



CASE

# GAME MANAGEMENT SYSTEM

# Agenda

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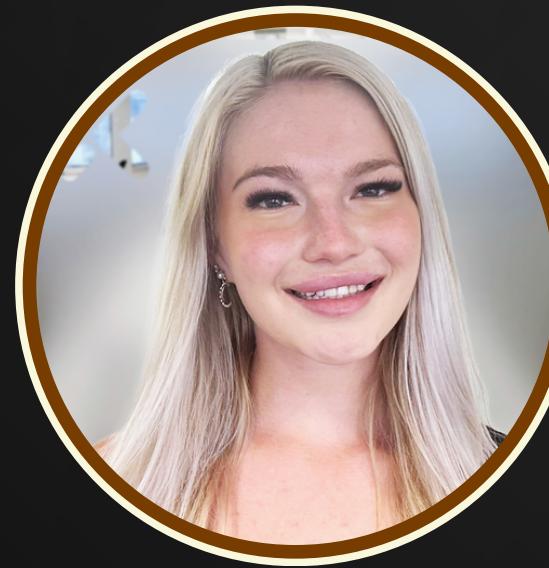
- *Introduction*
- *Case Overview*
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# Our team



**Tobias Vetrhus**

Fullstack



**Ine Mari Bredesen**

Frontend



**Noah Brovig Høgstøl**

Frontend



**Tommy Jåvold**

Fullstack



**Ritwaan Hashi**

Fullstack

# Case Overview

Making a software solution for managing the state and communication of concurrent games of Humans vs Zombies (HvZ). Provide the players with a user-friendly interface to register and track their game state.

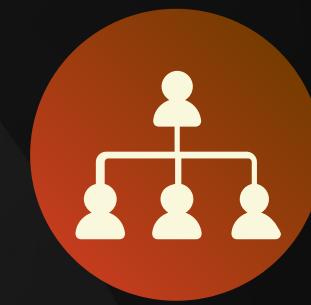
Administrators will be able to create and manage games.

# Project Scope / Overview



## Project aim

The project aimed to develop the HvZ game management system with all requirements implemented.



## System

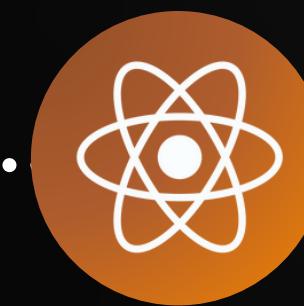
The system includes game management for admins, player registration, squad registration, kill functionality for zombies, real-time chat between factions and an interactive map

# Technology choices

Our choice of technologies was based on our acquired skills and experience from the course and the specific technological prerequisites stipulated by the assignment



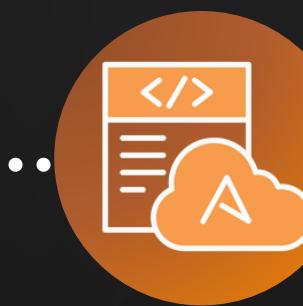
**Back-end Development**  
**(.NET 6)**



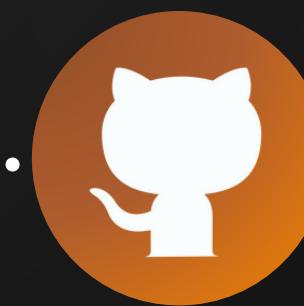
**Front-end Development**  
**(React.js + Tailwind)**



