VISVESVARAYA TECHNOLOGICAL UNIVERSITY
BELAGAVI-590018, KARNATAKA

A MINI PROJECT REPORT
ON

"CRICKET PLAYER STATISTICS DATABASE"

Submitted in partial fulfillment of requirements for the award of 5th semester,

BACHELOR OF ENGINEERING
IN
COMPUTER SCIENCE & ENGINEERING

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Certificate

This is to certify that the mini project entitled **"Cricket Player Statistics Database"** is a bona fide work carried out by **Shashikumar N(1MJ15CS136)** a bona fide student of MVJ College of Engineering in partial fulfillment for the award of degree of Bachelor of Engineering in Computer Science & Engineering of VisvesvarayaTechnological University, Belagavi during the year 2017-18. It is certified that all the corrections/suggestions indicated for Internal Assessment have been incorporated in the Report. The mini Project Report has been approved as it satisfies the academic requirements in respect of Project work prescribed for the said degree.

_____   _____
Signature of the Guide   **Signature of the HOD**

Signature of the Examiners

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Internal   **External**

Chapter 1

INTRODUCTION

Cricket is a sport that generates a large number of statistics. Statistics are recorded for each player during a match, and aggregated over a career. At the professional level, statistics for Test cricket, one-day internationals, and first-class cricket are recorded separately. However, since Test matches are a form of first-class cricket, a player's first-class statistics will include their Test match statistics – but not vice versa.

Nowadays records are also maintained for List A and Twenty20 limited over matches. These matches are normally limited over games played domestically at the national level by leading Test nations. Since one-day internationals are a form of List A limited over matches, a player's List A statistics will include their ODI match statistics – but not vice versa.

- Innings (I): The number of innings in which the batsman actually batted.
- Not outs (NO): The number of times the batsman was not out at the conclusion of an innings they batted in.
- Runs (R): The number of runs scored.
- 4's: The number of 4's the batsmen has scored.
- 6's: The number of 6's the batsmen has scored.
- Highest score (HS/Best): The highest score ever made by the batsman.
- Batting average (Ave): The total number of runs divided by the total number of innings in which the batsman was out.
- Ave = Runs/[I – NO] (also Avge or Avg.)
- Centuries (100): The number of innings in which the batsman scored one hundred runs or more.
- Half-centuries (50): The number of innings in which the batsman scored fifty to ninety-nine runs (centuries do not count as half-centuries as well).
- Balls faced (BF): The total number of balls received, including no balls but not including wides.
- Strike rate (SR): The average number of runs scored per 100 balls faced. (SR = [100 * Runs]/BF)

Chapter 2

SYSTEM REQUIREMENTS

2.1 Hardware requirements -

- Disk space of 500Mb
- RAM (1Gb or more)

2.2 Software requirements -

- Eclipse Mars 2
- JDK
- Windows 7/8/8.1/10
- MYSQL
- MS WORD

Chapter 3

PROBLEM DESCRIPTION

CRICKET PLAYER STATISTICS DATABASE

Player Statistics depends on the number of matches the player has played, number of runs the player has scored. Matches and Tournaments will be conducted by some International Cricket boards. In this Database, the user can add or delete Players. The user can also update the Statistics of Players.

Rank and Statistics of all Players are described in the given tables.

- PLAYER
- TOURNAMENT
- FIXTURES
- RANK
- STATISTICS

The table details are as follows:

Table 3.1 PLAYER

COLUMN NAME	DATATYPE & SIZE	CONSTRAINTS	DESCRIPTION
P_ID	INT	PRIMARY KEY	Accepts integer type data
P_NAME	VARCHAR(20)		Accepts player name
GENDER	VARCHAR(20)		Player gender
AGE	INT		Accepts integer type. i.e Player age
HEIGHT	VARCHAR(20)		Accepts height of player
ROLE	VARCHAR(20)		'BATSMAN' or 'BOWLER'
COUNTRY	VARCHAR(20)		Accepts coountry name

