

Case Study On
“The Cricket Tournament Management System (CTMS) Based on Cricket
ODI World Cup 2023”

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Summary

The Cricket Tournament Management System (CTMS) is designed with the aim to store and manage data generated during the tournament with as much preciousness as possible. Having this system, it is possible to insert, update and query any tournament data to track scores, points and other aspects of the tournament efficiently. This study focuses on the System and the data generated during Cricket ODI World Cup 2023.

Introduction

The ODI Cricket World Cup is one of the most prestigious sporting events globally, generating vast amounts of data. This data, if properly managed and structured, can provide deep analytical insights into team strategies, player performance, and tournament dynamics. The purpose of this project is to model this complex data into a functional and efficient SQL Server database.

Project Objectives

The key objectives of this project were to:

1. Design a normalized relational database schema (DDL) for the tournament.
2. Populate the database with comprehensive and accurate data (DML).
3. Implement advanced SQL objectives to enforce business logic and improve performance.
4. Conduct detailed data analysis using a variety of SQL query techniques.

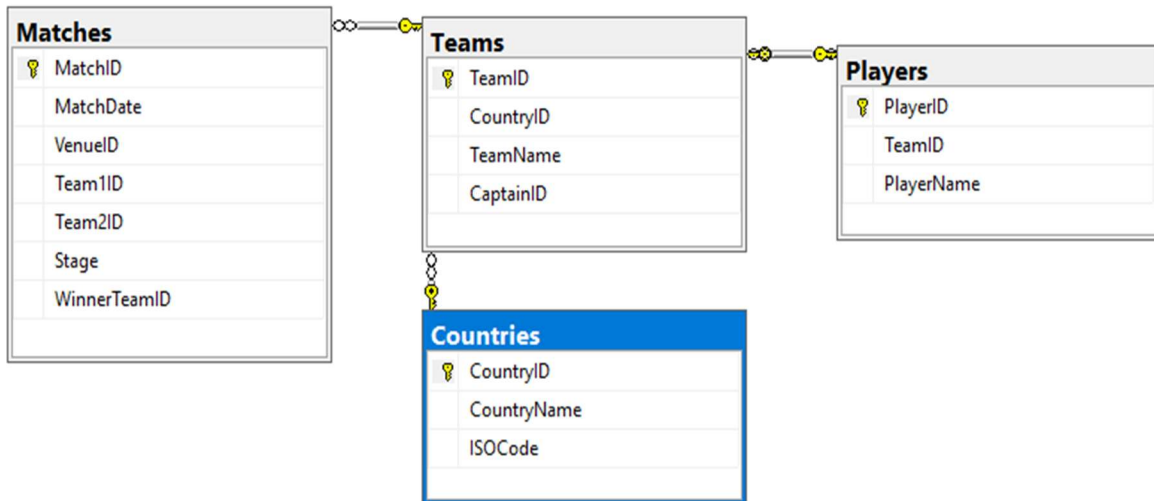
Database Design

The database schema, implemented in SQL Server, is a crucial component of this project. It was designed using a normalized approach to minimize data redundancy and maintain data integrity. The schema consists of 14 tables, each representing a core entity of the tournament.

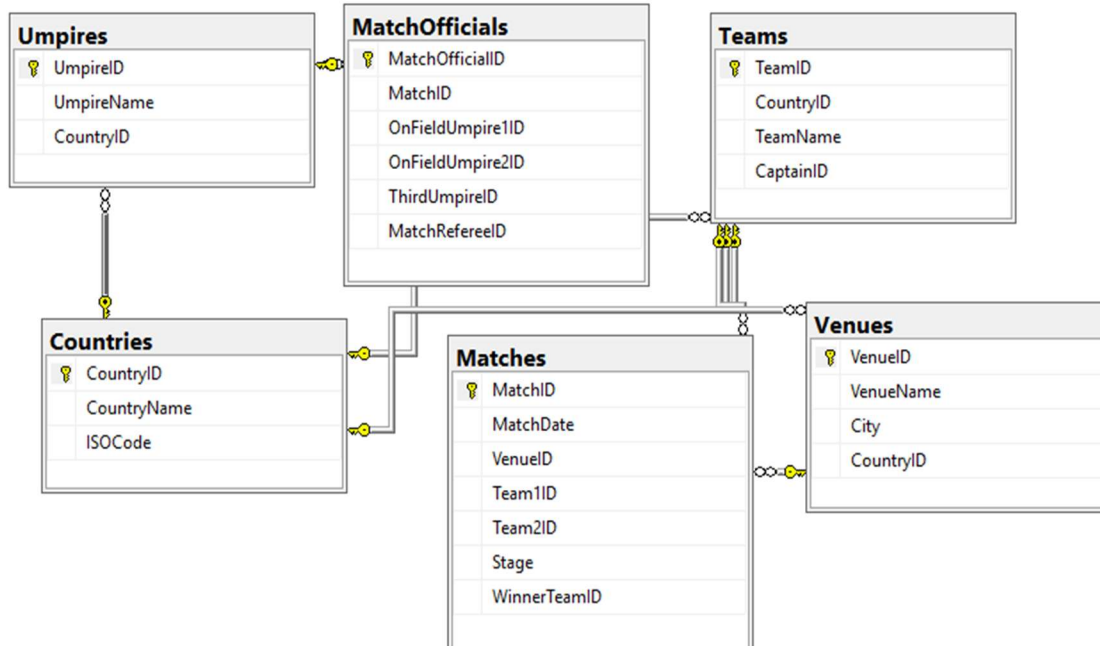
1. Physical Implementation (DDL)

