**Teams Controller Result Screen Shots**

1. Unregistered User Accessing Teams Controller Index

Graphical user interface, text, application, email

Description automatically generated

1. Non-Authorized User Accessing Teams Controller Index

Graphical user interface, text, application

Description automatically generated

1. Player Accessing Teams Controller Index

Graphical user interface, text, application, email

Description automatically generated

1. Player Trying to Create New Team

Graphical user interface, application

Description automatically generated

1. Player Trying to Delete/Edit Existing Team

Graphical user interface, text, application

Description automatically generated

1. Manager Accessing Teams Controller Index

Graphical user interface, text

Description automatically generated

1. Manager trying to Create New Team

Graphical user interface, text, application, email

Description automatically generated

1. Teams Controller Index After Manager Creates New Team

Graphical user interface, text, application, email

Description automatically generated

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**Test Plan**

Testing Application User Database/Teams Database (Authentication)

1. Register a new user
2. Test to see if required field is indicated to the user
3. Test to see if user can create an account without filling in required field
4. Test to see if user can create an account without filling in not required field (ex. Birthday)
5. Test to see if user can choose a birthday in the future
6. Attempt to login using the newly created user credentials
7. Check if the logged-on user can change User information (i.e., Phone number, email, first name, last name, Birthday)
8. Attempt to login using prepopulated Player account
9. Attempt to login using prepopulated Manager account

Testing User Access on Teams Controller Based on Role (Authorization)

Unregistered User

1. Attempt on accessing Teams page
2. Check if the page directs the user to login

Unauthorized User

1. Attempt on accessing Teams page
2. Check if the page shows “Access Denied”

Player

1. Attempt on accessing Teams page
2. Check if Player can view the Teams
3. Try Creating a New Team
4. Try Deleting an existing Team
5. Try Edit an existing Team
6. Step 3 – 5 should all show “Access Denied”

Manager

1. Attempt on accessing Teams page
2. Check if Manager can view the Teams
3. Try Creating a New Team
4. Try Deleting an existing Team
5. Try Edit an existing Team
6. Manager should have full access to all the above

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**Lab status:**

All required functionalities have been implemented including database that contains prepopulated accounts with different levels of authorization. User registration requires additional information such as first name and last name and gives user the option to enter valid birthday. Pre-exiting user information such as phone number and username are not added to avoid duplication. The program will respond accordingly when user tried to access Teams Controller, depending on user’s level of authorization.

**Three Things I Learned from the Lab**

1. How to properly setup ApplicationUser Class with additional user information implemented. Giving each of the fields proper properties such as required or range. Certain fields are already preconstructed when creating the database for users (Phone number and username). After updating the fields on ApplicationUser each index source file needs to have the same fields added in order to display it on the web page.
2. Installing Dbinitializer.cs to create different roles that will later be used to separate authorization level for accessing a scaffolded controller. Updating and restarting the database to automatically create the manager and player role once migration is finished.
3. Using the scaffolded controller to deny user’s who are not authorized to access either the entire index or certain features within the index. Restriction given on the index level can be overwritten on individual method level. Allow anonymous mean giving access to users with an account. On the user level having the restriction on GET or POST method does not affect them.

**Three areas that needs work, based on this lab**

1. Remembering and practicing the correct order of implementation. Scaffolding and data migration can be hard to update once it has been executed. Therefore, setting up each class properly before going through with those finalizations is very important.
2. Understanding Dbinitializer.cs thoroughly, in order to manipulate the folder to create deeper level of authorization in the future. Learning about generating hashed credentials in order to avoid having admin password written on the code.
3. Getting used to file location and how to relate the backend code with and front-end web display. It is sometimes hard to locate the correct file that is responsible for certain functionality and where it is being put on view. Finding the correct cshtml file and knowing how its related to the cshtml.cs file is critical when dealing with .NET.

**Key Screen shots**

1. Registering New User

Graphical user interface, application

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1. Updating user information (Adding phone number)

Graphical user interface, application

Description automatically generated

1. Selecting Birthday in the future

Graphical user interface, application

Description automatically generated

1. Checking the database for Manager and Player

A picture containing graphical user interface

Description automatically generated

1. Viewing Player Controller Index as Player (With Data)

Graphical user interface, text, application, email

Description automatically generated

1. Viewing Details about a team as Player

Graphical user interface

Description automatically generated with medium confidence

1. Trying to Create/Modify Team as Player

Graphical user interface, application

Description automatically generated

1. Editing Team as Manager

Graphical user interface, application

Description automatically generated

1. Tring to enter invalid Established Date

Graphical user interface, application

Description automatically generated

Graphical user interface

Description automatically generated

1. Deleting updated Team as Manager

Graphical user interface, text, application

Description automatically generated

Graphical user interface, text, application, email

Description automatically generated