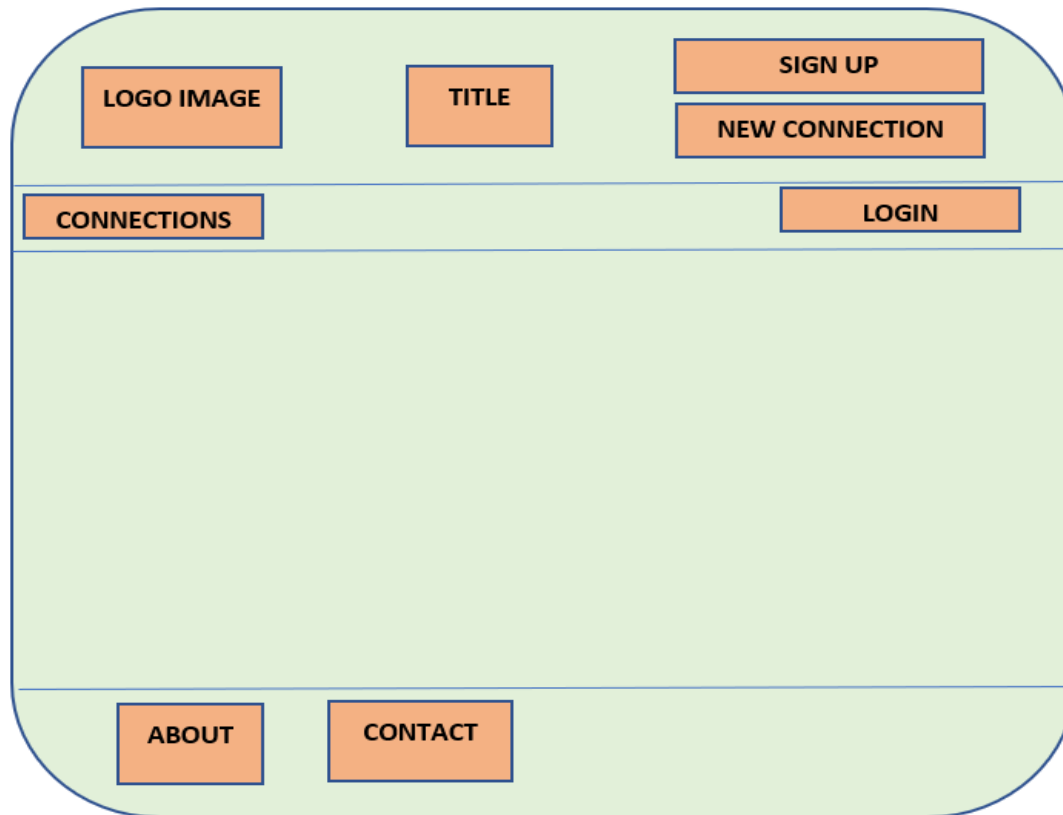Following is the sitemap generated for the basic understanding of the design:

Login

Link:

http://127.0.0.1:3000/Login

HOME

Link:

http://127.0.0.1:3000/

Signup

Link:

http://127.0.0.1:3000/Signup

Main navigations

New Connection

Link:

http://127.0.0.1:3000/newConnection

Connections

Link:

http://127.0.0.1:3000/connections

Connection Detail

Link:

http://127.0.0.1:3000/connection/10

My Connections

Link:

http://127.0.0.1:3000/myConnections

Contact

Link:

http://127.0.0.1:3000/contact

About

Link:

http://127.0.0.1:3000/about

Page Design:

Following is the design description for all the pages:

Page 1

Name of the page: Home(index.ejs)

Purpose of the page: This page is designed to be the home page of the Huntersville Tennis Association website. This page will provide all the necessary navigations for a user.

Audience of page: This page can be viewed by everyone who is visiting the Huntersville Tennis Association website. No specific user permission is required in order to access this webpage.

Data (fields) and the logic: There is no specific logic present on the page. Page simple displays generic static information about the website and welcome note.

Validations on the page: No specific validation is required on this webpage.

Buttons and hyperlinks and actions: This webpage will provide following buttons/navigations:

Signup: This link will help users to navigate to the signup page, using which users can register their details in order to create a user profile.