Table 3.2 TOURNAMENT

COLUMN NAME	DATATYPE & SIZE	CONSTRAINTS	DESCRIPTION
T_ID	VARCHAR(20)	PRIMARY KEY	ID of the tournament
T_NAME	VARCHAR(20)		name of the tournament
TYPE	VARCHAR(20)		'ODI' or 'T20' or 'TEST'
YEAR	INT		Year of tournament
LOCATION	VARCHAR(20)		Tournament played in

Table 3.3 FIXTURES

COLUMN NAME	DATATYPE & SIZE	CONSTRAINTS	DESCRIPTION
F_ID	VARCHAR(20)		Fixture ID
P_ID	INT	REFERENCES P_ID FROM PLAYER	Player ID
P_NAME	VARCHAR(20)	REFERENCES P_NAME FROM PLAYER	Player name
T_ID	VARCHAR(10)	REFERENCES T_ID FROM TOURNAMENT	Tournament ID
RUNS	INT		No of runsby the player
WICKETS	INT		No of wickets by the player

Table 3.4 RANK

COLUMN NAME	DATATYPE & SIZE	CONSTRAINTS	DESCRIPTION
P_ID	INT	PRIMARY KEY	Player ID
P_NAME	VARCHAR (50)		Player Name
ODI	INT		Rank in ODI
T 20	INT		Rank in T 20
TEST	INT		Rank in TEST

Table 3.5 STATISTICS

COLUMN NAME	DATATYPE & SIZE	CONSTRAINTS	DESCRIPTION
P_ID	INT	PRIMARY KEY	Player ID
P_NAME	VARCHAR(20)	REFERENCES P _NAME FROM PLAYER	Player Name
MATCHES	INT		Total Matches
RUNS	INT		Total Runs
WICKETS	INT		Total Wickets
HUNDREDS	INT		No. of Centuries
FIFTIES	INT		No. of Half Centuries
HIGH SCORE	INT		Highest score scored
STRIKE RATE	VARCHAR(20)		Strike rate of the Player
AVERAGE	VARCHAR(20)		Average of the Player

Chapter 4

SYSTEM DESIGN

3.1 ER DIAGRAM : It is a Entity-Relationship model composed of entity types and specifies relationships that can exist between instances of those entity types.
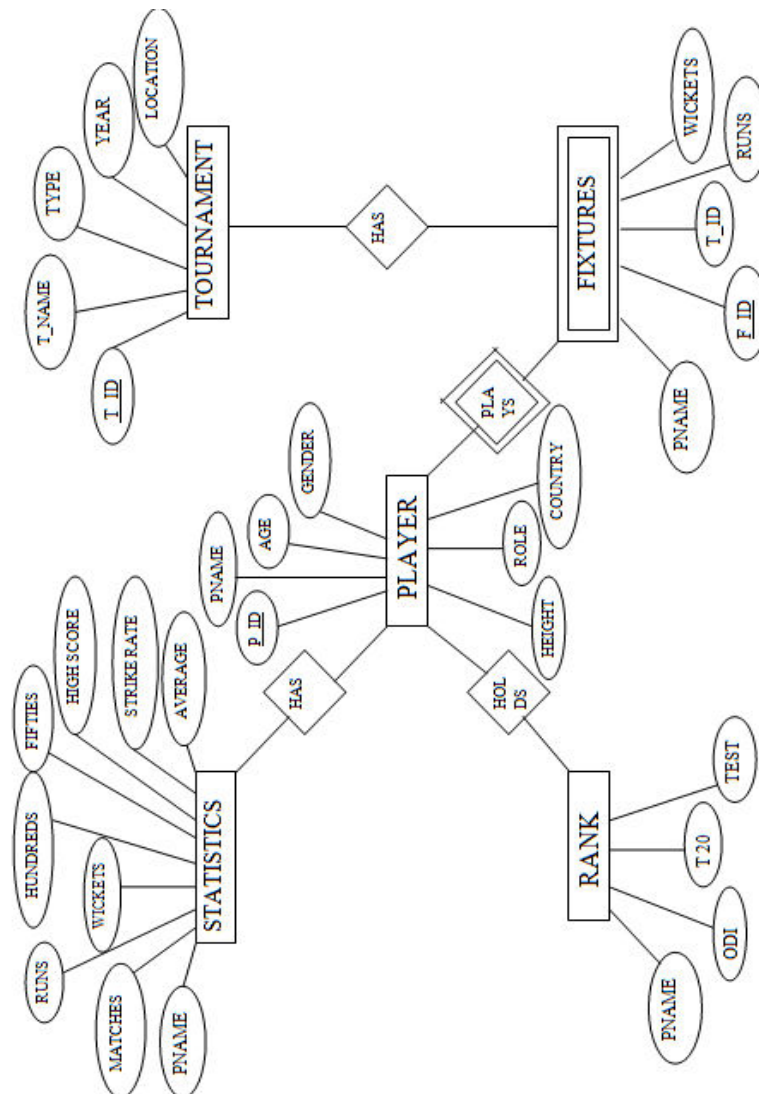
Fig 3.1: ER diagram for Cricket Player Statistics Database

