

**MICHIGAN STATE**  

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**U N I V E R S I T Y**

# Project Plan Presentation

## ROCKY Team Challenge Application

### The Capstone Experience

#### Team Rocket Mortgage

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*From Students...  
...to Professionals*

# Functional Specifications

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- Web based application for employees of Rocket Mortgage to compete in wellness challenges
- Accessible UI to be used by everyone including non-technical employees
- Leaderboard system to encourage participation and help staff determine winners
- Powerful tools for admins to create and curate challenges



# Design Specifications

- Web application designed to improve Rocket Mortgage employee satisfaction
- Users
  - Can join challenges individually or with teams
  - Can join challenges by browsing or with a code
- Admins
  - Can create, edit, and delete challenges
  - Can also manage groups



# Screen Mockup: Challenges Page

Rocky Challenge x +

localhost:4200 Guest

**ROCKET** Mortgage Challenges My Page Page3 Admin Username

**Enter Code Here:**  
Join challenges directly by entering a code here!

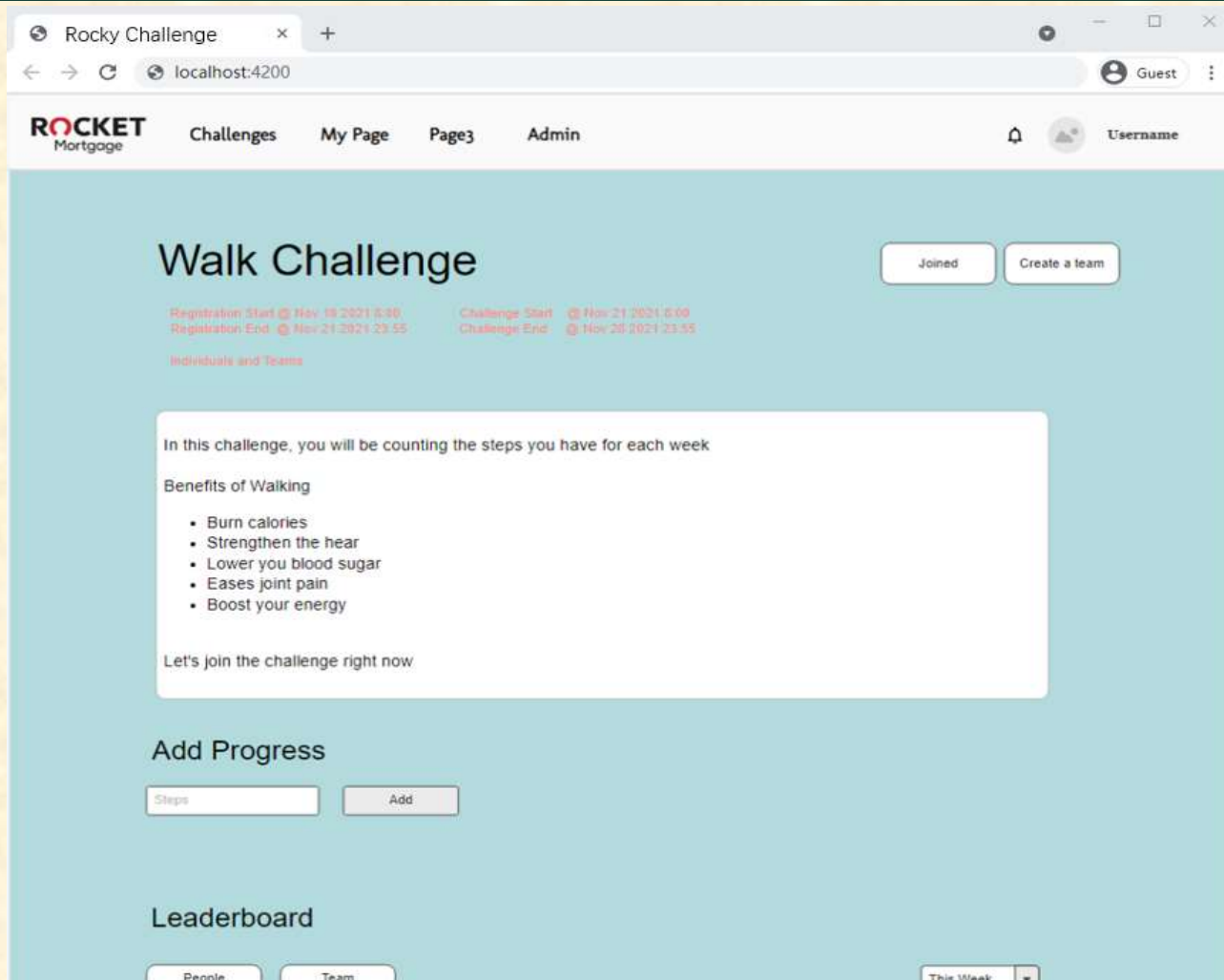
Individual / Teams Date Category Search Challenges

