

Ingegneria Del Software

Kart GP

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1. Introduction

1.1. Aim of the document

The primary purpose of this document is to provide a comprehensive and well-organized guide for the Kart GP project. It covers various aspects of the project, encompassing user stories, functional requirements and use case diagram. The goal is to provide a detailed insight into the application's functionality, features and interactions.

1.2. Overview of the defined System

Kart GP is an integrated platform that connects pilots, track managers, and referees, improving the entire go-kart racing ecosystem. Pilots can easily register for races, track their performance, and compete with other racers in real-time. Track managers can plan events and manage registrations. Referees can view race results, assign points, and update leaderboards.

1.3. HW and SW requirements

Kart GP can run on Windows, MacOS, and Unix-like operating systems, and to do so the relative database must be installed. Hardware requirements are:

- 2 GB RAM minimum, 4 GB RAM recommended.
- 1.5 GB hard disk space.

1.4. Related Systems

There already exist systems that can be related to the usage of Kart GP:

- **Hangar 42**

Common features: both systems allow pilot to participate in a tournament.

Advantages of Kart GP: The system allows the pilot to view the leaderboard.

Disadvantages of Kart GP: The system offers a loyalty card to access rewards or offers.

- **E-GoKart**

Common features: both systems allow pilot to participate in a tournament.

Advantages of Kart GP: The system allows the referee to assign points.

Disadvantages of Kart GP: The system offers pilots the ability to create a team and race together.

2. User Stories

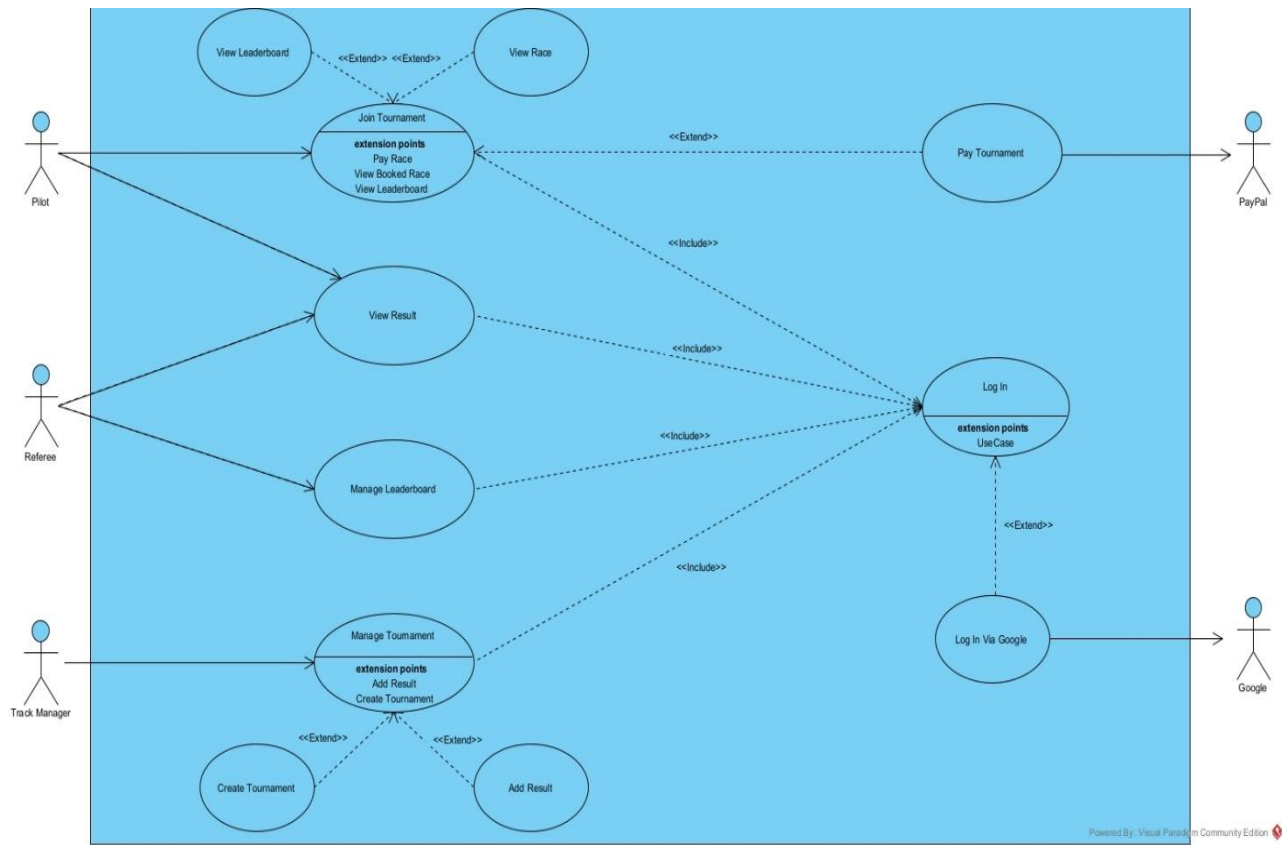
- As a pilot, I want to participate in a race, so that I can compete against other pilots.
- As a go-kart track manager, I want to manage tournaments, so that I can create races for pilots.
- As a referee, I want to see the result of the race, so that I can assign points in a leaderboard.

3. Functional Requirements

- The system shall provide a list of available races.
- The system shall display a fillable form with the information of the tournaments.
- The system shall display the result of the race.

4. Use Case

4.1. Overview Diagram



4.2. Internal Steps

Internal Steps: **Join Tournament**

1. The pilot requests to join tournament.
2. Log in
3. The system gets available tournaments from the DB.
4. The system displays available tournaments.
5. The pilot selects the tournament.
6. The system displays the entrance fee.
7. The system asks the pilot to select the payment method.
8. The pilot selects to pay cash.
9. The System display receipt.
10. The system terminates the use case.

Extensions

- 3a. DB does not respond: The system notifies the pilot and terminates the use case.
- 4a. There are not available tournaments: The system notifies the pilot and terminates the use case.
- 8a. The pilot wants to pay via PayPal: The pilot selects to pay via PayPal.
- 8b. PayPal.
- 10a. The pilot requests to view the tournament entries: The system displays the tournament entries.