

Sports Tournament Database Project Report

Abstract

This project presents the design and implementation of a database system to manage a sports tournament. The database stores essential details such as teams, players, matches, and performance statistics. It enables the generation of meaningful insights including match outcomes, leaderboards, team points tables, and player averages. The system demonstrates how structured data management improves efficiency in organizing sports events.

Introduction

Organizing sports tournaments requires tracking multiple components such as teams, players, results, and individual performances. The Sports Tournament Database Project provides a systematic solution by designing relational tables with foreign key relationships. Using SQL queries and views, it generates valuable reports that simplify tournament management and decision-making.

Tools Used

- **MySQL** – Database design, schema creation, and query execution
- **SQL** – For table creation, constraints, aggregation, and views
- **Python (ReportLab)** – To generate this structured project report in PDF format

Steps Involved in Building the Project

1. Designed relational schema with tables: Teams, Players, Matches, Stats.
2. Populated the database with sample data of teams, players, and match statistics.
3. Wrote SQL queries for match results, player scores, leaderboards, and team performance.
4. Created SQL views (Leaderboard, TeamPoints) for simplified reporting.
5. Applied aggregate functions and CTEs to calculate average performance.
6. Exported results into a professional report for presentation.

Sample Outputs

Match Results

Match ID	Team1	Team2	Winner	Date
1	Warriors	Titans	Warriors	2025-08-01
2	Titans	Strikers	Strikers	2025-08-05
3	Warriors	Strikers	Warriors	2025-08-10

Leaderboard

Player	Team	Points
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David Warner	Warriors	22
Steve Taylor	Titans	16
Chris Green	Warriors	11
Mark Johnson	Titans	9
Sam Wilson	Strikers	8
Kevin Stark	Strikers	7

Team Points

Team	Matches	Wins	Losses
Warriors	2	2	0
Titans	2	0	2
Strikers	2	1	1

Average Player Performance

Player	Avg Runs	Avg Wickets	Avg Points
David Warner	62.5	0.0	11.0
Chris Green	7.5	1.5	5.5
Steve Taylor	40.0	0.5	8.0
Mark Johnson	25.0	0.0	4.5
Sam Wilson	10.0	3.0	8.0
Kevin Stark	40.0	0.0	7.0

Conclusion

The Sports Tournament Database Project provides a structured and efficient way to manage tournament operations. It demonstrates the power of relational databases for sports management, offering insights into match outcomes, player rankings, and team performance. With scalability, this system can be extended to professional leagues and integrated with web or mobile applications for real-time updates.