Login: This link will enable users to enter their details in order to log in to the website and access their profile.

Start a New Connection: This link will help users navigating to new connection page, which displays a form to enter new connection details.

Connections: Connections link will redirect users to connections page, which displays list of tennis match events grouped together based on different categories.

About: About link will help users to navigate to the about page, which displays the information about the website.

Contact: Contact link will help users to navigate to the contact page, which displays the information about the website.

Page 2

Name of the page: login(Login.ejs)

Purpose of the page: This page is designed in order to facilitate users to login to their account using valid credentials.

Audience of page: This page can be viewed by anyone who is using Huntersville Tennis Association website. Users can view this page, but they cannot go further if they do not have valid account.

Data (fields) and the logic: On this page, two text boxes are present to insert the data, Username and password. User can type the details and click login. Once user clicks login, these values will be validation based on pre-defined validations.

Validations on the page: There are following validations present on the page:

1. Username cannot be null: Username field cannot be empty.
2. Password cannot be null: Password field cannot be empty.
3. Username should be in email format: Username should only be in email format.
4. User does not exist: Username should be existing and valid.

5. Password is incorrect: password should match with the data present in the database for that user.

Buttons and hyperlinks and actions: This webpage will provide following buttons/navigations:

Signup: This link will help users to navigate to the signup page, using which users can register their details in order to create a user profile.

Login: This link will enable users to enter their details in order to log in to the website and access their profile.

Start a New Connection: link will help users navigating to new connection page, which displays a form to enter new connection details.

Connections: Connections link will redirect users to connections page, which displays list of tennis match events grouped together based on different categories.

About: About link will help users to navigate to the about page, which displays the information about the website.

Contact: Contact link will help users to navigate to the contact page, which displays the information about the website.

Page 3

Name of the page: Signup(Signup.ejs)

Purpose of the page: This page is designed in order to facilitate users to register to this website and enter user details in the database. Users can enter their valid details and create a profile.

Audience of page: This page can be viewed by anyone who is using Huntersville Tennis Association website. Any user can visit this webpage and can create an account.

Data (fields) and the logic: There is no specific logic present on the page. Page provides a form to sign up. Text boxes are present to insert the details.

Validations on the page: There are following validations present on the page:

1. First Name cannot be null: First Name field cannot be empty.
2. Last Name cannot be null: Last Name field cannot be empty.
3. Address Line 1 cannot be null: Address Line 1field cannot be empty.
4. Address Line 2 cannot be null: Address Line 2 field cannot be empty.
5. City cannot be null: City field cannot be empty.

6. State cannot be null: State field cannot be empty.
7. Country cannot be null: Country field cannot be empty.
8. Zip cannot be null: Zip field cannot be empty.
9. Email should be in email format: Email should only be in email format.
10. Password cannot be null: Password field cannot be empty.

Buttons and hyperlinks and actions: This webpage will provide following buttons/navigations:

Signup: This link will help users to navigate to the signup page, using which users can register their details in order to create a user profile.

Login: This link will enable users to enter their details in order to log in to the website and access their profile.

Start a New Connection: This link will help users navigating to new connection page, which displays a form to enter new connection details.