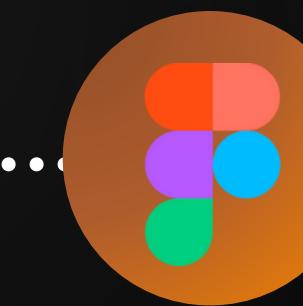
**Security**  
**(Keycloak)**



**Deployment**  
**(Azure Web App)**

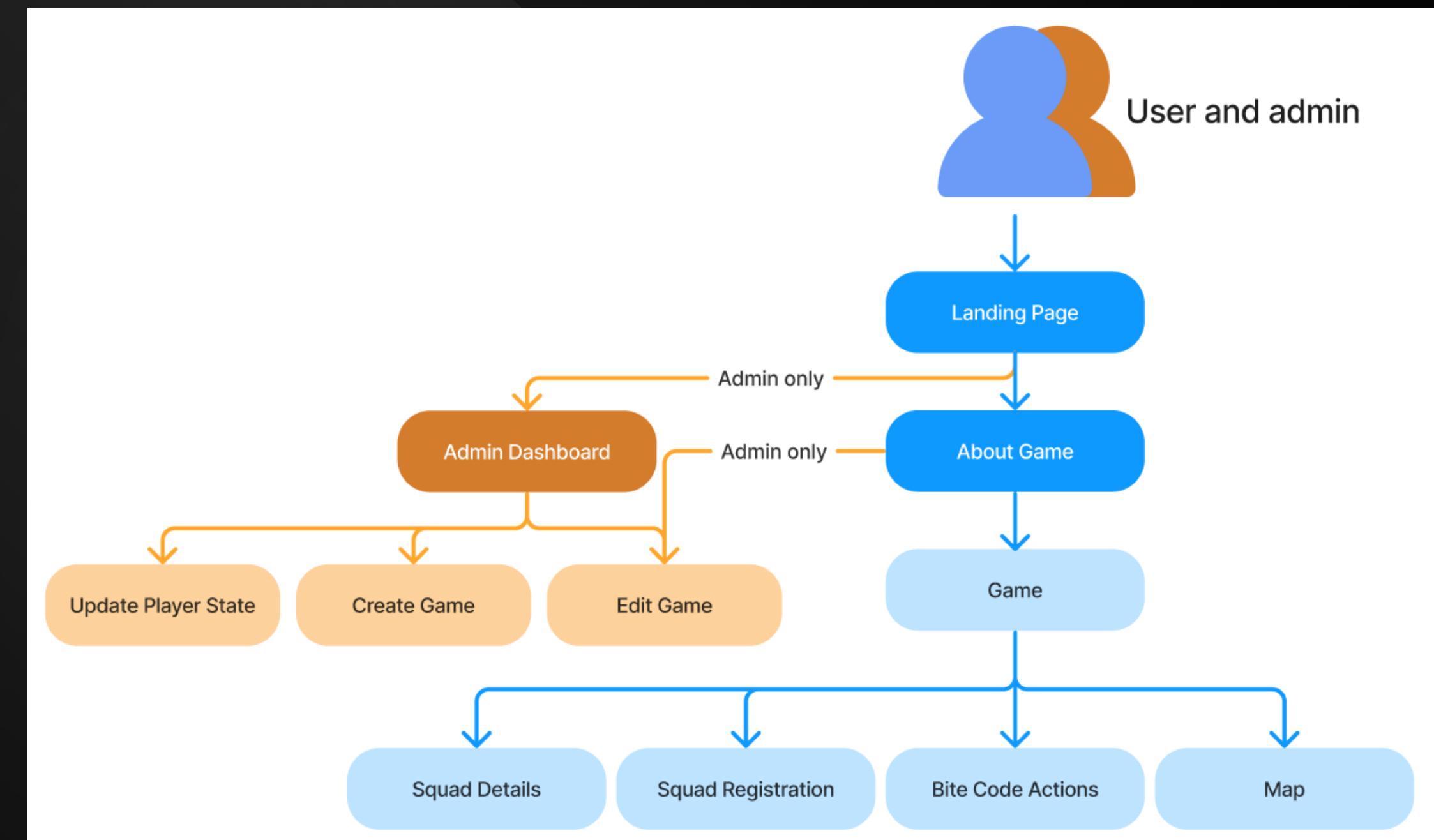


**Version Control**  
**(GitHub)**



**Design tool(Figma)**  
“Navigation map”,  
database modelling  
and prototype

# User flow



*Navigation Map created in Figma*

# Challenges

## Unfamiliar technologies

- Real-time updates for chat and squad using SignalR (WebSocket).
- Deployment
- Keycloak versions and back-end endpoint authorization

## Timeframe

- Tight schedule left little room for unexpected delays
- What we prioritized and why (MoSCoW)?



# Project management



## Approach: Agile methodology

- Streamlined project management
- Enhanced team collaboration
- Chose Agile for Adaptability as we are still learning therefore changes underway were expected



## Collaboration tools: Jira

- Project Planning and Tracking
- Progress Monitoring
- Sprints and Task Management
- Time Organization and Task Prioritization

# Solution Demonstration

Showcasing functionality and design

# Future scope

*Project is developed with scalability in mind to accommodate future growth.*

## Content

- + Dashboard for user/ profile page
- + Content/information (player information, statistics)

## Improvements

- Design
- Codebase
- Functionality (restrictions/error handling)

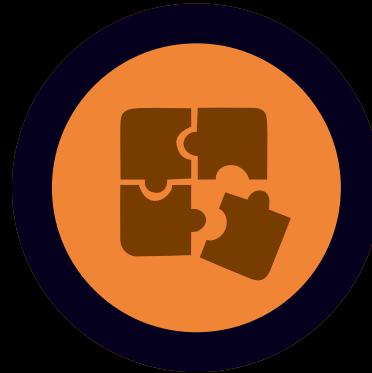
## Functionality

- + Notification functionality
- + Content/information (player information, statistics)
- + Possibility to change gamestates (completed, in progress, completed)

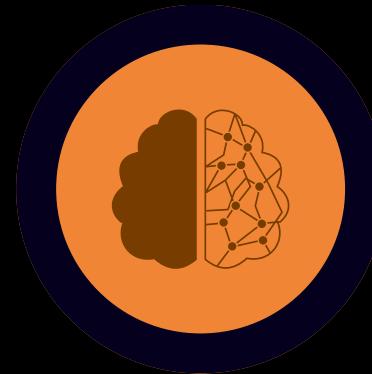
# Conclusion



- The team managed to develop a HvZ game management system with most requirements met



- Challenging but rewarding
- Significant learning outcome
- Expanded our knowledge in development projects, programming and different technologies



In the future

- Prioritize the implementation of core functionality over responsiveness and design
- Create coding guidelines to ensure uniformity in the codebase.
- Implement a structured time allocation strategy to prevent delays and boost project efficiency.



# THANK YOU

Any question?

*Icons from Flaticon created by: Pixel perfect, amoghdesign, Afian Rochmah Afif, Laisa Islam Ani & Freepik*