

# **PROJECT Wireless and Mobile Programming**

## **PROJECT REPORT: ARENA GO**

### **Lecturer**

Sir. Williem



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**Study Program: IT Cyber Security Class 1**

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# 1. Introduction

Arena Go is a mobile application designed to simplify the process of booking sports fields such as badminton, basketball, and futsal. Many booking systems are still done manually, which often leads to inaccurate schedules, miscommunication, and wasted time.

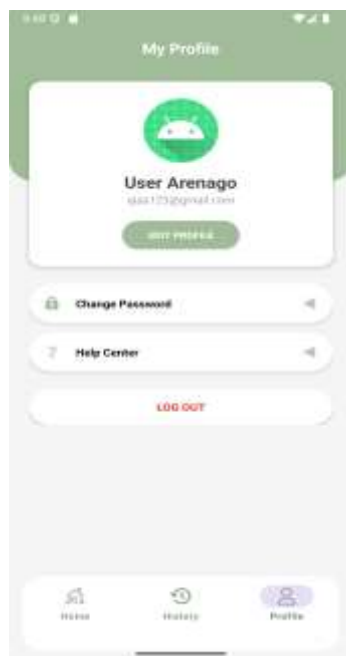
To solve this problem, Arena Go provides users with an easy way to view available courts, check details and prices, and make bookings directly through their phones. The application aims to make sports field reservations faster, more efficient, and more organized for both users and venue owners.

## 2. Features

### User Features

- **Login & Registration**

Users can create an account and log in to access all app features.



- **Choose Sports Field**

Users can select from various sports fields such as badminton, basketball, and futsal.



- **Select Date & Time**

Users can pick an available date and time slot for their booking.



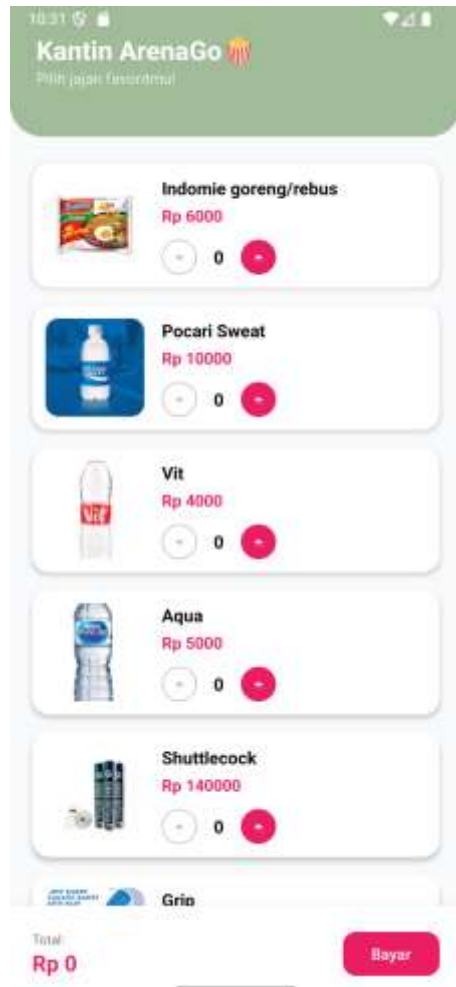
- **Book and Cancel Field Reservations**

Users can book their chosen field and also cancel any reservation they have previously made.



- **Canteen Purchase**

Users can browse and purchase food or drinks directly from the canteen section inside the app.



### 3. Tools & Technologies

#### Programming Language

- **Java**

Used as the primary programming language for the application. It supports Object-Oriented Programming (OOP), high compatibility, and full integration with the Android SDK.

## Development Environment

- **Android Studio**

Equipped with:

- Gradle build automation
- Android Emulator
- Debugging and profiling tools
- XML layout editor

## Minimum SDK

- **Min SDK: 24 (Android 7.0 Nougat)**

Ensures compatibility with most modern Android devices.

## User Interface

- **XML Layouts** for designing the application's UI
- **RecyclerView** for efficiently displaying dynamic data
- **CardView / ConstraintLayout**, as detected from the UI resources

## Backend Integration

- **Firebase**

Used for:

- Authentication
- Database / Storage (depending on the implementation within the code)

## Version Control

- **Git & GitHub**

- Used for version control, collaboration, and repository hosting.

- <https://github.com/andri-commits/GorBadmintonApp>