

## **Group 1 -**

### **Project Title : Sports Injury Management System**

#### **Background:**

Injuries are an unfortunate yet often unavoidable aspect of sports participation. While everyone strives to minimise their occurrence, the reality is that athletes frequently face the risk of injury during training and competition. They pose a major concern for athletes, coaches, and medical personnel. Effective management of these injuries requires comprehensive data collection and analysis to ensure timely treatment, rehabilitation, and prevention strategies. A well-structured database can streamline the tracking of injury occurrences, treatment protocols, recovery times, and long-term athlete health.

#### **Mission Statement/Objectives:**

- Targeted Centralized System: A centralized database that focuses on injury statistics and health monitoring within a specific sports organization or a team. This system will be provided to authorized medical staff, coaches, and athletic managers with detailed insights into their own athletes' health, recovery process, and injury prevention. By limiting access to relevant stakeholders only, the system ensures that sensitive data is used exclusively for internal improvements and competitive advantage, while safeguarding the confidentiality of individual teams' health metrics.
- Comprehensive Health Reporting: Provide detailed and up-to-date reports on each player's current health status and injury history. This includes tracking vital signs, injury details, and recovery progress to support informed decision-making by medical staff and coaches.
- Clearance Tracking: Implement a system to manage and document clearances from all relevant parties, including doctors, physiotherapists, and coaches. Ensure that all relevant health assessments and feedback from medical professionals are accurately recorded and easily accessible to support informed decisions about an athlete's participation in training or competitions.
- Secure Access: The system will only be available to authorized people, guaranteeing that all sensitive athlete data is protected by high-security processes and meets industry data privacy requirements.

#### **Purpose:**

With the growing emphasis on athlete performance and health, sports organisations face increasing pressure to maintain competitive edges and ensure player safety. To thrive in this competitive landscape, it is crucial for sports organisations to enhance their operational efficiency and reduce costs associated with injuries and recovery. The Sports Injury Management System (SIMS) is designed to help organisations achieve these goals.

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**Scope:**

The Sports Injury Management System (SIMS) will focus primarily on managing the medical history of athletes, which includes their current health status, injury tracking, rehabilitation progress, and any relevant medical conditions, such as allergies. The system will feature access-controlled information regarding physicians, nurse practitioners, and physiotherapists, both available and on standby, along with details about the current roster, coaches, and athletic trainers, including their insights on the players. However, this project will not cover logistical aspects, such as hospital transfers.

**References :**

1. <https://www.hopkinsmedicine.org/health/conditions-and-diseases/sports-injuries/sports-injury-statistics>
2. <https://www.harwoodhighlanders.com/injuryprotocol>
3. <https://www.nfhs.org/articles/planning-for-return-to-play-after-time-loss-injury/>