Indian Institute of Technology, Palakkad

CS3710 : DATABASE SYSTEM LAB PROJECT

CRICBASE v1.0

"Under the guidance of Dr. Sahely Bhadra and Dr. Mrinal Kanti Das"

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Chapter 1

Aim and Motivation

1.1 Aim

This project will involve developing a database to store information about cricketers, cricket matches and various county and international cricket leagues. This will help in analyzing various statistics of cricketers and also helps in generating cricket stats and facts. Moreover, it would also help cricketers to understand their strengths and weakness.

1.2 Motivation

The advent of saturation television coverage of professional cricket has provided an impetus to develop new and interesting forms of presenting statistical data to viewers. Television networks have thus invented several new ways of presenting statistics.

These include graphs of run scoring and wicket taking numbers plotted against time or balls bowled over a career or within a match. These graphics can be changed dynamically through a computer-controlled back-end, as statistics evolve during a game. Due to the increased craze many websites provide with various facts and interesting numbers related to cricket matches and players.

Figure 1.1: The numbers game column of a reputed newspaper.

Many big newspapers like `The Hindu` and `Times Of India` reserve a column for the number game (stats of cricket matches). The above fact also can be justified by the top trending searches on `Google`. During the years 2013 and 2014 famous cricketing statistics websites like **cricbuzz.com** and **cricinfo.com** appeared in the lists. [1]

Chapter 2

Requirement Analysis

2.1 Introduction

This section gives a brief description about the data required in order to maintain `Cricbase`. The database considers match to be a set of innings and overs. Overs is a 6-set of balls. The data pertaining to ball(atomic unit of a cricket match) are as follows. The bowler who bowled, batsman facing it, the non-striker and also wicket taken (if any). For each and every the bowl many updates are done to the database. The runs scored, balls faced would change for the batsman. The runs given, wicket taken, balls bowled would alter accordingly. The other basic information required for the organization of the database include stadiums, toss, result, player bio-information.

2.2 Data Stored

Cricket is a game rich in statistical information. Over multiple games within a series, season, or an entire career, each player accumulates a set of statistics that can be used to compare the performances of different players. [2]

Statistics for different classes of matches are recorded separately, in particular a top-level player would have statistics recorded for:

- Test matches.

- One-day internationals.

- First class matches, including Test matches.

- List-A one-day matches, including one-day internationals.

The above types of matches are hierarchical and have similar properties among them. So they inherit some characteristics of cricket match(a general one).

The data collected for a match includes lot of details. The statistics accumulated for matches are diagrammatically explained below.

Figure 2.1: Various information stored about a player

(a) Match, team and ball

(b) Tournaments and stadiums

Figure 2.2: Various information stored for the entities

2.3   Derived data

Various other statistics are also required in assessing a player's performance. We do not intend on storing this data too in the database. Such information can be calculated from the data stored in other tables. Upon the queries pertaining to these facts it would be calculated and output would be given. These statistics would be referred as derived statistics or calculated statistics in the document.

The various calculated statistics for players are:

Batsman	Bowler
Batting Average Strike Rate	Bowling Average Strike Rate Economy

2.4   Queries

Viewers nowadays are interested in various complex statistics which can be calculated using queries such as:

- Runs scored by a batsmen in a year.

- Wickers by a bowler in a particular country.

- Matches lost by team in particular stadium.

Viewers are not the only ones who are interested in stats but players and their coaches are also pretty interested in analyzing and understanding their mistakes and improving their game.

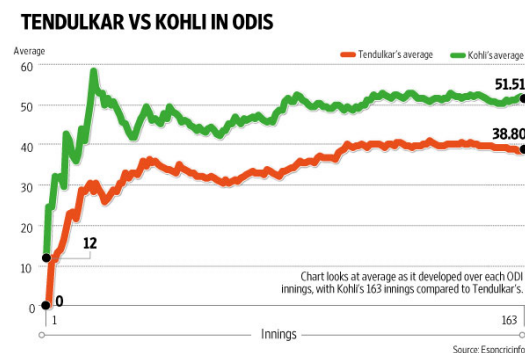So, ability to generate such statistics from the information that we store is what makes our project most interesting.

Figure 2.3: Graphs generated based on information from cricket databases.

References

[1] "Top 10 trending searches on google." https://www.gadgetsnow.com/tech-news/Times-of-India-and-cricbuzz-in-Google-Indias-top-10-searches-of-2014/articleshow/45560633.cms, 2014. 2

[2] "David morgan's explanation of cricket statistics." http://www.dangermouse.net/cricket/statistics.html, 2007. 3