

Project Documentation

Informative Document

1.1 Informative Section

1.Name, Place and Date

- E-sports Team
- University of Puerto Rico Mayagüez
- Fall 2025

1.1 Team Members

Our project team is composed entirely of students participating in the E-sport project. Every team member is directly involved in the development, design, and decision-making processes. At this stage, we do not have external partners (such as external experts, sponsors, or client organizations). Since the project is academic in nature, it is fully carried out by the student team without additional stakeholders.

Roles and responsibilities are distributed among the team members as follows:

- Experience Design Team - Responsible for ensuring that the website interface looks good, obtaining a pleasant experience. Focusing on how people would use the page.
- Identity and Data Systems Team - Responsible of data and all the backend that support the website and the user information.
- Events and Notifications - Responsible of how the events and notifications of said events are handled in the web.
- Player and Teams Profiles Team -

1.2 Informative Section

1.2 Current situations, needs, ideas

Current situation

Video games are a widely popular form of entertainment where people can either enjoy casual fun with friends or compete in more structured, competitive settings. However, the competitive gaming

scene is broad and diverse, which makes it harder for players to navigate. Most of the information about E-sports events is scattered across many platforms and communities, and because preferences in games genres vary widely, a lot of events go unnoticed. This lack of variety prevents player from discovering tournaments, joining them, or join the community of that game. Reducing opportunities for players to connect with others who share similar interests.

Needs

From this situation a few needs were identified.

- Players need a **clear, reliable and centralized** where they can easily discover and register for E-sports events.
- Organizers need a reliable and effective channel to promote their events and reach their audience effectively.
- Communities need more visibility for their events so they can attract new members and maintain engagement.
- Spectators and fans need an accessible way to follow competitions, track results, and feel part of the event experience.

Ideas

Our project aims to address these needs by implementing the following features:

- A centralized events hub where player can browser and discover tournaments by game, date, community.
- A registration and management system to simplify how participants sign up and how organizers handle teams and brackets.
- A notification and updates feature to keep participants and spectators informed in real time.
- A community-driven interface that allows players to connect with others, share interests, and follow ongoing competitions.

These ideas were designed to reduce fragmentation, improve the visibility of events, and create a stronger and more connected E-sports community.

Countermeasures:

- Domain engineering: analyze the e-sports ecosystem, players, and tournament organizers.
- Requirements engineering: clearly define the minimum functionalities that the platform requires.
- Software design and architecture: design a modular architecture that allows for scalability and future integrations.
- Implementation: frontend (UI/UX) and backend (event management, users, notifications) development.
- Testing: unit and integration tests to ensure quality.

- Deployment: deployment on a server accessible to test users. = 1.3 Informative Section

1.3 Scope, Span, and Synopsis

Scope

This project belongs to the big domain of entertainment, gaming and event organization, with a focus on the growing field of E-sports. This includes players, organizer, or just spectators who participate or follow gaming tournaments and events, whether its online or in person. The scope covers all phases of the software engineering required for the project, including domain description, requirements engineering, software architecture, component design, implementation, and finally testing. It also considers aspects of user experience, communication, and community engagement, as these are important for the competitive gaming environment.

Span

While the domain of the project is the global E-sports community, the specific focus (span) of this web is on small to medium scale tournaments organized by local communities, including the student's group and other independent gaming community. The platform is designed to help these organizers manage registration, brackets, communications and visibility in a way that is easy to use. Unlike large scale E-sport platforms, this projects emphasis inclusivity, adaptability, and simplicity making it suitable for grassroots and semi-formal competitions.

1.3.2Synopsis

This project aims to design and develop a digital platform that facilitate the organization and participation of E-sports tournaments. The system will centralize key process like event discover, player registration, tournament registration and schedule. It will also provide real time notifications, and public results for spectators.

The project will be conducted through standard software engineering activities:

- Domain description to understand the current practices of student E-sport events.
- Requirements prescription to capture user and stakeholder needs.
- Software architecture and design to define the system's structure and components.
- Implementation of core features in line with the defined requirements.
- Testing and validation to ensure functionality, usability, and reliability.

In summary, this project delivers not only a working system but also serve as a solution to improve the way other E-sports platform organize tournaments and user's experiences. = 1.4 Informative Section

1.4 Other activities than just developing a source code

Our project is not limited to just source code. Behind everything each team did the respective research in order to develop a system that is meaningful and effective for the gaming community, helping resolved problems that affect other platforms. = 1.5 Informative Section = Descriptive Document

2.1 Descriptive Section

2.2 Requirements

2.2.1 User Stories, Epics, Features

Epics

- As a gamer, I want to discover local tournaments and communities, so that I can participate on the tournaments and meet players with similar interests to myself.
- As a tournament organizer, I want to announce and manage events so that I can attract the maximum number of participants and grow the competitive scene.
- As a competitive player, I want to track my performance and rankings, so that I can measure progress and compare myself with others.
- As a casual player, I want to join or create teams for my favorite games so that I can play cooperatively and find new friends to play my favorite games.

User Stories

- As a gamer, I want to follow specific communities so that I receive notifications about upcoming events.
- As a gamer, I want to create a new community for a game without an existing one so that I can gather players with similar interests.
- As a competitive player, I want to view my local ranking so that I can see how I compare with others in my region.
- As a competitive gamer, I want to join a team for my favorite game so that I can participate in team-based competitions.
- As an organizer, I want to create tournament brackets so that matches are structured and easy to follow.
- As an organizer, I want to notify users about new tournaments so that they are aware and can sign up.

Features

- Tournament and event search by both game and location.
- Community following and customizable notifications.
- Local and regional ranking system based on tournament results.
- Team creation and management tools.
- Bracket generation for competitions.
- Organizer tools for posting and updating events.
- Option to create new communities for games without an existing competitive scene.

2.2.2 Personas

Persona 1: Alex the Competitive Player

- **Age:** 21
- **Background:** University student, plays multiple esports titles, highly motivated by rankings and performance.
- **Goals:**
 - Find tournaments to test and improve skills.
 - Track rankings and stats across games.
- **Frustrations:**
 - Difficult to keep up with scattered tournament announcements.
 - Lacks a centralized platform to measure performance.

Persona 2: Maria the Organizer

- **Age:** 34
- **Background:** Works in event management, organizes local gaming tournaments on weekends.
- **Goals:**
 - Announce tournaments easily to the right audience.
 - Manage brackets and notify participants quickly.
- **Frustrations:**
 - Promotion spread thin across many platforms.
 - Hard to build consistent communities for recurring events.

Persona 3: Liam the Casual Gamer

- **Age:** 26
- **Background:** Plays games for fun after work, sometimes interested in casual competitions.

- **Goals:**
 - Discover local communities for his favorite games.
 - Join teams to participate in friendly competitions.
- **Frustrations:**
 - Overwhelmed by too many platforms and event sources.
 - Wants simple notifications without constantly monitoring social media.

2.2.3

2.2.4

2.2.5

Analytic Document

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3.2 Informative Section