3.2 SCHEMA DIAGRAM : A representation of logical configurations of all or part of a relational database.

PLAYER

P_ID	P_NAME	GENDER	AGE	HEIGHT	ROLE	PLAYED FOR

TOURNAMENT

T_ID	T_NAME	TYPE	YEAR	LOCATION

FIXTURES

F_ID	P_ID	T_ID	RUNS	WICKETS

RANK

P_ID	ODI	T20	TEST

STATISTICS

P_ID	MATCHES	RUNS	WICKETS	HUNDREDS	FIFTIES	HIGH	STRIKE	AVERAGE
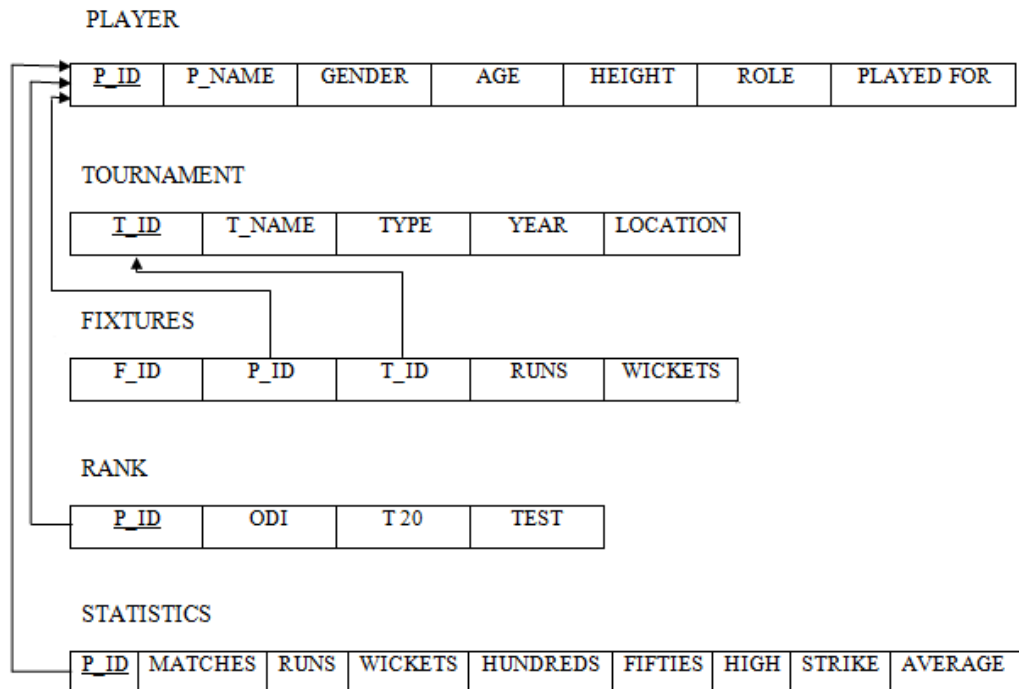
Fig 3. 1:Schema diagram for Cricket Player Statistics Database

NORMALIZATION FORMS

FIRST NORMAL FORM (1NF) : As per First Normal Form, no two Rows of data must contain repeating group of information i.e. each set of columns must have a unique value, such that multiple columns cannot be used to fetch the same row. Each table should be organized into rows, and each row should have a primary key that distinguishes it as unique.