Challenge	Category	Attribute	Individual / Teams	Registration End Date	Challenge Date
Steps Challenge	Wellness	Steps recorded	Team	09/21/2021	09/22/2021-10/22/2021
Speed Reader	Wellness	Pages read	Individual	09/30/2021	10/01/2021-12/01/2021
Sleeper	Wellness	Hours slept	Individual	10/04/2021	10/05/2021-11/15/2021
Runners high	Wellness	Miles ran	Team	08/31/2021	09/01/2021-10/01/2021
Sharing is Caring	Volunteering	Books donated	Team	11/06/2021	11/07/2021-12/08/2021
Donation Station	Volunteering	Money donated	Team	11/06/2021	11/07/2021-12/08/2021

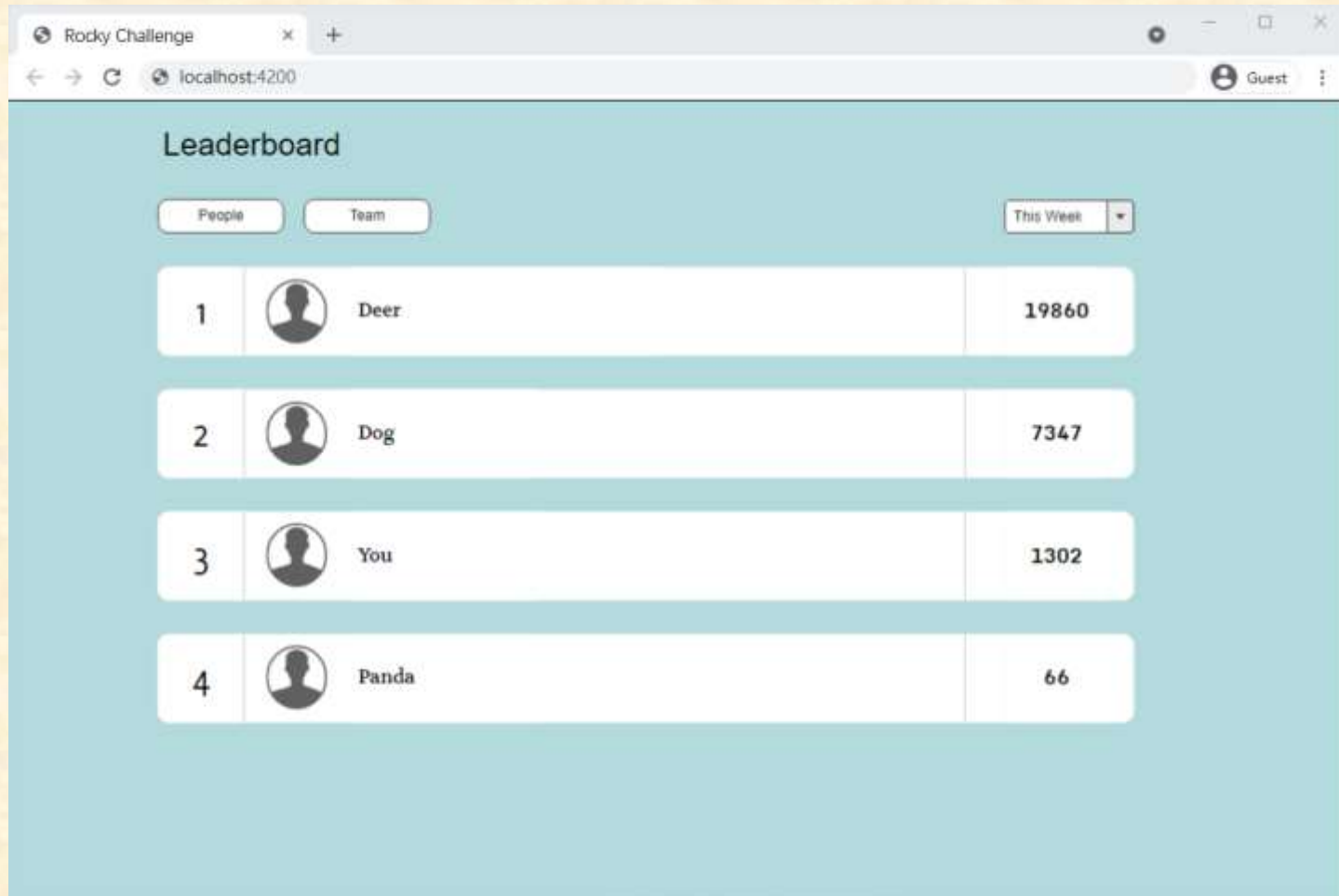
Page 1 of 5



# Screen Mockup: a Challenge Page



# Screen Mockup: Leaderboard



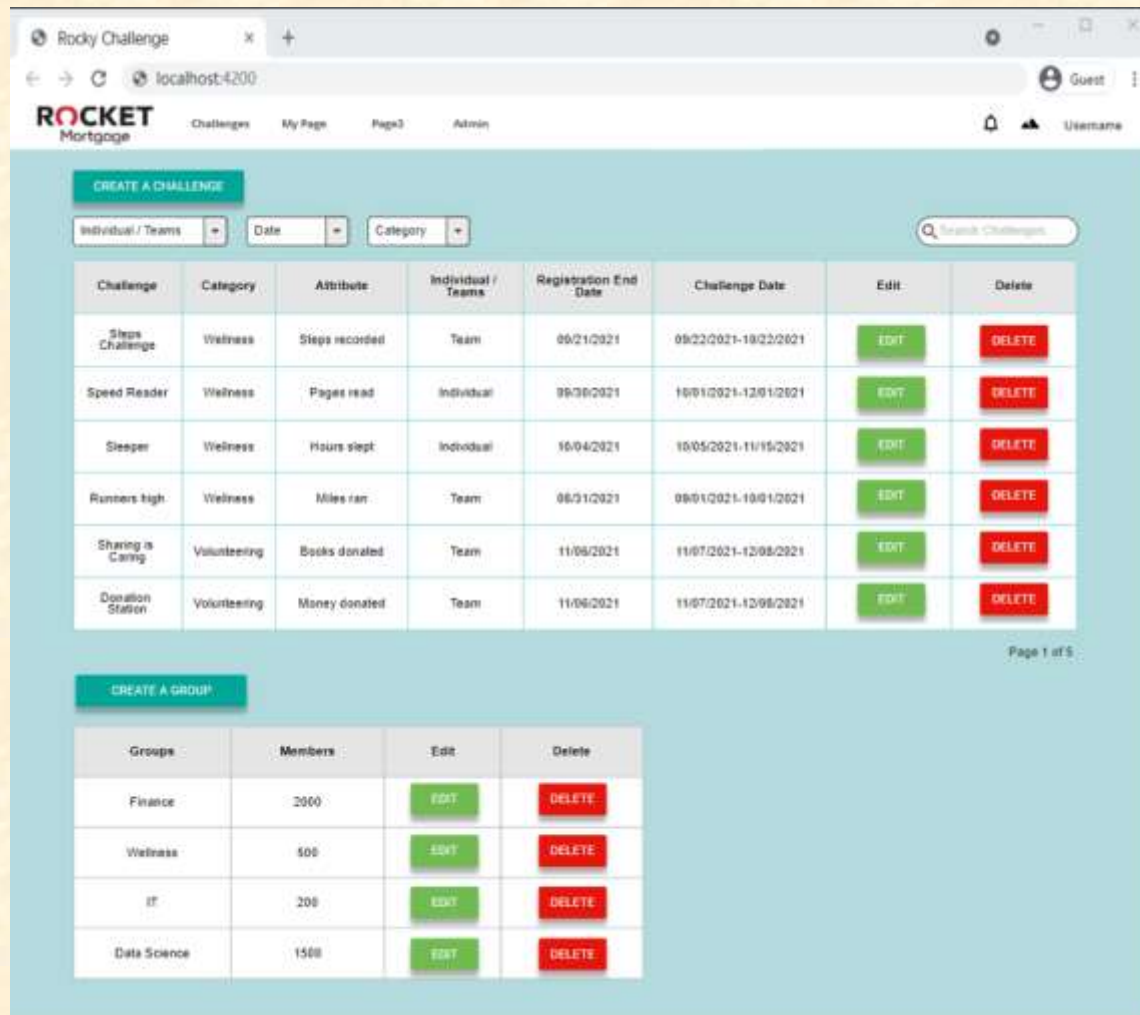
