PLAY BY PLAY

Empowering interactive gaming experiences through intelligent prediction management

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CLIENT INFORMATION

A small startup company

Contact Information:

-Mike Foss-CEO

-Matt Foss-Design/UX

-Abeed Visram-Technical

Business Requirements

## Centralized Platform for Sports Engagement and Administration

Our client already has a working mobile application that lets game masters manage live games. However, using only a mobile app limits efficiency, especially for administrators who need to manage many games, ads, and users at once.

The **business need** here is to provide a **desktop, web-based interface** that makes it easier for game masters and ad masters to:

- Work with larger screens for better visibility and control,
- Access real-time monitoring tools,
- Manage multiple aspects of the platform (games, ads, users) in one place,
- Support workflows that are harder to do on a small mobile screen.

In short, the web admin system is about **scalability and efficiency** , giving administrators a professional, centralized tool to manage the platform as it grows.

Tech Stack
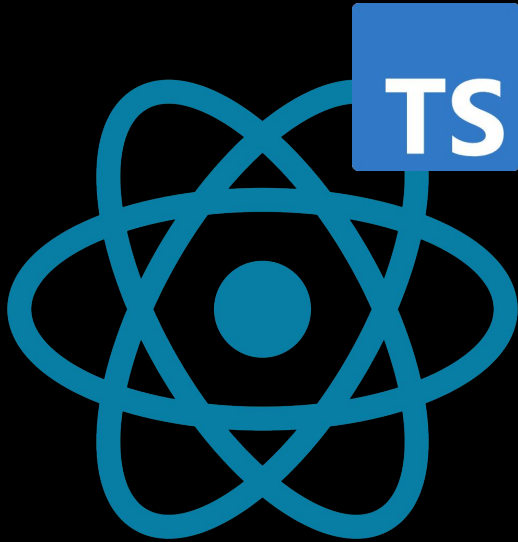
Functional Requirement

Game Creation & Management

Game Masters create new games with details like name and video stream URL. They control prediction windows and select questions from templates or create custom ones.

Scoring & Results

After plays end, Game Masters mark correct answers for automatic point awards. System supports "Legend Mode" conversion for enhanced gameplay.

Advertisement Control

Ad Masters upload ads with images and URLs, schedule deployment during live games, and preview content before going live.

High Priority Features

- Game creation and management
- Prediction window control
- Question templates and custom creation
- Answer marking and scoring
- Ad upload and scheduling

Medium Priority Features

- Ad preview functionality
- Legend Mode activation

Non-Functional Requirements

Critical system specifications ensuring optimal performance, security, and user experience for Game Masters and Ad Masters.

Performance
HIGH PRIORITY

Real-time updates for game and ad management actions with minimal delay between Game Masters and Ad Masters.

Security
HIGH PRIORITY

Authorized access only for Game Masters and Ad Masters. Secure Firebase data storage implementation.

Usability
MEDIUM PRIORITY

Intuitive dashboards with clear workflows for game creation, ad management, and prediction questions.

Reliability
HIGH PRIORITY

Continuous availability during live games without crashes or unexpected downtime.

First Iteration Features

Core functionality for Game Masters to create and manage interactive prediction games with live audience engagement.

Create Game
Game Masters can create new games, assign custom names, and set video URLs for seamless integration.
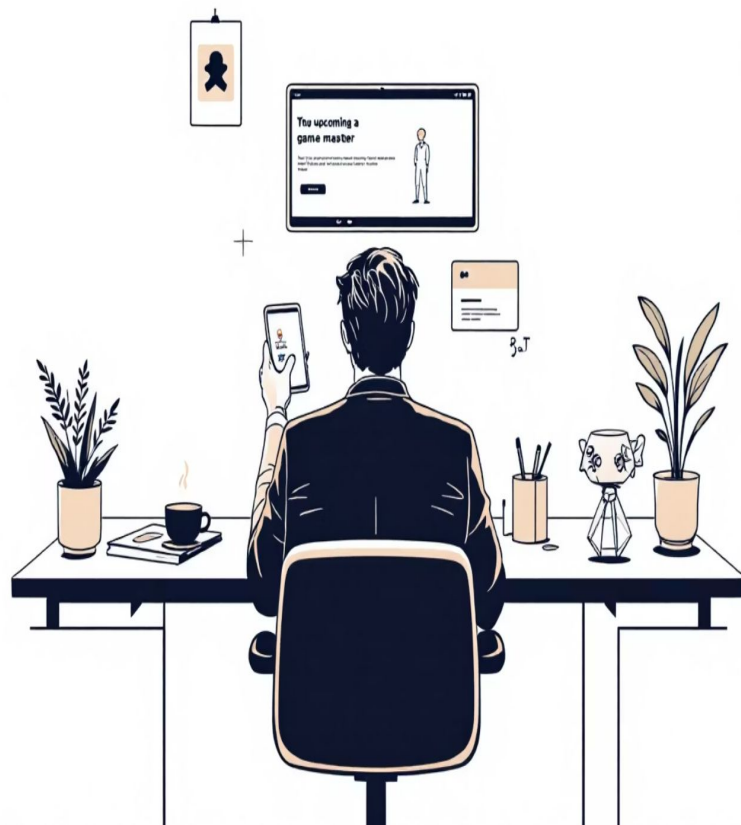
Manage Prediction Windows

Real-time control to open and close prediction windows during live gameplay sessions.