SECOND NORMAL FORM (2NF) : As per the Second Normal Form there must not be any partial dependency of any column on primary key. It means that for a table that has concatenated primary key, each column in the table that is not part of the primary key must depend upon the entire concatenated key for its existence. If any column depends only on one part of the concatenated key, then the table fails Second normal form.

THIRD NORMAL FORM (3NF) : Third Normal form applies that every non-prime attribute of table must be dependent on primary key, or we can say that, there should not be the case that a non-prime attribute is determined by another non-prime attribute. So this *transitive functional dependency* should be removed from the table and also the table must be in Second Normal form

Above tables follows all three Normalization Forms.

Chapter 5

IMPLEMENTATION

Following code is used to establish connection with the back-end Database :

```java
import java.sql.*;
import javax.swing.JOptionPane;
public class jconnect
{
 Connection conn=null;
public static Connection connectdb()
{
 try{
 Class.forName("com.mysql.jdbc.Driver");

Connectionconn=DriverManager.getConnection("jdbc:mysql://127.0.0.1/demo","root","QWERTY");
        JOptionPane.showMessageDialog(null,"connected to database");
        return conn;    }
   catch(Exception e)
   {
          JOptionPane.showMessageDialog(null, e);
        return null;
   }
}
   public static void main(String args[]) throws IOException{
 }}
```
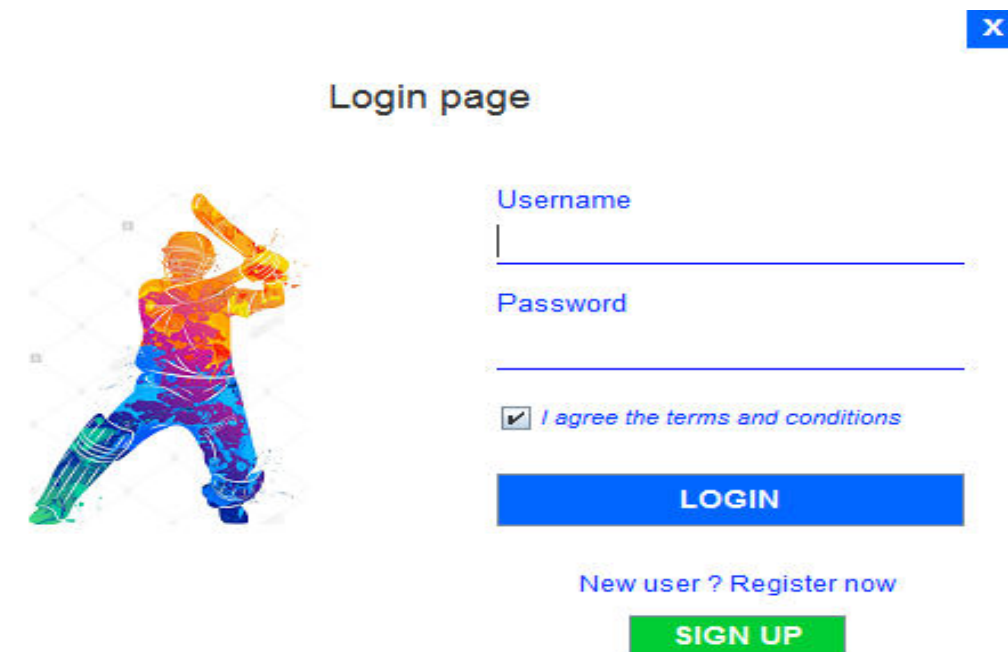
Chapter 6
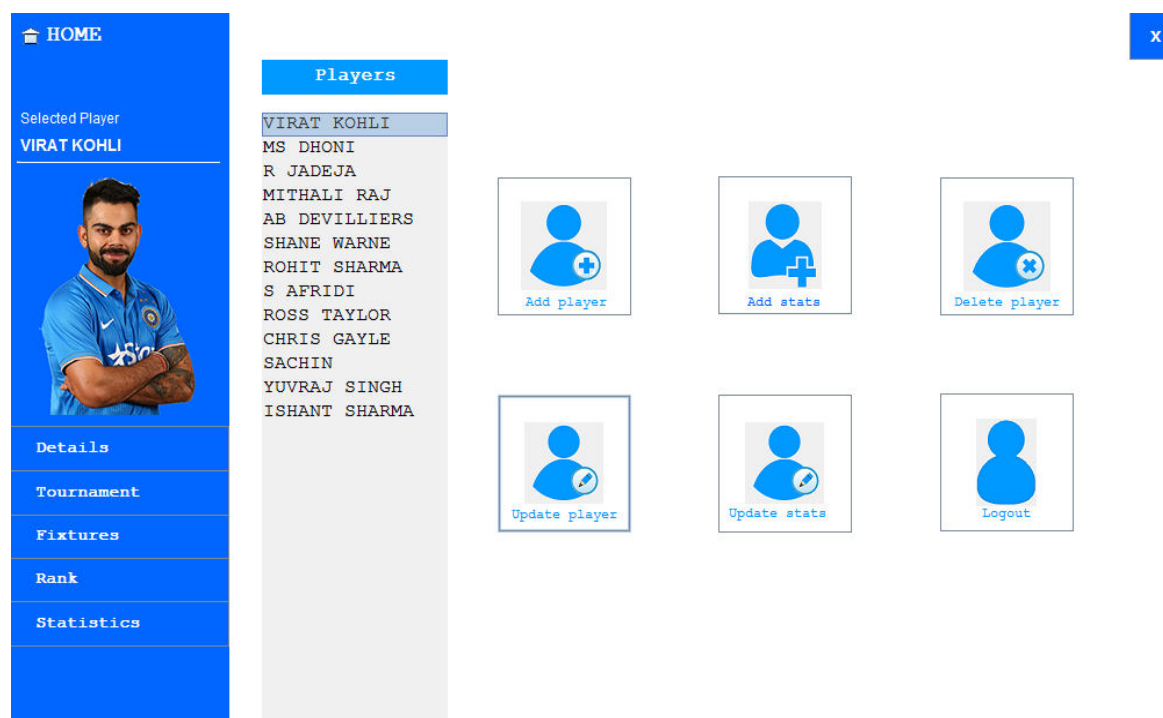
SCREENSHOTS