Connections: Connections link will redirect users to connections page, which displays list of tennis match events grouped together based on different categories.
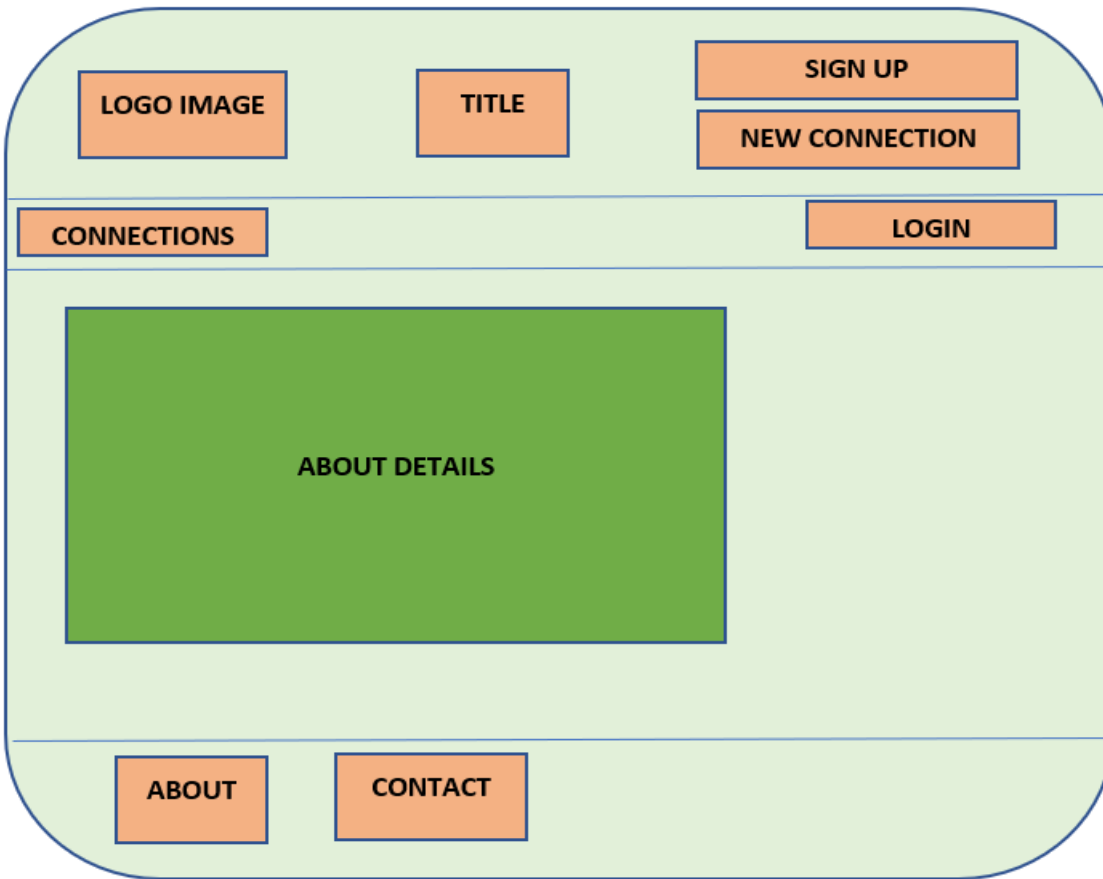
About: About link will help users to navigate to the about page, which displays the information about the website.

Contact: Contact link will help users to navigate to the contact page, which displays the information about the website.

Signup button: This button will complete the signup process for any user and will create an account for the user.

Page 4

Name of the page: About(about.ejs)

Purpose of the page: This purpose of this page is to provide users information about the website.

Audience of page: This page can be viewed by anyone who is using Huntersville Tennis Association website. No specific permission is required to view this webpage.

Data (fields) and the logic: There is no specific logic present on the page. Page simply displays static information about the website.

Validations on the page: There are no validations required on this page:

Buttons and hyperlinks and actions: This webpage will provide following buttons/navigations:

Signup: This link will help users to navigate to the signup page, using which users can register their details in order to create a user profile.

Login: This link will enable users to enter their details in order to log in to the website and access their profile.