Select Prediction Questions & Set Answers
Build custom questions or select from predefined templates, with ability to assign correct answers.

Key Actors in PxP Platform

Game Master (GM)

Creates and manages games: chooses prediction questions, opens/closes windows, selects presets, marks answers, monitors video feed.

Ad Master (AM)

Manages ads: uploads assets, previews, schedules during games.

Player (User)

Target: 19-35 years. Predicts outcomes, earns points, competes on leaderboard, receives rewards.

System (PxP/Firebase)

Provides real-time updates for all interactions.

UC1: Create Game

The Game Master must be able to create a new live or taped game. This will be done by entering a video stream URL.

Actors:

- Game Master
- System

Flow:

1. GM logs into the PxP dashboard.
2. GM selects "Create Game."
3. GM enters game details (name, feed URL).
4. System validates and stores details in Firebase.
5. Game session becomes available for live or taped scoring.

UC2: Manage Prediction Windows

The prediction window will allow players to guess outcomes in real time. This will be controlled and set by a preset the Game Master selects.

Actors:

- Game Master
- System
- Player

Flow:

1. GM selects a prediction preset during a play.
2. Players receive the window and select their prediction.
3. GM closes the window.
4. GM selects the correct outcome.
5. System stores player responses.

UC3: Create and Select Prediction Questions

GMs can select templates or add new questions to give players choices for each play.

Actors:

- Game Master
- System

Flow:

1. GM selects a template or creates a custom question.
2. System saves the question.
3. GM links it to an upcoming prediction window.

UC4: Mark Correct Answer

After each play, the GM must identify and select the correct outcome of the play so that the system can award points to Players.

Actors:

- Game Master
- System
- Player

Flow:

1. GM identifies outcome of the play.
2. GM selects the correct answer.
3. System awards points to correct players.

UC5: Upload Ads

The Ad Master must upload ad assets which will display to players.

Actors:
- Ad Master
- System

Flow:
1. AM goes to "Upload Ad."
2. AM uploads an image/asset.
3. System stores ad data in Firebase.

UC6: Manage Ads

Ads should appear during the right times. The Ad Master can manage when they will appear during games.

Actors:
- Ad Master
- System
- Player

Flow:
1. AM selects an uploaded ad.
2. System displays ads on players' screens.

UC7: Preview Ads

The Ad Master should preview ads to ensure that sizing and formatting is correct.

Actors:
- Ad Master
- System

Flow:
1. AM selects an uploaded ad.
2. System displays a preview.
3. AM approves or re-uploads.