Fig 6.1 LOGIN

Fig 6.2 HOME

Fig 6.3 ADD NEW PLAYER

CONCLUSION

A player's ability to get off strike in one-day cricket is crucial to a flowing team innings, yet scoring-shot percentage is never spoken about. The importance of bowling balls that ask a question of the batsman's length footwork is drilled in at team meetings, but never given a full statistical evaluation

Besides observing the Laws, cricketers must respect the "Spirit of the Game" and the Preamble to the Laws, first published in the 2000 code, opens with this statement: "Cricket is a game that owes much of its unique appeal to the fact that it should be played not only within its Laws but also within the Spirit of the Game".

The onus for ensuring that a team complies is placed firmly on the captain who may be required by the umpires to "take action" against any player on his team whose behaviour is unacceptable and may bring the sport into disrepute. The umpires are the sole judges of fair and unfair play. They are required to intervene if players are inter alia wasting time, damaging the pitch, tampering with the ball or showing disrespect to other players or to the umpires themselves.

Nowadays records are also maintained for List A and Twenty20 limited over matches. These matches are normally limited over games played domestically at the national level by leading Test nations. Since one-day internationals are a form of List A limited over matches, a player's List A statistics will include their ODI match statistics – but not vice versa.

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ABSTRACT

A database is an organized collection of data. A database-management system (DBMS) is a computer software application that helps in maintaining administrative information and specialized data.

One such database application is **Cricket Player Statistics Database**, an efficient way of maintaining the statistics of Players

The system will be implemented using Eclipse, a software development platform written in java, an open source cross-platform web server solution stack package.

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I wish to thank the faculty of Computer Science and Engineering department whose suggestions have enabled me to surpass many of the seemingly impossible hurdles.

Thank you.

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