Start a New Connection: This link will help users navigating to new connection page, which displays a form to enter new connection details.
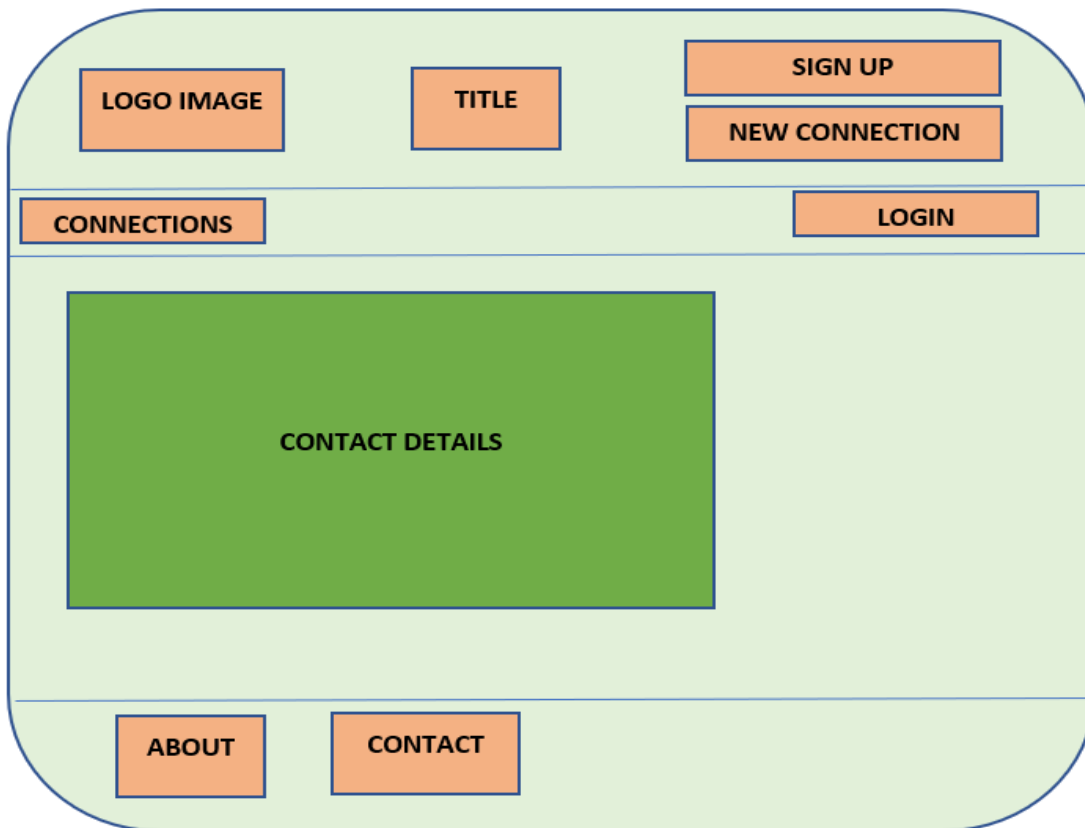
Connections: Connections link will redirect users to connections page, which displays list of tennis match events grouped together based on different categories.

About: About link will help users to navigate to the about page, which displays the information about the website.

Contact: Contact link will help users to navigate to the contact page, which displays the information about the website.

<div align="center">

Page 5

Name of the page: Contact(contact.ejs)

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Purpose of the page: This purpose of this page is to provide users contact information about the website.

Audience of page: This page can be viewed by anyone who is using Huntersville Tennis Association website. No specific permission is required to view this webpage.

Data (fields) and the logic: There is no specific logic present on the page. Page simply displays static information about contact of the website.

Validations on the page: There are no validations required on this page:

Buttons and hyperlinks and actions: This webpage will provide following buttons/navigations:

Signup: This link will help users to navigate to the signup page, using which users can register their details in order to create a user profile.

Login: This link will enable users to enter their details in order to log in to the website and access their profile.