The database was physically implemented using a Data Definition Language (DDL) script. This script defines all the tables, their columns, data types, and constraints. It includes FOREIGN KEY constraints to enforce referential integrity between tables, ensuring that relationships are maintained. Additionally, CHECK constraints were used to validate data, such as restricting a match's stage to specific values (Group, Semi-Final, Final).

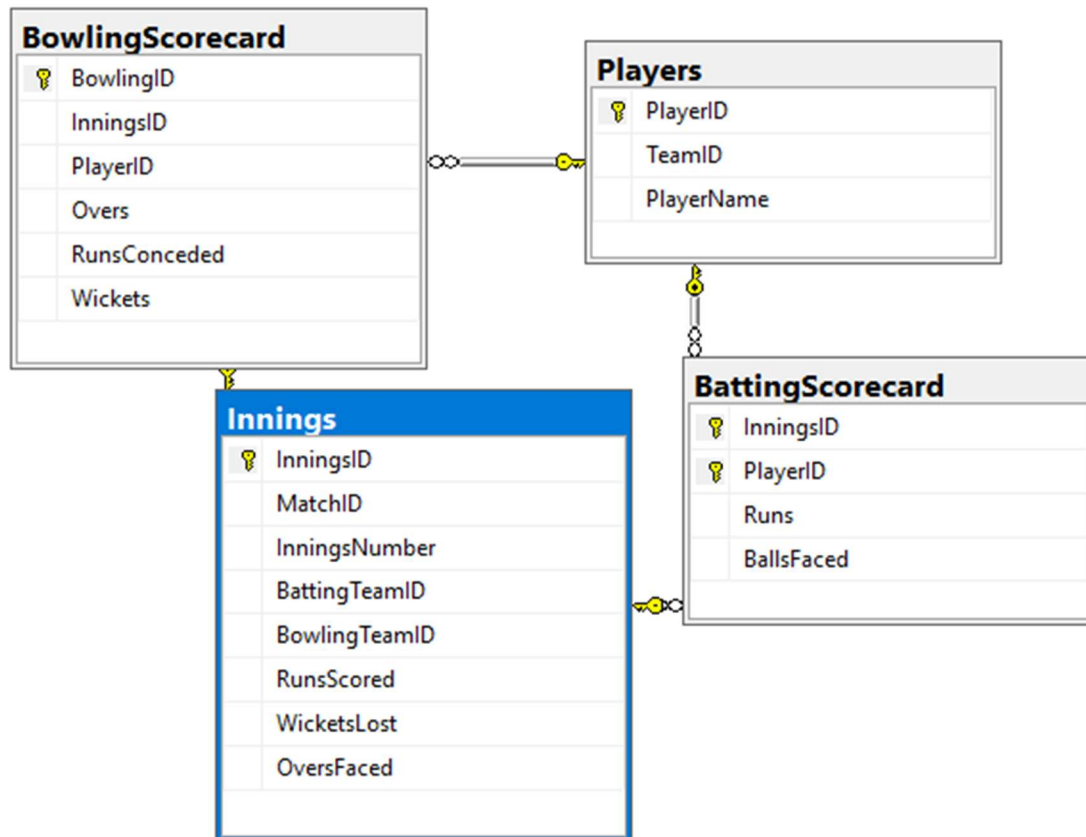
Team Details:



Match Details:



Score Details:



2. Data Population (DML)

Following the schema creation, the database was populated with Data Manipulation Language (DML) scripts. These scripts contained INSERT statements for all 14 tables. The data was meticulously compiled from real-world tournament information, including teams, players, match results, individual player statistics, and final standings. This comprehensive dataset serves as the foundation for all subsequent queries and analyses, providing a realistic environment for testing and reporting.

Conclusion

This project successfully demonstrates the comprehensive process of database design and implementation using SQL Server. From the initial schema creation and data population to the development of advanced database objects, the final system is a robust and efficient platform for analyzing ODI Cricket World Cup 2023 data. The implemented features ensure data integrity, improve query performance, and provide a foundation for complex analytical tasks. The project serves as a strong foundation for future enhancements, such as integrating a user-friendly application or building a more sophisticated business intelligence solution.