# Screen Mockup: User Page

The screenshot displays a web application interface for 'Rocky Challenge'. The browser address bar shows 'localhost:4200'. The navigation menu includes 'Challenges', 'MyPage', 'Page3', and 'Admin'. The user is logged in as 'Guest'. The main content area features an 'Invitations' section with two recent invites: 'Wellness Team Steps Challenge Invite' and 'Finance Team Health Challenge Invite', each with 'ACCEPT' and 'DECLINE' buttons. To the right is a pie chart showing progress: 6 Completed (dark blue), 2 In Progress (medium blue), and 3 To Do (light blue). Below these is a table of challenges.

Challenge	Category	Attribute	Individual / Team	Challenge Date	Progress
Sleep Challenge	Wellness	Hours slept	Individual	10/05/2021-11/15/2021	<div style="width: 25%;"></div>
Runners high	Wellness	Miles ran	Team	09/01/2021-10/01/2021	<div style="width: 75%;"></div>



# Screen Mockup: Admin Page





# Screen Mockup: Create Challenge Page

Rocky Challenge x +

localhost:4200 Guest

**ROCKET** Mortgage Challenges My Challenge Page3 Admin Username

## Create a challenge

Challenge Name:

Registration Start:

Registration End:

Challenge Start:

Challenge End:

Group :

Category:

Attribute:

Open to :  Individuals  Teams

Description :