Start a New Connection: This link will help users navigating to new connection page, which displays a form to enter new connection details.
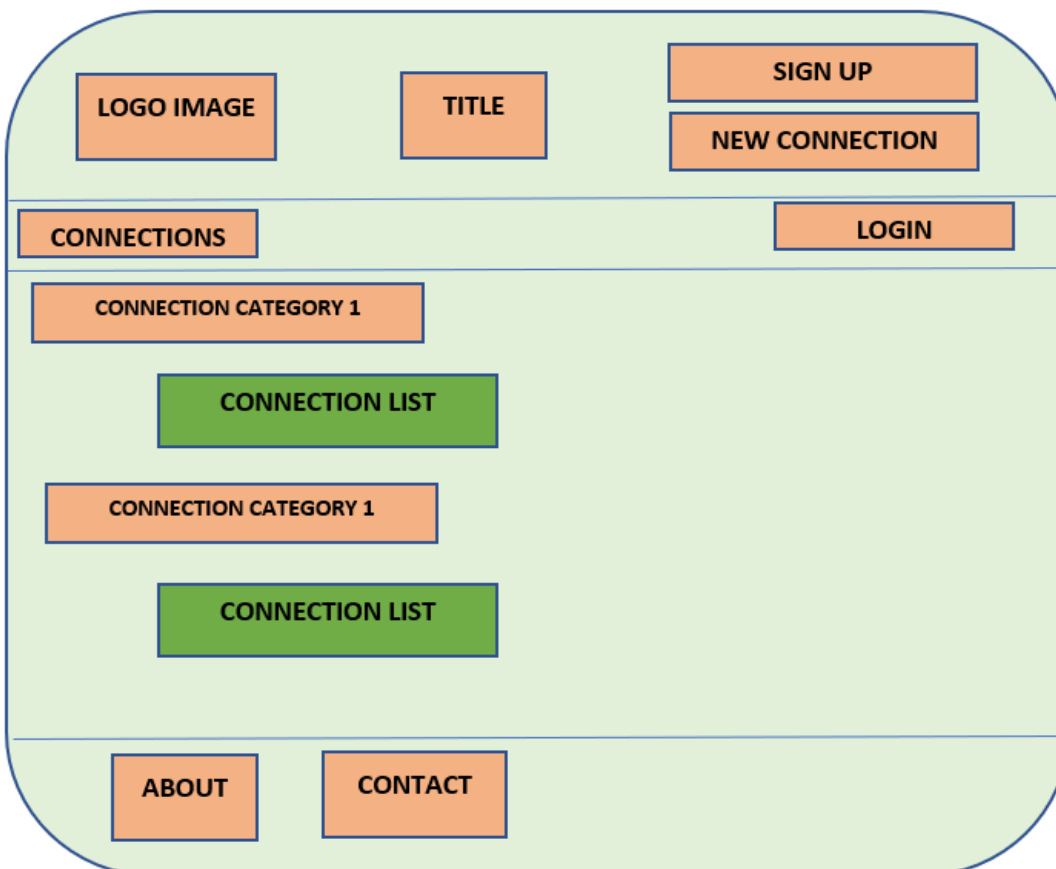
Connections: Connections link will redirect users to connections page, which displays list of tennis match events grouped together based on different categories.

About: About link will help users to navigate to the about page, which displays the information about the website.

Contact: Contact link will help users to navigate to the contact page, which displays the information about the website.

Page 6

Name of the page: Connections(connections.ejs)

Purpose of the page: This purpose of this page is to provide a list of connections (tennis match events) for users to view. All the match events will be grouped together in different categories.

Audience of page: This page can be viewed by anyone who is using Huntersville Tennis Association website. No specific permission is required to view this webpage.

Data (fields) and the logic: This page dynamically displays the match event list categorized in different categories. All the match events list can be viewed on this page.

Validations on the page: There are no validations required on this page:

Buttons and hyperlinks and actions: This webpage will provide following buttons/navigations:

Signup: This link will help users to navigate to the signup page, using which users can register their details in order to create a user profile.

Login: This link will enable users to enter their details in order to log in to the website and access their profile.