UC8: Activate Legend Mode

GMs can run Legend Mode. This is a pre-recorded game. These games are scored similarly to live games but are based on pre-recorded taped footage.
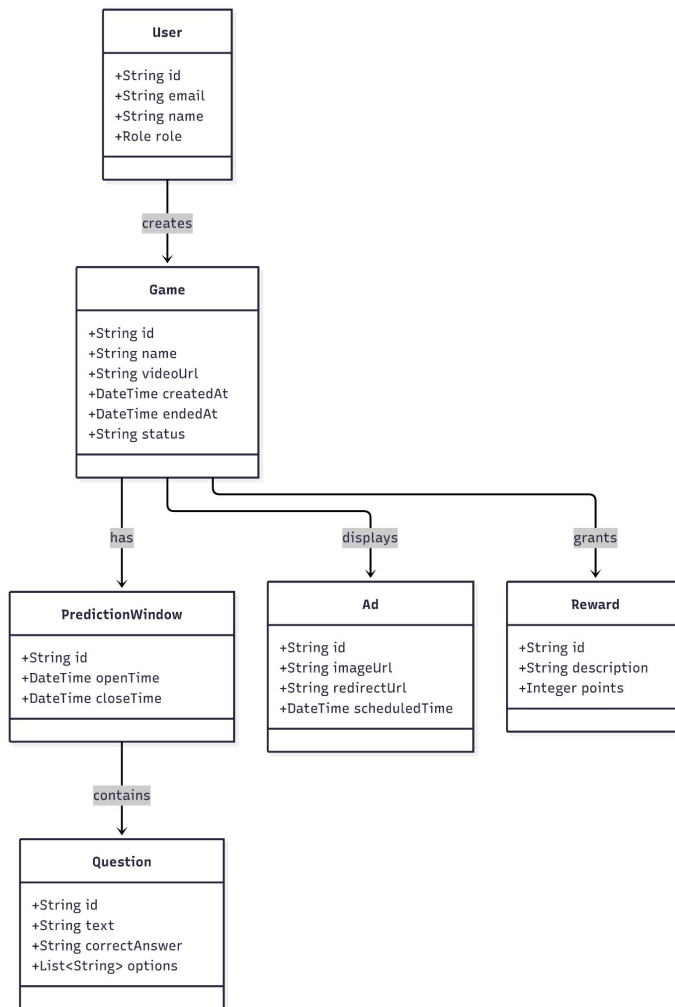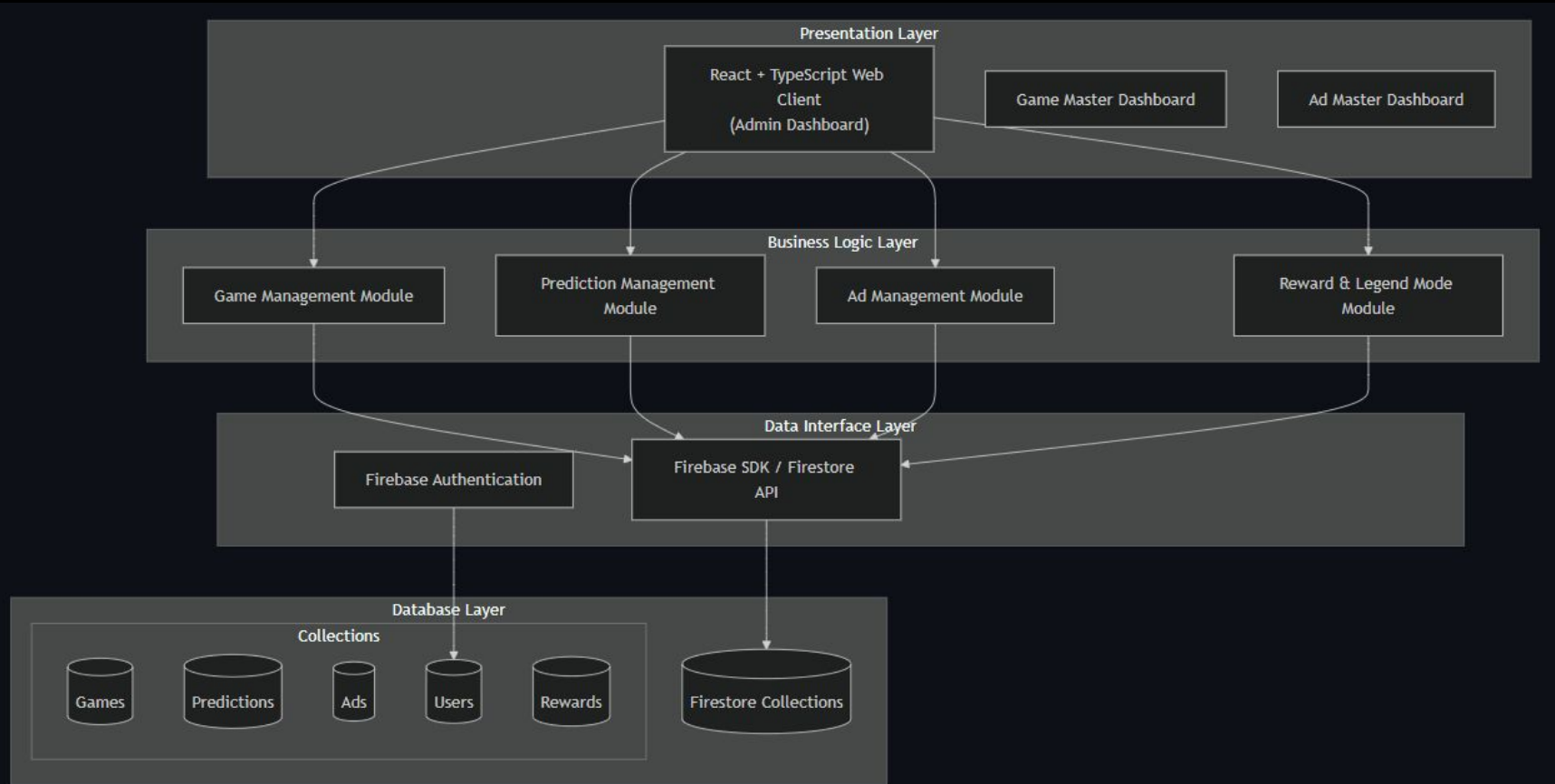
Actors:
- Game Master
- System

Flow:
1. GM selects Legend Mode.
2. GM selects a pre-recorded game.
3. Players interact as if it were a live game.

Domain Model

User

+String id
+String email
+String name
+Role role

creates

Game

+String id
+String name
+String videoUrl
+DateTime createdAt
+DateTime endedAt
+String status

has *displays* *grants*

PredictionWindow

+String id
+DateTime openTime
+DateTime closeTime

Ad

+String id
+String imageUrl
+String redirectUrl
+DateTime scheduledTime

Reward

+String id
+String description
+Integer points

contains

Question

+String id
+String text
+String correctAnswer
+List<String> options

Architecture

Oliver Photos

Client Feedback

The client approved of the work and expressed satisfaction with the deliverables.

Continue with the current direction, while monitoring for any future adjustments if needed.