



**Manipal Academy of Higher Education**

Minor project synopsis  
**Hockey Scoring Application**

MCA Sec - A  
(Batch A1)  
Team 6

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# **Project Synopsis**

**Project Title:** *Smart Hockey Scoring and Match Management Application*

## **Objective:**

The primary goal of this project is to develop a user-friendly Android application that enables users to manage hockey game scores, player statistics, and match events. The app aims to simplify scorekeeping, enhance team management, and provide valuable analytics.

## **Problem Statement:**

Traditional methods of tracking hockey scores and player performance are often manual, error-prone, and less accessible. There is a need for a digital solution that allows seamless and accurate scorekeeping with additional features like team lineup management, match timelines, and performance summaries.

## **Proposed Solution:**

The Hockey Scoring App will allow users to:

- Record goals, assists, and fouls.
- Maintain player profiles and match history.
- Automatically calculate team statistics (e.g., possession time, shots on goal, penalties).

## Modules and Features

### 1) User Authentication & Access Control

Feature	Description
<b>Phone Number/Password Login</b>	Users can log in securely using Firebase Authentication.
<b>Registration</b>	New users can sign up with their details.
<b>Password Reset</b>	Users can recover their password via email.
<b>Session Persistence</b>	Keeps users logged in until they log out manually.

### 2) User Module

Feature	Description
<b>Create Matches</b>	Users can create their own custom matches for scoring.
<b>Add Teams to Match</b>	Select or create teams and assign players.
<b>Add Players</b>	Add or edit player details for custom matches.
<b>Manual Scoring</b>	Record goals, assists, and fouls for each player.

<b>Match Summary</b>	View a complete summary of the match after finishing.
<b>Match History</b>	View previously created and completed matches.
<b>Search and Filter</b>	Find matches by name, date, or teams.

### 3) Match Analytics & Leaderboards

<b>Feature</b>	<b>Description</b>
<b>Match Summary</b>	A detailed result page for completed matches.
<b>Goals per Period</b>	A detailed result page for completed matches
<b>Leaderboard</b>	Ranking of players based on performance (most goals, assists).
<b>Win/Loss Ratio</b>	Team performance history

**Technology Stack:**

- **Frontend:** Java with XML (Android)
- **Backend:** Java
- **Database:** Firebase Realtime Database
- **Authentication:** Firebase Authentication

### **Target Users:**

- Local and school-level hockey teams
- Sports enthusiasts

### **Conclusion:**

The Hockey Scoring App addresses a real-world gap in efficient match scoring and player performance tracking. By providing detailed analytics, it enhances team performance evaluation.