Start a New Connection: This link will help users navigating to new connection page, which displays a form to enter new connection details.
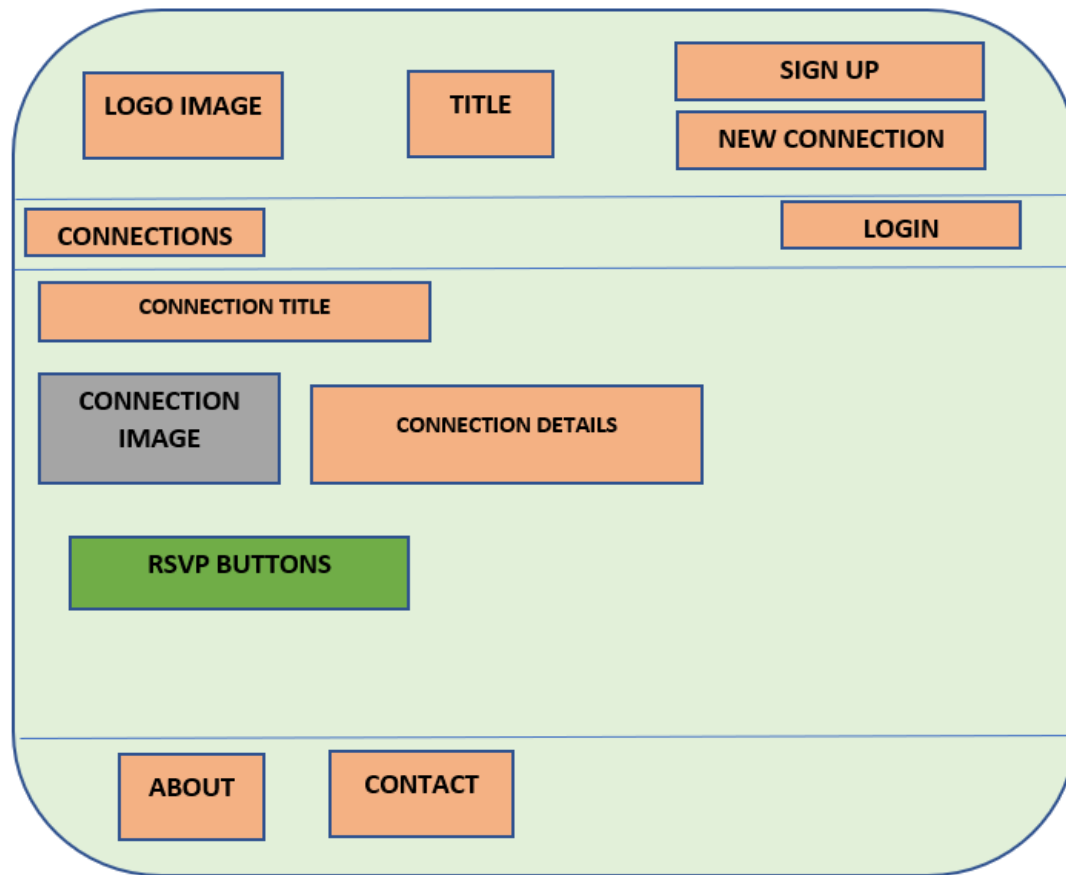
Connections: Connections link will redirect users to connections page, which displays list of tennis match events grouped together based on different categories.

About: About link will help users to navigate to the about page, which displays the information about the website.

Contact: Contact link will help users to navigate to the contact page, which displays the information about the website.

Page 7

Name of the page: Connection Detail(connection.ejs)

Purpose of the page: This purpose of this page is to provide detail about selected match event by user from connections page. When user clicks on the link of any match event, user will be redirected to this page, where user can view details about the match event and decide if user wants to RSVP for that match event.

Audience of page: This page can be viewed by anyone who is using Huntersville Tennis Association website. No specific permission is required to view this webpage. Three buttons "yes", "No" and "Maybe" present on the page will allow action only when user is logged in.

Data (fields) and the logic: This page dynamically displays the details about any specific match event only when passed match event id is valid and exists in the database. If match event id passed is invalid, the list of all the match events will be displayed. If no match event id is passed, then too, the list of all the match events will be displayed.

Validations on the page: There are no validations required on this page:

Buttons and hyperlinks and actions: This webpage will provide following buttons/navigations:

Signup: This link will help users to navigate to the signup page, using which users can register their details in order to create a user profile.

Login: This link will enable users to enter their details in order to log in to the website and access their profile.

Start a New Connection: This link will help users navigating to new connection page, which displays a form to enter new connection details.

Connections: Connections link will redirect users to connections page, which displays list of tennis match events grouped together based on different categories.