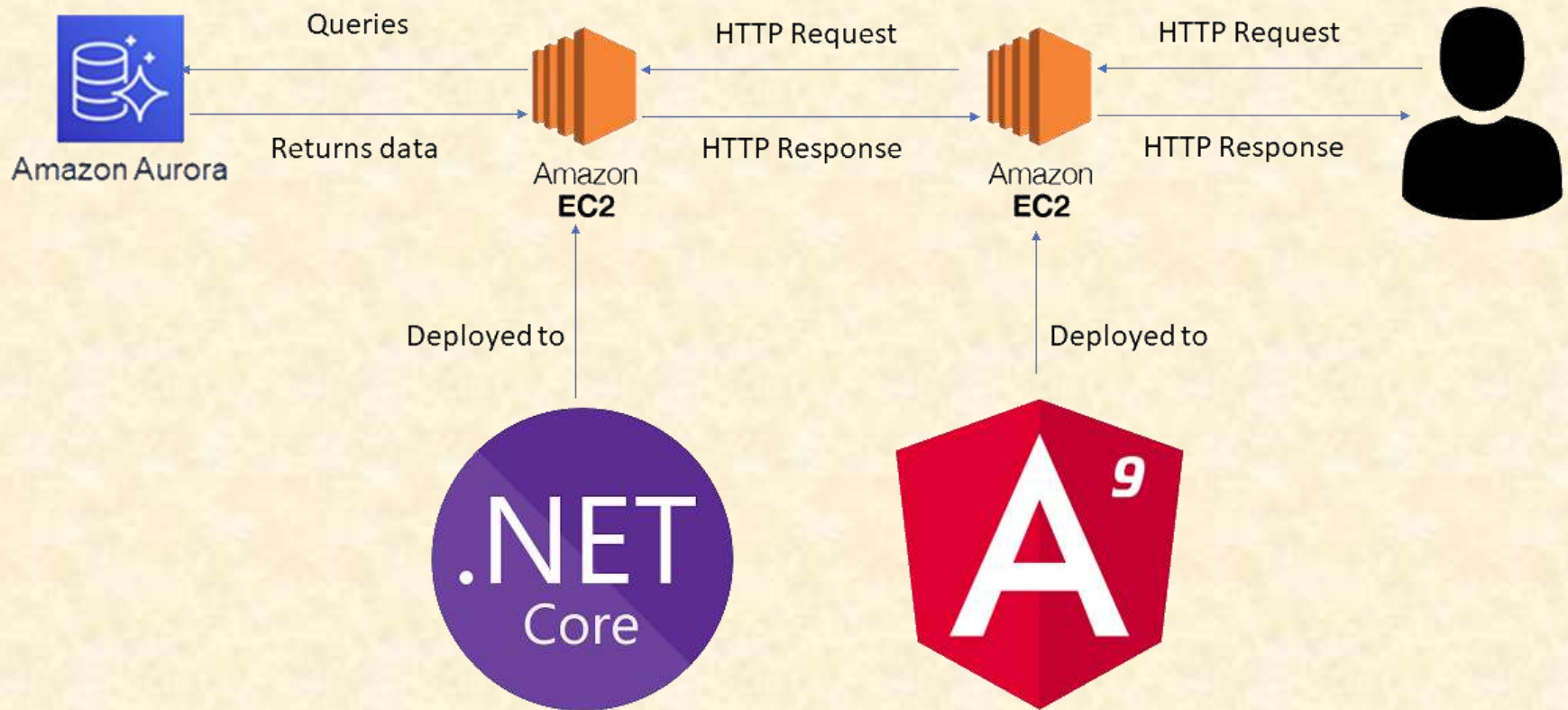
# Technical Specifications

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- A frontend User Interface made using Angular 9
- A database made through Amazon Relational Database Service's Aurora
- A backend API on top of the database made in .Net core 3.1
- API and UI deployed to AWS EC2



# System Architecture



# System Components

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- Hardware Platforms
  - Any internet-connected device
- Software Platforms / Technologies
  - Angular 9
  - Amazon RDS Aurora
  - .Net core 3.1
  - Amazon Elastic Compute Cloud



# Risks

- Ease of use
  - The application is only successful if many people use it, therefore it must be easy to use
  - Streamline the User Interface to minimize unnecessary steps in using entering activities and joining challenges
- Group Management
  - The application's group system requires a lot of database space and is difficult to edit and keep track of
  - Create a better user interface for editing groups
- Authentication System
  - The application supports multiple levels of administrator accounts
  - Further research on methods of varying authentication based on privileges



# Questions?

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