About: About link will help users to navigate to the about page, which displays the information about the website.
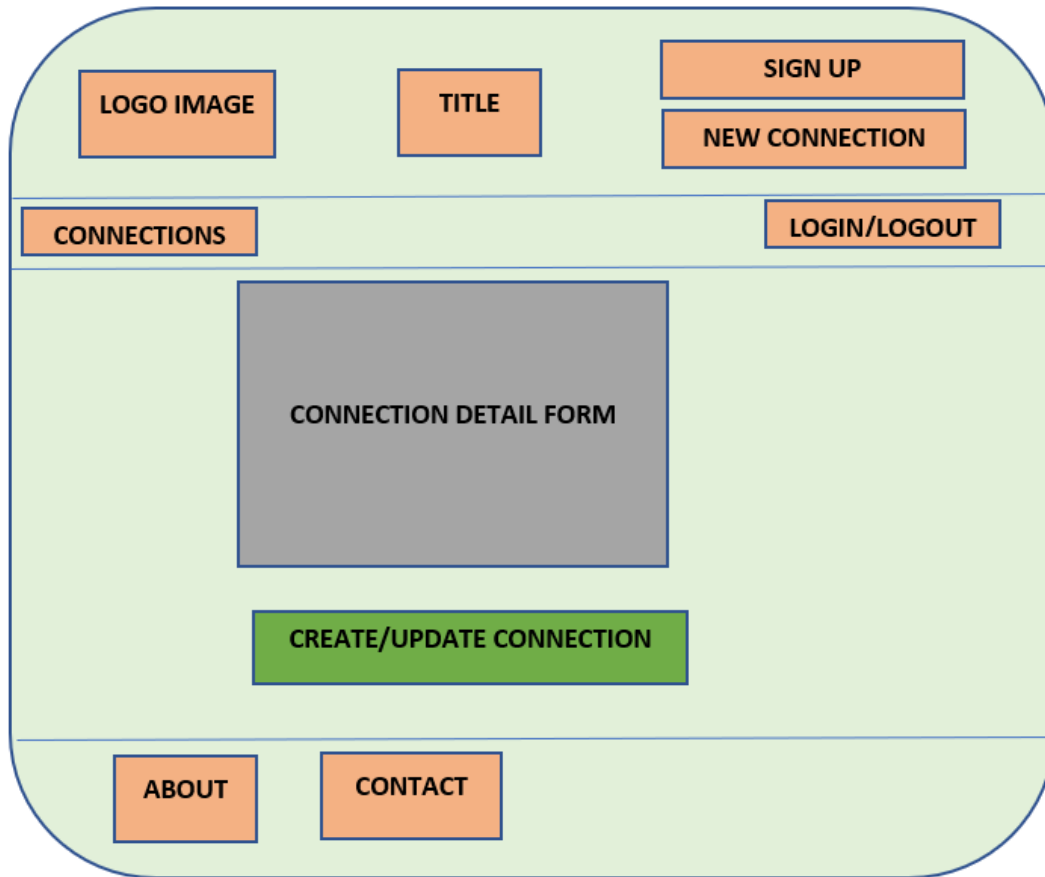
Contact: Contact link will help users to navigate to the contact page, which displays the information about the website.

RSVP buttons('Yes", "No", "Maybe"): Three are three RSVP buttons present on the webpage. The function of these buttons is to add this match event to the user profile with corresponding RSVP value only when user is logged in.

Update Connection/Delete connection: These two buttons will only get displayed on the webpage when user is the owner of the match event and user has created this match event in the past. Update Connection will provide a functionality to update the details of existing match events and delete connection will delete that match event.

Page 8

Name of the page: Create Connection(newConnection.ejs)

Purpose of the page: The purpose of this page is to provide users a functionality using which users can create new match events and provide details about those match events.

Audience of page: This page can be viewed by anyone who is using Huntersville Tennis Association website. No specific permission is required to view this webpage. In order to successfully create a connection, user needs to login.

Data (fields) and the logic: There is no specific logic present when user is viewing this page by simply clicking on "start a new connection". This will display a static form. But when user is viewing this page by clicking "update connection" this form will dynamically display all the correct information about that specific match event. These data fields will be prepopulated with the information.

Validations on the page: There are following validations on the page:

1. You need to login first in order to create a connection: When user is not logged in and tries to create a connection.

2. Topic cannot be null: When topic field is empty.
3. Datetime cannot be null: When Datetime field is empty.
4. Details cannot be null: When Details field is empty.
5. Category cannot be null: When Category field is empty.
6. Location cannot be null: When Location field is empty.

Buttons and hyperlinks and actions: This webpage will provide following buttons/navigations:

Signup: This link will help users to navigate to the signup page, using which users can register their details in order to create a user profile.

Login: This link will enable users to enter their details in order to log in to the website and access their profile. This will get displayed only when user is not logged in.

Logout: When user is logged in to the profile., this will get displayed instead of login link.
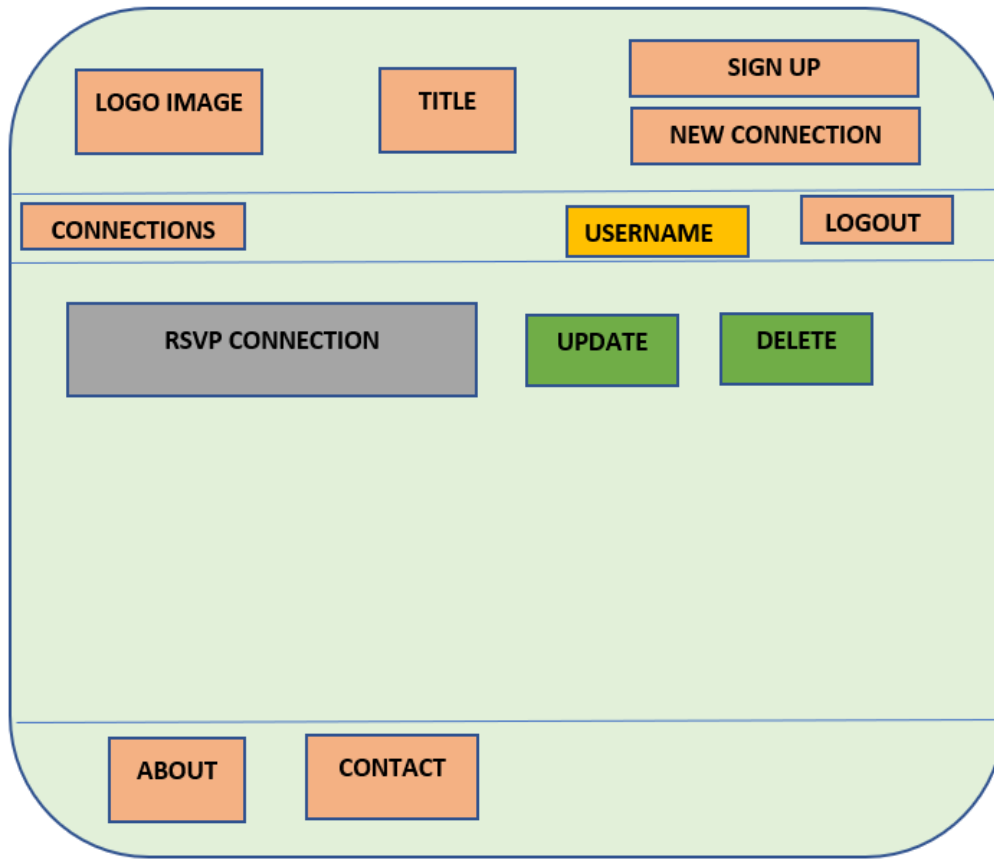
Start a New Connection: This link will help users navigating to new connection page, which displays a form to enter new connection details.

Connections: Connections link will redirect users to connections page, which displays list of tennis match events grouped together based on different categories.

About: About link will help users to navigate to the about page, which displays the information about the website.

Contact: Contact link will help users to navigate to the contact page, which displays the information about the website.

Create/Update connections: Create connection will get display when user has simply clicked on the "start a new connection" link. Update connection will get displayed when user is trying to update information of the existing connection that user has created in the past.

Page 9

Name of the page: My Connections(myConnections.ejs)

Purpose of the page: The purpose of this page is to facilitate user view his profile. User can navigate to this webpage and view the list of match events user has RSVP in the past.

Audience of page: This page can be viewed only when user is logged in using valid credentials.

Data (fields) and the logic: This page will dynamically display all the match events in the user profile for which user has RSVP for in the past. This webpage will reflect all the update and delete changes.

Validations on the page: There are no validations required on this webpage.

Buttons and hyperlinks and actions: This webpage will provide following buttons/navigations:

Signup: This link will help users to navigate to the signup page, using which users can register their details in order to create a user profile.

Logout: Now when user is logged in, this will get displayed instead of login link.

Start a New Connection: This link will help users navigating to new connection page, which displays a form to enter new connection details.

Connections: Connections link will redirect users to connections page, which displays list of tennis match events grouped together based on different categories.

About: About link will help users to navigate to the about page, which displays the information about the website.

Contact: Contact link will help users to navigate to the contact page, which displays the information about the website.

Update/Delete buttons: These buttons will provide the functionality to update the details of RSVP for any match event and deleting that match event RSVP from the profile.

ER Diagram of persistent database designed: