

INDIAN OLYMPIC MEDALS MANAGEMENT SYSTEM

Report Submitted by –

NAME :- Afaque Zain

ROLL NO. :- 20501358

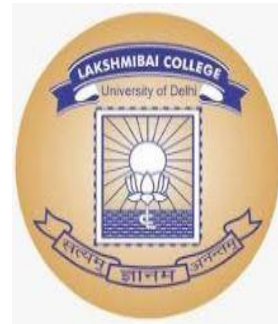
COURSE :- BA. PROGRAMME

**SUBJECT :- DATABASE MANAGEMENT
SYSTEM**

SEMESTER :- IIND

Under Guidance of –

Dr. Yaduvanshi Ankit Kumar



Department of Computer Science

Faculty of Computer Science

Lakshmibai College (Delhi University)

Ashok Vihar , New Delhi, India

Declaration

This DBMS project entitled “Indian Olympic Medals Management System” that is being submitted to the Department of Computer Science, Lakshmibai College (Delhi University), New Delhi -110052 for partial fulfillment of the semester II BA. Program (Computer Science) contains the project work carried out by me under the supervision of **Dr. Yaduvanshi Ankit Kumar**.

This project work presented in this report has not been submitted to any other University or Institution for any degree or diploma.

Afaque Zain

This is to certify that the above statement made by the candidate is correct to the best of my knowledge.

Supervisor

Dr. Yaduvanshi Ankit kumar

Department of Computer Science

Delhi University

New Delhi, India

© Lakshmibai college (Delhi University) , 2016

All Right Reserved.

ACKNOWLEDGEMENT

First and foremost I would like to express my sincere gratitude to my supervisor Dr. Yaduvanshi Ankit Kumar for his excellent guidance, motivation, patience and providing me with an excellent atmosphere for doing the project. He let me experience this project and deal with the practical issues beyond the textbooks, patiently corrected my mistakes and helped me to develop my background in deep learning.

I take this opportunity to thank all faculty members of faculty of Computer Science for their guidance.

I am grateful to all my friends, roommates and class fellows for all their moral and academic support throughout our study directly or indirectly.

I would especially like to thank my parents and sisters. They were supporting and encouraging me with their best wishes. They are always there for cheering me up and stood by me through the thick and thin. It wouldn't have been possible without their patience and support.

Contents

1	Indian Olympic Medals Management System	
1.1	Introduction.....	01
1.2	What is Database.....	01-02
1.2.1	Types.....	02
1.2.2	Components.....	02-04
1.3	Database Management System.....	04
1.4	Importance of DBMS.....	04
1.5	Advantages & Disadvantages	04
1.5.1	Advantages.....	04
1.5.2	Disadvantages.....	05
2	Tools & Technologies	06
2.1	MYSQL.....	06
2.1.1	MySQL Command Line Client.....	06-07
2.1.2	MySQL Workbench.....	07-08
2.2	Microsoft word.....	08-09
3	Implementation of Database	10
3.1	Introduction.....	10
3.2	India at Olympics	10
3.2.1	Medals won by India.....	10-11
3.2.2	First Indian at Olympics.....	11
3.3	System Design.....	12
3.3.1	Table Structure.....	13-14
3.3.2	Table Description.....	14-16
3.4	Schema of the Database.....	16-18
3.5	ER- Diagram of the Database.....	18-20
4	Outputs & Queries	21
4.1	Outputs.....	21-30
4.2	Queries for retrieving data.....	30-38
5	Conclusion	39
5.1	Conclusion.....	39
5.2	Future Work.....	39-40
5.3	References	40

List of Figures

1.1 Overview of Database.....	01
1.2 Database Components.....	03
2.1 MySQL 8.0 Command Line Client.....	07
2.2 MySQL Workbench 8.0 CE.....	08
2.3 MS Word 2010.....	09
3.1 Command for creating tables.....	14
3.2 Command for describing tables.....	14-15
3.7 Insertion.....	16
3.8 Database Schema.....	17
3.9 ER Diagram	19
4.1 Database.....	22
4.2 table's view.....	23-31
4.5 Queries.....	31-38

Abstract

This report presents the issues of the database project entitled “Indian Olympic Medals Management System”. It gets all the results gold, silver and bronze medals of the Olympic Games by India from 1900 up till now. It will get us descriptions of all the Olympic sports, list of medals by medalists over the years and during a particular Olympic Event. This database helps us to store information of all Indian Olympic medalists and their medals. Its aim to formally describe the phase of the design and development of the database. These phases are described with the help of entity relationship diagram (ERD), schema and some screenshots of the coding and implantation section. In this project, will shed light on major patterns of Olympic history of India. How many medalist, sports and medals are there? Where Olympics were held? Who wins medal at what age? What are the characteristic of the medalists? In this project, I explore the text-base queries to generate the response.

This project can be updated in near future as Olympic is going on.

Chapter 1

Indian Olympic Medals Management System

1.1 Introduction

The “Indian Olympic Medals Management System” project is a model of Olympic winners of India. This project shows all the Medalists and Medals won by India since 1900. This database enables us to present accurate medals standing in relation to the number of medals obtained by each athlete, the medals at a particular Olympic Games, the all-time medal standings in a specific event etc.

In this, I am going to discuss that how many medals India has won in Olympic Games and by whom.

India’s maiden appearance at the Olympics came in 1900 and since then the country has won 28 medals till the 2016 Rio Olympics.

1.2 What Is Database?

Database is a collection of related data. By data we meant known facts that can be recorded and that have implicit meaning.

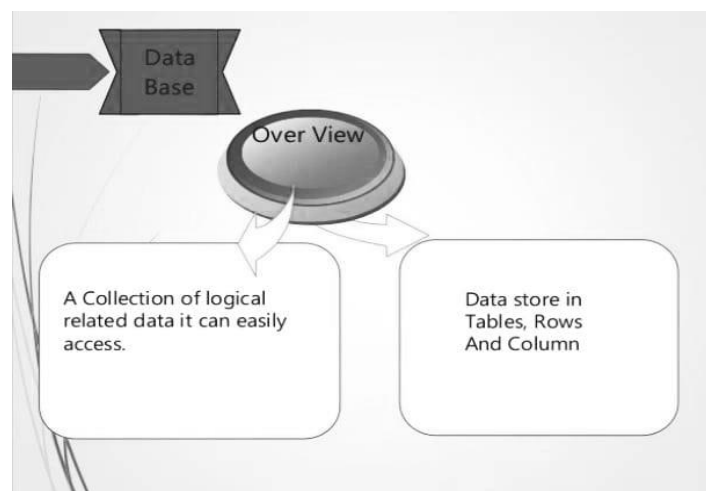


Figure 1.1: Overview of database.

Nowadays, Data is typically stored in mobile phones which have their own simple database software. This data can also be recorded in an indexed address, books or stored on a hard drive using a personal computer and software such as Microsoft Access or Excel.

Let us discuss a database example:

Let's consider Facebook. It needs to store, manipulate, and present data related to members, their friends, member activities, messages, advertisements and many more. We can have a countless number of examples for the usage of databases.

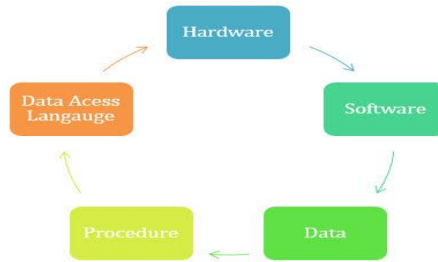
1.2.1 Types of Databases

Here are some popular types of Databases:-

- Distributed Databases
- Relational Databases
- Object-Oriented Databases
- Centralized Databases
- Open Source Databases
- Cloud Databases
- NoSQL Databases
- Graph Databases
- OLTP Databases
- Personal Databases
- Multimodal Databases
- JSON/Document Databases

1.2.2 Components of Database

Five main components of database are hardware, Software, data, procedure and Data Access Language.



1.2: Database Components

There are five main components of a database:

- Hardware
- Software
- Data
- Procedure
- Database Access Language

- **Hardware:**

The hardware consists of physical, electronical devices computers, I/O devices, storage devices etc.

- **Software:**

This is a set of programs used to manage and control the overall database.

- **Data:**

Data is a raw and unorganized fact that is required to be processed to make it meaningful.

- **Procedure:**

Procedure is a set of instructions and rules that help us to use the DBMS. It is designing and running the database using documented methods, which allows us to guide the users who operate and manage it.

- **Database Access Language:**

Database Access Language is used to access the data to and from the database. The user writes some specific commands in a database access language and submits these to the database.

1.3 Database Management System

A database management system (DBMS) is a system software that allows us to define, manipulate and share databases among various users and applications.

1.4 Importance of DBMS

- It helps in making data management more efficient and effective.
- It stores, organizes and manages a large amount of information within a single software application.
- Use of this system increases efficiency of business operations and reduces overall costs.

1.5 Advantages and Disadvantages of DBMS

As we all know that everything comes with some advantages and disadvantages. In the same way, the Database Management System has its advantages and disadvantages.

1.5.1 Advantages:

- ❖ While using DBMS, the data is independent.
- ❖ It removes duplication of data.
- ❖ Easy to insert, update and delete data in DBMS.
- ❖ When we use DBMS, the files integrated each other.
- ❖ We can secure our data by using DBMS.
- ❖ A DBMS schedules concurrent access to the data in such a manner that only one user can access the same data at a time.
- ❖ It reduces Application Development Time.
- ❖ It does Data Abstraction.

1.5.2 Disadvantages:

- ❖ DBMS can't perform sophisticated calculations.
- ❖ Uses of same program at a time by many users sometimes lead to the loss of some data.
- ❖ Data Dependency.
- ❖ Duplication of Data.
- ❖ Cost of software and hardware of a DBMS is quite high which increases the budget of a particular organization.
- ❖ Management complexity.

Chapter 2

Tools and Technologies

For developing any kind of project we need to have some tools and technologies by which we can develop our project and make a report.

Here in this project, I have used some tools and software for developing my project. These are following:

- MySQL
- Microsoft word

2.1 MYSQL

MYSQL is one of the most common technologies used by me in this project. It is an open source relational database management system that runs as a server providing multi-user access to a number of database. It is named after co-founder Michael Wideniu's daughter "My". The SQL phrase stands for "Structured Query Language".

○ Here I have used 8.0 version of MySQL

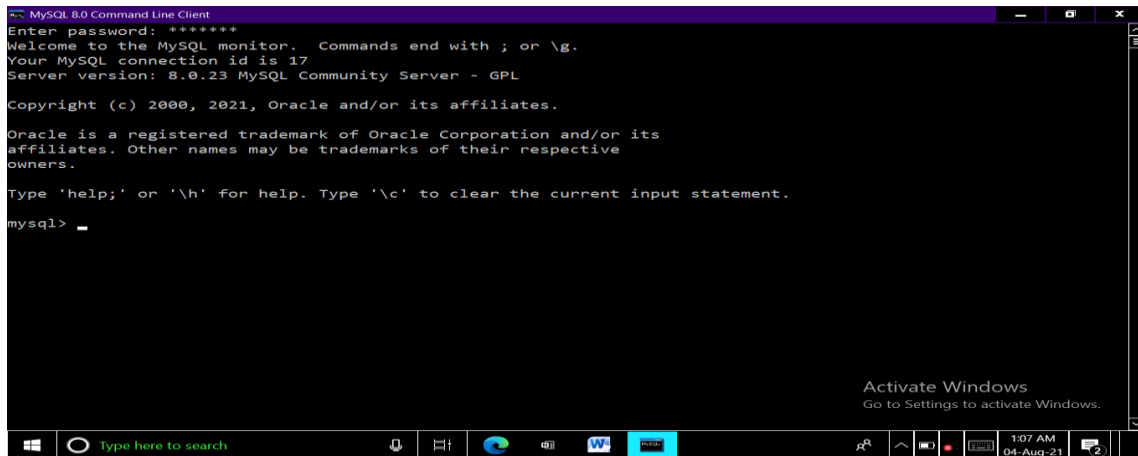
With a low cost, flexible uses and relative simplicity MYSQL has become one of the most popular databases in the world, and almost my DBMS project uses MYSQL.

The program is a relational database management system that has no graphical tools to administer, making it easier to access and implement. MySQL is also used by Facebook, Google, Word press, Twitter and other popular websites.

2.1.1 MySQL Command Line Client

MySQL Command Line Client is a simple SQL Shell with input line editing capabilities. It supports interactive and non-interactive use.

Here, in this project I have used **MySQL 8.0 Command line Client** for creating tables and databases. Its server version is 8.0.23.

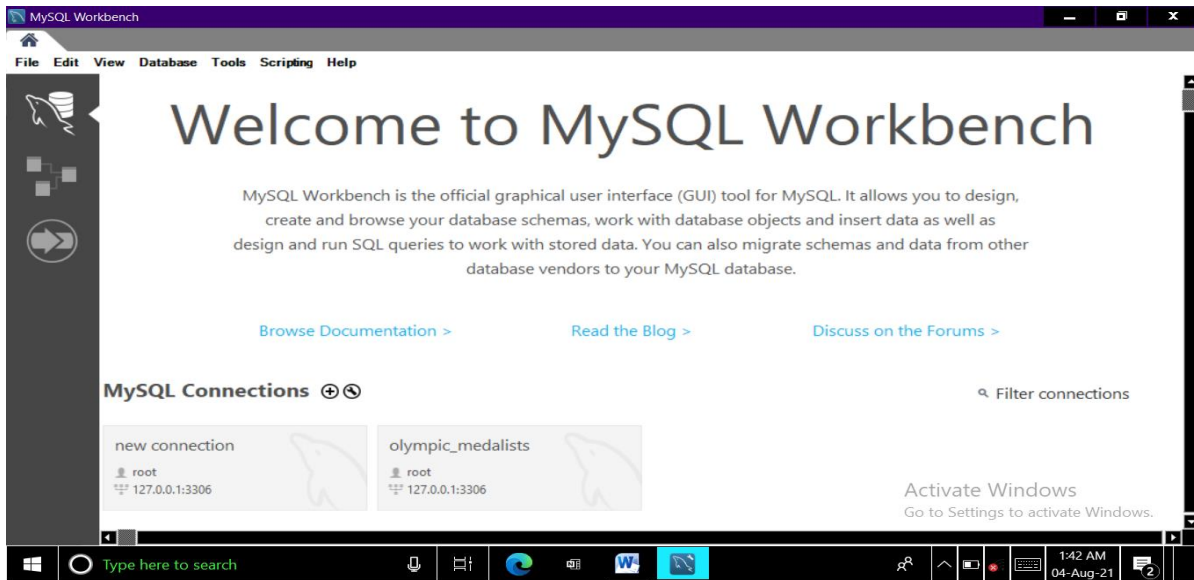
A screenshot of a Windows terminal window titled "MySQL 8.0 Command Line Client". The window has a black background with white text. The text inside the terminal reads: "Enter password: *****", "Welcome to the MySQL monitor. Commands end with ; or \g.", "Your MySQL connection id is 17", "Server version: 8.0.23 MySQL Community Server - GPL", "Copyright (c) 2000, 2021, Oracle and/or its affiliates.", "Oracle is a registered trademark of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners.", "Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.", and "mysql> _". At the bottom of the terminal, there is a watermark that says "Activate Windows Go to Settings to activate Windows." The Windows taskbar is visible at the bottom of the screen, showing the Start button, a search bar, and several application icons. The system clock in the bottom right corner shows "1:07 AM 04-Aug-21".

2.1: MySQL 8.0 command Line Client homepage

2.1.2 MySQL Workbench

MySQL Workbench is a visual database design tool that integrates SQL development, Administration, database design, creation and maintenance into a single integrated development environment for the MySQL database system.

Here, in this project I have used **MySQL Workbench 8.0 CE** for developing the schemas of the database.



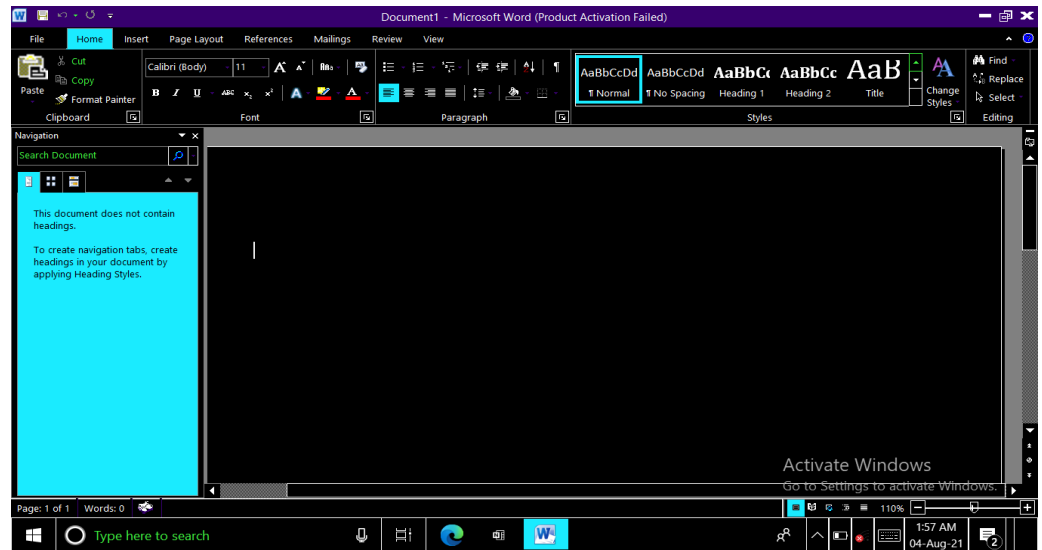
2.2: MySQL Workbench 8.0 CE homepage

2.2 Microsoft Word

Microsoft word is a component of the Microsoft Office suite of productivity software, but can also be purchased as a stand-alone product. It is often called simply word or MS Word.

It is a word processor that allows us to create various types of documents such as letters, papers, flyers and faxes with the finest document formatting tools. It is a widely used commercial word processor designed by Microsoft.

Here, in this project I have used **Microsoft Word 2010** for writing the report and making this file.



2.3: MS Word 2010 homepage

Chapter 3

Implementation

3.1 Introduction

An important aspect of system design is the design of data storage structure. To being with a logical model of data structure is developed first. A database is a container object which contains tables, queries, reports and data validation policies enforcement rules or constraints etc.

A logical data often represented as a records are kept in different tables after reducing anomalies and redundancies. The goodness of database design lies in the table structure and its relationship.

This software project maintains a database named “Indian Olympic Medals Management System” contains all the information regarding all the medalist of Indian who plays the different games at different event and won different types of medals.

3.2 India at Olympics

India has been participating in the Olympics since 1900. It has shown some magnificent performance in Hockey at the Olympics.

The country was represented by Norman Pritchard, an Anglo Indian who was holidaying in Paris during that time. He bagged two silver medals in 200m dash and 200m hurdles .Then after a gap of India again participated with two athletes in 1920 Antwerp Olympics and with eight members in 1924 Paris Olympics. But, the more organized, official representation by India was made in 1928 Amsterdam, with the formation of Indian Olympic Association in 1927.

3.2.1 Medals Won by India

India has won 29 medals at the Olympics since the 1900 edition. A two-medal haul in its debut kick-started India’s campaign at the Olympics. It has since gone on to win 29 medals across 24 Olympic Games including gold, silver and bronze.

India bagged six gold medals in Hockey from 1928 to 1956 an achievement which has yet to be beaten. They won the gold medal at the 1964 and 1980 Olympics as well. In all India has won eight gold medals in Hockey.

However, despite this wonderful show in hockey, India has been unable to garner any notable success in individual sports. When a country that boasts of a population of more than a billion is unable to secure even one gold medal in individual sports at the Olympics is a matter of concern.

Note: India has won a total of 29 medals since 1900

- Eleven from hockey
- Five from wrestling
- Four from shooting
- Two from badminton
- Two from boxing
- Two from weightlifting
- One from tennis
- Two from athletics

3.2.2 First Indian at Olympics

Here are some facts which tell that who and what was the first from India at Olympics:-

- Norman Pritchard was the first Indian to participate in the Olympics.
- Karnam Malleswari was the first Indian woman to win an Olympic medal.
- Abhinav Bindra is the first Indian to win an individual gold medal at the Olympics.
- Leander Paes is the first and only Indian to compete in seven Olympics Games.
- In 2016, India's largest ever delegation sent to the Olympics and that was 117.
- Saina Nehwal is India's first ever badminton medalist at the Olympics.

3.3 System Design

As we can see a lot of medalists have different kind of medals that should be memorize by us and that serially management is must.

This software project maintains a database named “Indian Olympic Medals Management System” which contains the following tables:

Table Design

The database of **Indian Olympic Medals Management System** contains five tables in database **Olympic medals**. The tables are normalized to minimize the redundancies of data. Most of the tables are designed to store master records.

The tables and their structure are given below:

DBMS: MySQL

Host: local host

User: root

Password: *****

Database: Olympic_medals

❖ Entities and Arrtibutes

- **Entity:** Athlete
- **Attributes:** (Athlete_id,Athlete_name,Age,Gender,Game_id)

- **Entity:** Event
- **Attributes:** (Event_id,Event_name,Event_date)

- **Entity:** Games
- **Attributes:** (Game_type,Game_id,Place,Date)

- **Entity:** Medalist
- **Attributes:** (Srno,Medalist_name,Medalist_id,Medal_id,Game_type,Event_id,Gender)

- **Entity:** Medals
- **Attributes:** (Medal_id,Medal_type)

3.3.1 Table Structure

For developing a database we need to create tables .a table is a collection of related data held in a table format within a database.

It consists of **column** and **Rows** .A table has a specific number of columns, but can have any number of rows.

- **Rows** are known as records that contain fields in which objects are placed alongside or horizontally. It is also known as **tuple**.
- **Columns** are called fields which contain the collection of characters. It is a vertical division of object based on category.

MySQL Commands

ATHLETE

- Create table athlete(Athlete_id varchar(100),Athlete_name varchar(100),Age varchar(25),Gender varchar(25),Game_id varchar(25));

EVENT

- Create table event(Event_id varchar(100),Event_name varchar(100),Event_date date));

GAMES

- Create table games(Game_type varchar(100),Game_id varchar(25),Place varchar(100),Date date));

MEDALIST

- Create table medalist(Srno int,Medalist_name varchar(100),Medalist_id varchar(25),Medal_id int,Game_type varchar(100),Event_id varchar(100),Gender varchar(25));

MEDALS

- Create table medals(Medal_id int,Medal_type varchar(25));

```
mysql> CREATE TABLE EVENT(EVENT_ID VARCHAR(100) PRIMARY KEY,EVENT_NAME VARCHAR(100),EVENT_DATE DATE NOT NULL,FO
REIGN KEY(EVENT_DATE) REFERENCES GAMES(DATE));
Query OK, 0 rows affected (1.57 sec)

mysql> _
```

3.1: Command for creating table (Event)

3.3.2 Table Description

As the name suggest, DESCRIBE is used to describe something. Since in database we have tables, that's why we use DESCRIBE or DESC (both are same) command to describe the structure of a table.

```
mysql> desc athlete;
+-----+-----+-----+-----+-----+-----+
| Field      | Type          | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| ATHLETE_ID | varchar(100)  | NO   | PRI | NULL    |       |
| ATHLETE_NAME | varchar(100)  | YES  |     | NULL    |       |
| AGE        | varchar(25)   | YES  |     | NULL    |       |
| GENDER     | varchar(25)   | YES  |     | NULL    |       |
| GAME_ID    | varchar(25)   | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
5 rows in set (0.11 sec)
```

3.2: Command for describing the table (Athlete)

```
mysql> desc event;
```

Field	Type	Null	Key	Default	Extra
EVENT_ID	varchar(100)	NO	PRI	NULL	
EVENT_NAME	varchar(100)	YES		NULL	
EVENT_DATE	date	NO	MUL	NULL	

```
3 rows in set (0.05 sec)
```

3.3: Command for describing the table (Event)

```
mysql> desc games;
```

Field	Type	Null	Key	Default	Extra
GAME_TYPE	varchar(100)	NO		NULL	
GAME_ID	varchar(25)	NO		NULL	
PLACE	varchar(100)	NO		NULL	
DATE	date	NO	PRI	NULL	

```
4 rows in set (0.01 sec)
```

3.4: Command for describing the table (games)

```
mysql> desc medalist;
```

Field	Type	Null	Key	Default	Extra
SRNO	int	NO	PRI	NULL	
MEDALIST_NAME	varchar(100)	NO		NULL	
MEDALIST_ID	varchar(25)	NO	MUL	NULL	
MEDAL_ID	int	NO	MUL	NULL	
GAME_TYPE	varchar(100)	YES		NULL	
EVENT_ID	varchar(100)	NO	MUL	NULL	
GENDER	varchar(25)	NO		NULL	

```
7 rows in set (0.01 sec)
```

3.5: Command for describing the table (Medalist)

```
mysql> desc medals;
```

Field	Type	Null	Key	Default	Extra
MEDAL_ID	int	NO	PRI	NULL	
MEDAL_NAME	varchar(25)	YES		NULL	

```
2 rows in set (0.01 sec)
```

```
mysql> _
```

3.6: Command for describing the table (Medals)

Here, above on using DESC or DESCRIBE command we are able to see the structure of a table which include **name** of the column, **data-type** of the column and **nullability** which means, that column can contain null values or not.

All these features of table are describes at the time of **creation** of table.

Insertion

THE INSERT INTO statement of MySQL is used to insert a new row in a table. There are two ways of using INSERT INTO statement for inserting rows:

1. **Only values:** First method is to specify only the value of data to inserted without the column names.

INSERT INTO table_name VALUES (value1, value2,...);

2. **Column names and values both:** In the second method we will specify both the columns which we want to fill and their corresponding values.

INSERT INTO table_name (column1, column2,...);

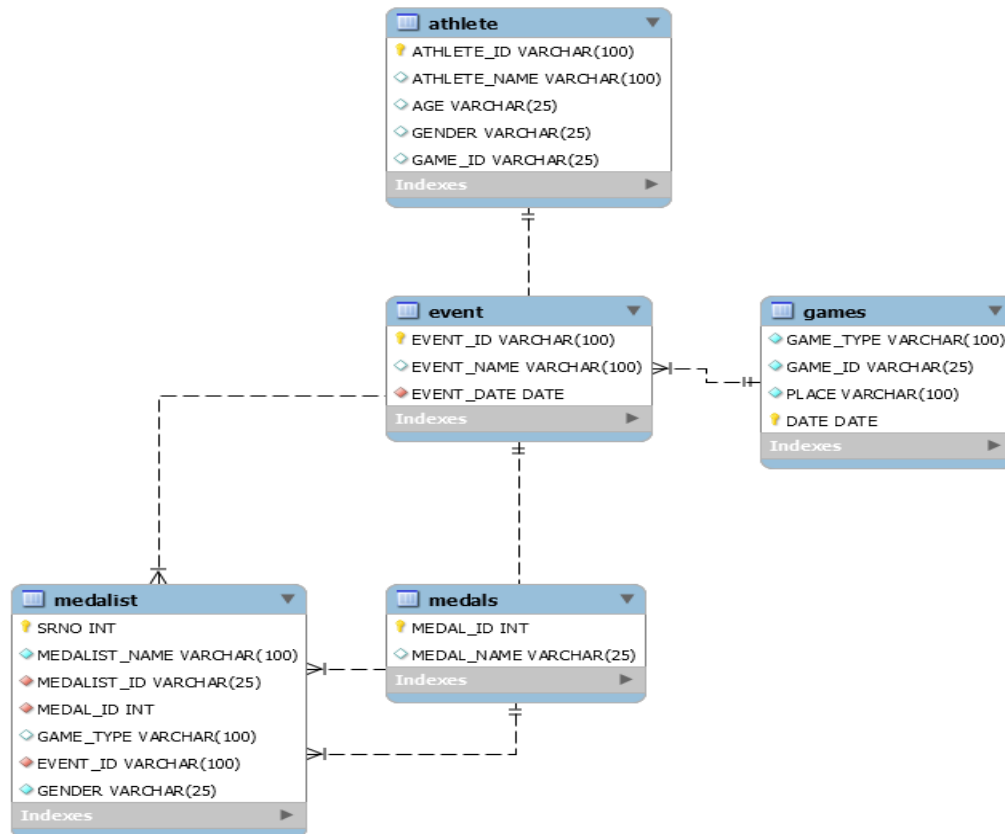
```
mysql> INSERT INTO ATHLETE(ATHLETE_ID,ATHLETE_NAME,AGE,GENDER) VALUES('PVS15','PV.SINDHU','25YRS','FEMALE'),('SAK16','SAKSHI MALIK','24YRS','FEMALE');
Query OK, 2 rows affected (0.11 sec)
Records: 2 Duplicates: 0 Warnings: 0
```

3.7: Insertion

3.4 Schema of the Database

The **database schema** is its structure described in a formal language supported by the Database Management System (DBMS).The term “schema” refers to the organization of data as a blueprint of how the database is constructed.

Here, in this project I have developed Indian Olympic Medals Management System schema with the help of MySQL workbench. It helped me to visualize how my database should be structured.



3.8: Database schema

In this schema, there are some keys that define the schema's structure and one can easily identify the table, these are:

- **Key:** It plays an important role in the relational database. It uniquely identifies any record or row of data from the table. It has many types:
 - **Super Key:** It is a set of attributes which can uniquely identify a tuple.
 - **Candidate Key:** It is a minimal set of attributes which can uniquely identify a tuple.
 - **Primary Key:** One of the candidate key chosen by database administrator.
 - **Alternate Key:** The candidate key(s) other than the primary key.
 - **Foreign Key:** It is an attribute or a set of attributes in a relational database table that provides a link between data in two tables.
- **Index:** an index in a database resembles an index at the back of a book.

- **Referential Integrity:** It makes sure that a foreign key value always points to an existing row.
- **Redundancy:** Storing data twice, redundantly to make the system faster.

1.1ER-Diagram of the Database

An Entity Relationship Diagram (ER Diagram) is a diagram based representation which is easy to understand even by the non-technical users.

It describes interrelated things of interest in a specific domain of knowledge. A basic ER Diagram is composed of entity types (which classify the things of interest) and specifies relationships that can exist between entities (instances of those entity types).

It was introduced by **Peter Chen** in 1976.

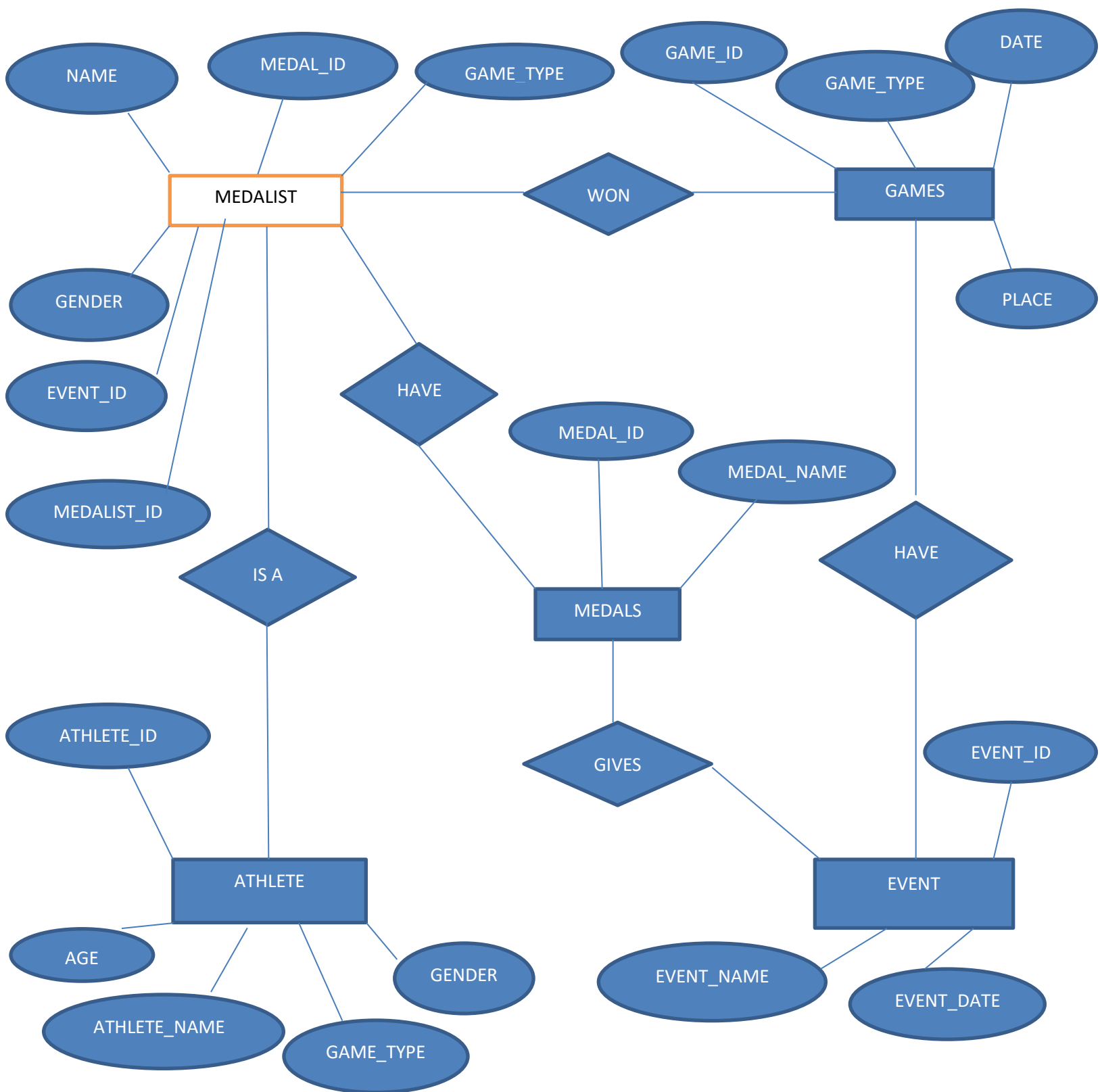
It consist all collection of basic objects (entities) and of relationship among those objects (attributes) which defines their properties.

- **ENTITY:** It is a distinguishable real-world object that exists.
- **ATTRIBUTES:** It describes the elementary features of an entity.

NOTE: In DBMS entities are termed as record and attributes are termed as field.

Every entity is an object, but every object is not an entity.

Here, in this project I have made an ER diagram of my database which made me easily understand for data requirement in my project. It is easily understandable to everyone as it has clearly defined entities and the relation between them.



3.9: ER Diagram for Indian Olympic Medals Management System

- **Description**

- Athlete is a Medalist
- Medalist won Games
- Games have Event
- Event gives Medals
- Medalist have Medals

Chapter 4

Outputs & Queries

4.1 Outputs

After implementing some queries and giving some commands we have some outputs, these are:

I have started to show the outputs from begin:

Firstly, I have used the database for showing the tables within it:

```
mysql> use olympic_medals;
```

Database changed

```
mysql> show tables;
```

```
+-----+
| Tables_in_olympic_medals |
+-----+
| athlete          |
| event            |
| games            |
| medalist         |
| medals           |
+-----+
```

```
2 rows in set (0.22 sec)
```

```
mysql> use olympic_medals;
Database changed
mysql> show tables;
+-----+
| Tables_in_olympic_medals |
+-----+
| athlete                    |
| event                      |
| games                      |
| medalist                   |
| medals                     |
+-----+
5 rows in set (0.22 sec)
```

4.1: database

I have shown below each table and their records one by one by using select query:

The table **athlete** is look like –

```
mysql> select * from athlete;
```

```
+-----+-----+-----+-----+-----+
| ATHLETE_ID | ATHLETE_NAME          | AGE  | GENDER | GAME_ID |
+-----+-----+-----+-----+-----+
| ABH7       | ABHINAV BINDRA        | 27YRS | MALE   | SHO     |
| GAG13      | GAGAN NARANG          | 32YRS | MALE   | SHO     |
| KAR5       | KARNAM MALLESWARI     | 28YRS | FEMALE | WEI     |
| KHA3       | KHASHABA DADASAHEB    | 45YRS | MALE   | WRE     |
| LEA4       | LEANDER PAES          | 30YRS | MALE   | TEN     |
| MAR12      | MARY KOM              | 29YRS | FEMALE | BOX     |
| NAT2       | NATIONAL TEAM         | 50YRS | MALE   | HOC     |
| NOR1       | NORMAN PRITCHARD      | 35YRS | FEMALE | ATH     |
| PVS15      | PV.SINDHU             | 25YRS | FEMALE | BAD     |
| RAJ6       | RAJYAVARDHAN SINGH RATHODE | 28YRS | MALE   | SHO     |
|
```

SAI11	SAINA NEHWAL	27YRS	FEMALE	BAD	
SAK16	SAKSHI MALIK	24YRS	FEMALE	WRE	
SUS9	SUSHIL KUMAR	30YRS	MALE	WRE	
VIJ10	VIJAY KUMAR	29YRS	MALE	SHO	
VIJ8	VIJENDER SINGH	32YRS	MALE	BOX	
YOG14	YOGESHWAR DUTT	35YRS			
MALE	WRE				

+-----+-----+-----+-----+-----+

16 rows in set (0.23 sec)

```
mysql> select * from athlete;
```

ATHLETE_ID	ATHLETE_NAME	AGE	GENDER	GAME_ID
ABH7	ABHINAV BINDRA	27YRS	MALE	SHO
GAG13	GAGAN NARANG	32YRS	MALE	SHO
KAR5	KARNAM MALLESWARI	28YRS	FEMALE	WEI
KHA3	KHASHABA DADASAHEB	45YRS	MALE	WRE
LEA4	LEANDER PAES	30YRS	MALE	TEN
MAR12	MARY KOM	29YRS	FEMALE	BOX
NAT2	NATIONAL TEAM	50YRS	MALE	HOC
NOR1	NORMAN PRITCHARD	35YRS	FEMALE	ATH
PVS15	PV.SINDHU	25YRS	FEMALE	BAD
RAJ6	RAJYAVARDHAN SINGH RATHODE	28YRS	MALE	SHO
SAI11	SAINA NEHWAL	27YRS	FEMALE	BAD
SAK16	SAKSHI MALIK	24YRS	FEMALE	WRE
SUS9	SUSHIL KUMAR	30YRS	MALE	WRE
VIJ10	VIJAY KUMAR	29YRS	MALE	SHO
VIJ8	VIJENDER SINGH	32YRS	MALE	BOX
YOG14	YOGESHWAR DUTT	35YRS		
MALE	WRE			

16 rows in set (0.23 sec)

4.2: Athlete table

The table **event** is look like –

```
mysql> select * from event;
```

EVENT_ID	EVENT_NAME	EVENT_DATE
----------	------------	------------

1A	MENS 200 METRES	1900-07-22
1B	MENS 200 METRES HURDLES	1900-07-16
1C	MENS COMPETITION	1928-05-26
1D	MENS COMPETITION	1932-08-11
1E	MENS COMPETITION	1936-08-15
1F	MENS COMPETITION	1948-08-12
1G	MENS COMPETITION	1952-07-24
1H	MENS FREE STYLE BANTAMWEIGHT	1952-07-23
1I	MENS COMPETITION	1956-12-06
1J	MENS COMPETITION	1960-09-09
1K	MENS COMPETITION	1964-10-23
1L	MENS COMPETITION	1968-10-26
1M	MENS COMPETITION	1972-09-10
1N	MENS COMPETITION	1980-07-29
1O	MENS SINGLE	1996-08-03
1P	WOMENS 69KG	2000-09-19
1Q	MENS DOUBLE TRAP	2004-08-17
1R	MENS 10m AIR RIFLE	2008-08-11
1S	MENS MIDDLEWEIGHT	2008-08-20
1T	MENS FREE STYLE 66KG	2008-08-21
1U	WOMENS SINGLES	2012-08-04
1V	MENS 25 RAPID FIRE PISTOL	2012-08-03
1W	MENS FREE STYLE 66KG	2008-08-21

1X	WOMENS FLYWEIGHT	2021-08-08
1Y	MENS 10m AIR RIFLE	2021-07-30
1Z	MENS FREESTYLE 60KG	2016-08-17
2A	WOMENS SINGLES	2016-08-19
2B	WOMENS FREESTYLE 58KG	2016-08-17

+-----+-----+-----+

28 rows in set (0.11 sec)

The table **games** is look like –

mysql> select * from games;

+-----+-----+-----+
GAME_TYPE GAME_ID PLACE DATE
+-----+-----+-----+
ATHLETICS ATH PARIS 1900-07-16
ATHLETICS ATH PARIS 1900-07-22
FIELD HOCKEY HOC AMSTERDAM 1928-05-26
FIELD HOCKEY HOC LOC ANGLES 1932-08-11
FIELD HOCKEY HOC BERLIN 1936-08-15
FIELD HOCKEY HOC LONDON 1948-08-12
WRESTLING WRE HELSINKI 1952-07-23
FIELD HOCKEY HOC HELSINKI 1952-07-24
FIELD HOCKEY HOC MELBOURNE 1956-12-06
FIELD HOCKEY HOC ROME 1960-09-09
FIELD HOCKEY HOC TOKYO 1964-10-23

FIELD HOCKEY HOC MEXICO CITY 1968-10-26
FIELD HOCKEY HOC MUNICH 1972-09-10
FIELD HOCKEY HOC MOSCOW 1980-07-29
TENNIS TEN ATLANTA 1996-08-03
WEIGHTLIFTING WEI SYDNEY 2000-09-19
SHOOTING SHO ATHENS 2004-08-17
SHOOTING SHO BEIJING 2008-08-11
BOXING BOX BEIJING 2008-08-20
WRESTLING WRE BEIJING 2008-08-21
SHOOTING SHO LONDON 2012-08-03
BADMINTON BAD LONDON 2012-08-04
WRESTLING WRE LONDON 2012-08-11
WRESTLING WRE LONDON 2012-08-12
WRESTLING WRE RIO DE JENERIO 2016-08-17
BADMINTON BAD RIO DE JENERIO 2016-08-19
SHOOTING SHO LONDON 2021-07-30
BOXING BOX LONDON 2021-08-08

+-----+-----+-----+-----+

28 rows in set (0.04 sec)

The table **medalist** is look like –

mysql> select * from medalist;

+-----+-----+-----+-----+-----+-----+

SRNO	MEDALIST_NAME	MEDALIST_ID	MEDAL_ID	GAME_TYPE	EVENT_ID	GENDER
------	---------------	-------------	----------	-----------	----------	--------

1	NORMAN PRITCHARD	NOR1		2	ATHLETICS	1A
---	------------------	------	--	---	-----------	----

	FEMALE					
--	--------	--	--	--	--	--

2	NORMAN PRITCHARD	NOR1		2	ATHLETICS	1B
---	------------------	------	--	---	-----------	----

	FEMALE					
--	--------	--	--	--	--	--

3	NATIONAL TEAM	NAT2		1	FIELD HOCKEY	1C
---	---------------	------	--	---	--------------	----

	MALE					
--	------	--	--	--	--	--

4	NATIONAL TEAM	NAT2		1	FIELD HOCKEY	1D
---	---------------	------	--	---	--------------	----

	MALE					
--	------	--	--	--	--	--

5	NATIONAL TEAM	NAT2		1	FIELD HOCKEY	1E
---	---------------	------	--	---	--------------	----

	MALE					
--	------	--	--	--	--	--

6	NATIONAL TEAM	NAT2		1	FIELD HOCKEY	1F
---	---------------	------	--	---	--------------	----

	MALE					
--	------	--	--	--	--	--

7	NATIONAL TEAM	NAT2		1	FIELD HOCKEY	1G
---	---------------	------	--	---	--------------	----

	MALE					
--	------	--	--	--	--	--

8	KHASHABA DADASAHEB	KHA3		3	WRESTLING	1H
---	--------------------	------	--	---	-----------	----

	MALE					
--	------	--	--	--	--	--

9	NATIONAL TEAM	NAT2		1	FIELD HOCKEY	1I
---	---------------	------	--	---	--------------	----

	MALE					
--	------	--	--	--	--	--

10	NATIONAL TEAM	NAT2		2	FIELD HOCKEY	1J
----	---------------	------	--	---	--------------	----

	MALE					
--	------	--	--	--	--	--

11	NATIONAL TEAM	NAT2		1	FIELD HOCKEY	1K
----	---------------	------	--	---	--------------	----

	MALE					
--	------	--	--	--	--	--

12	NATIONAL TEAM	NAT2		3	FIELD HOCKEY	1L
----	---------------	------	--	---	--------------	----

	MALE					
--	------	--	--	--	--	--

13	NATIONAL TEAM	NAT2	3	FIELD HOCKEY	1M	MALE
14	NATIONAL TEAM	NAT2	1	FIELD HOCKEY	1N	MALE
15	LEANDER PAES	LEA4	3	TENNIS	1O	MALE
16	KARNAM MALLESWARI	KAR5	3	WEIGHTLIFTING	1P	FEMALE
17	RAJYAVARDHAN SINGH	RAJ6	2	SHOOTING	1Q	MALE
18	ABHINAV BINDRA	ABH7	1	SHOOTING	1R	MALE
19	VIJENDER SINGH	VIJ8	3	BOXING	1S	MALE
20	SUSHIL KUMAR	SUS9	3	WRESTLING	1T	MALE
21	SAINA NEHWAL	SAI11	3	BADMINTON	1U	FEMALE
22	VIJAY KUMAR	VIJ10	2	SHOOTING	1V	MALE
23	SUSHIL KUMAR	SUS9	2	WRESTLING	1W	MALE
24	MARY KOM	MAR12	3	BOXING	1X	FEMALE
25	GAGAN NARANG	GAG13	3	SHOOTING	1Y	MALE
26	YOGESHWAR DUTT	YOG14	3	WRESTLING	1Z	MALE

```
| 27 | PV.SINDHU          | PVS15    | 2 | BADMINTON | 2A    |
FEMALE |
```

```
| 28 | SAKSHI MALIK        | SAK16     | 3 | WRESTLING | 2B     |
FEMALE |
```

```
+-----+-----+-----+-----+-----+-----+
```

28 rows in set (0.08 sec)

```
mysql> select * from medalist;
```

SRNO	MEDALIST_NAME	MEDALIST_ID	MEDAL_ID	GAME_TYPE	EVENT_ID	GENDER
1	NORMAN PRITCHARD	NOR1	2	ATHLETICS	1A	FEMALE
2	NORMAN PRITCHARD	NOR1	2	ATHLETICS	1B	FEMALE
3	NATIONAL TEAM	NAT2	1	FIELD HOCKEY	1C	MALE
4	NATIONAL TEAM	NAT2	1	FIELD HOCKEY	1D	MALE
5	NATIONAL TEAM	NAT2	1	FIELD HOCKEY	1E	MALE
6	NATIONAL TEAM	NAT2	1	FIELD HOCKEY	1F	MALE
7	NATIONAL TEAM	NAT2	1	FIELD HOCKEY	1G	MALE
8	KHASHABA DADASAHEB	KHA3	3	WRESTLING	1H	MALE
9	NATIONAL TEAM	NAT2	1	FIELD HOCKEY	1I	MALE
10	NATIONAL TEAM	NAT2	2	FIELD HOCKEY	1J	MALE
11	NATIONAL TEAM	NAT2	1	FIELD HOCKEY	1K	MALE
12	NATIONAL TEAM	NAT2	3	FIELD HOCKEY	1L	MALE
13	NATIONAL TEAM	NAT2	3	FIELD HOCKEY	1M	MALE
14	NATIONAL TEAM	NAT2	1	FIELD HOCKEY	1N	MALE
15	LEANDER PAES	LEA4	3	TENNIS	1O	MALE
16	KARNAM MALLESWARI	KAR5	3	WEIGHTLIFTING	1P	FEMALE
17	RAJYAVARDHAN SINGH	RAJ6	2	SHOOTING	1Q	MALE
18	ABHINAV BINDRA	ABH7	1	SHOOTING	1R	MALE
19	VIJENDER SINGH	VIJ8	3	BOXING	1S	MALE
20	SUSHIL KUMAR	SUS9	3	WRESTLING	1T	MALE
21	SAINA NEHWAL	SAI11	3	BADMINTON	1U	FEMALE
22	VIJAY KUMAR	VIJ10	2	SHOOTING	1V	MALE
23	SUSHIL KUMAR	SUS9	2	WRESTLING	1W	MALE

4.3: medalist table

The table **medals** is look like –

```
mysql> select * from medals;
```

```
+-----+-----+
```

```
| MEDAL_ID | MEDAL_NAME |
```

```
+-----+-----+
```

```
| 1 | GOLD |
```

```
| 2 | SILVER |
```

```
|      3 | BRONZE      |
```

```
+-----+-----+
```

2 rows in set (0.11 sec)

```
mysql> select * from medals;
+-----+-----+
| MEDAL_ID | MEDAL_NAME |
+-----+-----+
|      1   | GOLD       |
|      2   | SILVER     |
|      3   | BRONZE     |
+-----+-----+
3 rows in set (0.11 sec)
```

4.4: medals table

4.2 Queries for retrieving Data

Primarily, Queries are used to find specific data by filtering explicit criteria. Once we have created tables and loaded them with data, we need to retrieve this data.

There are some queries I have used for retrieving data, these are:

Query 1.

```
mysql> select athlete_name as ath_name,gender,athlete_id from athlete
where athlete_id='NOR1';
```

```
+-----+-----+-----+
| ath_name      | gender | athlete_id |
+-----+-----+-----+
| NORMAN PRITCHARD | FEMALE | NOR1      |
+-----+-----+-----+
1 row in set (0.00 sec)
```

```
mysql> select athlete_name as ath_name,gender,athlete_id from athlete where athlete_id='NOR1';
+-----+-----+-----+
| ath_name      | gender | athlete_id |
+-----+-----+-----+
| NORMAN PRITCHARD | FEMALE | NOR1       |
+-----+-----+-----+
1 row in set (0.00 sec)
```

Activate Windows
Go to Settings to activate Windows.

4.5: Query 1

Query 2.

```
mysql> select medalist_name,gender as female,medal_id from medalist
where gender='female';
```

```
+-----+-----+-----+
| medalist_name | female | medal_id |
+-----+-----+-----+
| NORMAN PRITCHARD | FEMALE | 2 |
| NORMAN PRITCHARD | FEMALE | 2 |
| KARNAM MALLESWARI | FEMALE | 3 |
| SAINA NEHWAL    | FEMALE | 3 |
| MARY KOM        | FEMALE | 3 |
| PV.SINDHU       | FEMALE | 2 |
| SAKSHI MALIK    | FEMALE | 3 |
+-----+-----+-----+
7 rows in set (0.00 sec)
```

```
mysql> select medalist_name,gender as female,medal_id from medalist where gender='female';
+-----+-----+-----+
| medalist_name | female | medal_id |
+-----+-----+-----+
| NORMAN PRITCHARD | FEMALE | 2 |
| NORMAN PRITCHARD | FEMALE | 2 |
| KARNAM MALLESWARI | FEMALE | 3 |
| SAINA NEHWAL    | FEMALE | 3 |
| MARY KOM        | FEMALE | 3 |
| PV.SINDHU       | FEMALE | 2 |
| SAKSHI MALIK    | FEMALE | 3 |
+-----+-----+-----+
7 rows in set (0.00 sec)
```

Activate
Go to Settings

4.6: Query 2

Query 3.

```
mysql> select event.event_id,event_name from event inner join medalist
on event.event_id=medalist.event_id;
```

+-----+-----+	
event_id	event_name
+-----+-----+	
1A	MENS 200 METRES
1B	MENS 200 METRES HURDLES
1C	MENS COMPETITION
1D	MENS COMPETITION
1E	MENS COMPETITION
1F	MENS COMPETITION
1G	MENS COMPETITION
1H	MENS FREE STYLE BANTAMWEIGHT
1I	MENS COMPETITION
1J	MENS COMPETITION
1K	MENS COMPETITION
1L	MENS COMPETITION
1M	MENS COMPETITION
1N	MENS COMPETITION
1O	MENS SINGLE
1P	WOMENS 69KG
1Q	MENS DOUBLE TRAP
1R	MENS 10m AIR RIFLE
1S	MENS MIDDLEWEIGHT
1T	MENS FREE STYLE 66KG
1U	WOMENS SINGLES
1V	MENS 25 RAPID FIRE PISTOL
1W	MENS FREE STYLE 66KG
1X	WOMENS FLYWEIGHT
1Y	MENS 10m AIR RIFLE
1Z	MENS FREESTYLE 60KG
2A	WOMENS SINGLES
2B	WOMENS FREESTYLE 58KG

+-----+-----+
28 rows in set (0.06 sec)

```
mysql> select event.event_id,event_name from event inner join medalist on event.event_id=medalist.event_id;
```

event_id	event_name
1A	MENS 200 METRES
1B	MENS 200 METRES HURDLES
1C	MENS COMPETITION
1D	MENS COMPETITION
1E	MENS COMPETITION
1F	MENS COMPETITION
1G	MENS COMPETITION
1H	MENS FREE STYLE BANTAMWEIGHT
1I	MENS COMPETITION
1J	MENS COMPETITION
1K	MENS COMPETITION
1L	MENS COMPETITION
1M	MENS COMPETITION
1N	MENS COMPETITION
1O	MENS SINGLE
1P	WOMENS 69KG
1Q	MENS DOUBLE TRAP
1R	MENS 10m AIR RIFLE
1S	MENS MIDDLEWEIGHT
1T	MENS FREE STYLE 66KG
1U	WOMENS SINGLES
1V	MENS 25 RAPID FIRE PISTOL
1W	MENS FREE STYLE 66KG

Activate Windows
Go to Settings to activate Windows.

4.7: Query 3

Query 4.

```
mysql> select medalist_id,medalist_name from medalist where medal_id='2' order by medalist_id;
```

+-----+-----+
| medalist_id | medalist_name |
+-----+-----+
NAT2	NATIONAL TEAM
NOR1	NORMAN PRITCHARD
NOR1	NORMAN PRITCHARD
PVS15	PV.SINDHU
RAJ6	RAJYAVARDHAN SINGH
SUS9	SUSHIL KUMAR
VIJ10	VIJAY KUMAR
+-----+-----+
7 rows in set (0.09 sec)


```
mysql> select medalist_id,medalist_name from medalist where medal_id='2' order by medalist_id;
```

medalist_id	medalist_name
NAT2	NATIONAL TEAM
NOR1	NORMAN PRITCHARD
NOR1	NORMAN PRITCHARD
PVS15	PV.SINDHU
RAJ6	RAJYAVARDHAN SINGH
SUS9	SUSHIL KUMAR
VIJ10	VIJAY KUMAR

```
7 rows in set (0.09 sec)

mysql> _
```

4.8: Query 4

Query 5

```
mysql> select medalist_id,medalist_name from medalist where medal_id='2' order by medalist_id desc;
```

medalist_id	medalist_name
VIJ10	VIJAY KUMAR
SUS9	SUSHIL KUMAR
RAJ6	RAJYAVARDHAN SINGH
PVS15	PV.SINDHU
NOR1	NORMAN PRITCHARD
NOR1	NORMAN PRITCHARD
NAT2	NATIONAL TEAM

```
7 rows in set (0.00 sec)
```

```
mysql> select medalist_id,medalist_name from medalist where medal_id='2' order by medalist_id desc;
+-----+-----+
| medalist_id | medalist_name |
+-----+-----+
| VIJ10      | VIJAY KUMAR   |
| SUS9       | SUSHIL KUMAR  |
| RAJ6       | RAJYAVARDHAN SINGH |
| PVS15      | PV.SINDHU     |
| NOR1       | NORMAN PRITCHARD |
| NOR1       | NORMAN PRITCHARD |
| NAT2       | NATIONAL TEAM  |
+-----+-----+
7 rows in set (0.00 sec)

mysql> _
```

4.9: Query 5

Query 6.

```
mysql> select game_id,game_type from games where place='athens'
order by game_id asc;
```

```
+-----+-----+
| game_id | game_type |
+-----+-----+
| SHO     | SHOOTING  |
+-----+-----+
1 row in set (0.00 sec)
```

```
mysql> select game_id,game_type from games where place='athens' order by game_id asc;
+-----+-----+
| game_id | game_type |
+-----+-----+
| SHO     | SHOOTING  |
+-----+-----+
1 row in set (0.00 sec)

mysql> _
```

4.10: Query 6

Query 7.

```
mysql> select athlete_name,age from athlete where age > 40 group by
athlete_name,age order by athlete_name;
```

```
+-----+-----+
| athlete_name | age |
+-----+-----+
```

```
| KHASHABA DADASAHEB | 45YRS |
| NATIONAL TEAM      | 50YRS |
+-----+-----+
2 rows in set, 16 warnings (0.07 sec)
```

```
mysql> select athlete_name,age from athlete where age > 40 group by athlete_name,age order by athlete_name;
+-----+-----+
| athlete_name      | age  |
+-----+-----+
| KHASHABA DADASAHEB | 45YRS |
| NATIONAL TEAM      | 50YRS |
+-----+-----+
2 rows in set, 16 warnings (0.07 sec)
mysql>
```

4.11: Query 7

Query 8.

```
mysql> select avg(age) from athlete;
```

```
+-----+
| avg(age) |
+-----+
| 31.625 |
+-----+
```

```
1 row in set, 16 warnings (0.00 sec)
```

```
mysql> select avg(age) from athlete;
+-----+
| avg(age) |
+-----+
| 31.625 |
+-----+
1 row in set, 16 warnings (0.00 sec)
mysql>
```

4.12: Query 8

Query 9.

```
mysql> select medal_id medals_description from medals;
```

```
+-----+
| medals_description |
+-----+
|          1 |
|          2 |
|          3 |
+-----+
```

3 rows in set (0.00 sec)

```
mysql> select medal_id medals_description from medals;
+-----+
| medals_description |
+-----+
|          1 |
|          2 |
|          3 |
+-----+
3 rows in set (0.00 sec)
mysql>
```

4.13: Query 9

Query 10.

```
mysql> explain select medal_id,medalist_name from medalist where
medal_id='1';
```

```

+----+-----+-----+-----+-----+-----+-----+-----+
--+-----+-----+-----+
| id | select_type | table | partitions | type | possible_keys | key | key_len |
ref | rows | filtered | Extra |
+----+-----+-----+-----+-----+-----+-----+-----+
--+-----+-----+-----+
| 1 | SIMPLE | medalist | NULL | ref | medal_id | medal_id | 4 |
const | 9 | 100.00 | NULL |
+----+-----+-----+-----+-----+-----+-----+
--+-----+-----+-----+

```

1 row in set, 1 warning (0.04 sec)

mysql>

```

mysql> explain select medal_id,medalist_name from medalist where medal_id='1';
+----+-----+-----+-----+-----+-----+-----+-----+
--+-----+-----+-----+
| id | select_type | table | partitions | type | possible_keys | key | key_len | ref | rows | filtered | Extra |
+----+-----+-----+-----+-----+-----+-----+-----+
--+-----+-----+-----+
| 1 | SIMPLE | medalist | NULL | ref | medal_id | medal_id | 4 | const | 9 | 100.00 | NULL |
+----+-----+-----+-----+-----+-----+-----+
--+-----+-----+-----+
1 row in set, 1 warning (0.04 sec)

mysql> _

```

4.14: Query 10

Chapter 5

Conclusion

5.1 Conclusion

I created a database that a market or everyone can use for keeping track on Indian performance in Olympic Games. For India Olympic Games are divided into medals and medalists. Medals given by event and medals won by medalists both are important for Olympic Games as it is part of it.

In my case I have created the database according to the wishes of Indians. Indian or any person gets easier, when he or she can use a database on a computer, rather than knowing it with paper.

Although I have created this database according to Indian wishes, the model can also be adapted to meet other purposes and thus be used for other projects. The database structure is quite simple, which makes it easy for also other programmers to understand it.

During our database management course I have learned about the basics of database design. This project gave me the opportunity to try my new skills in practice. While doing this project I also gained deeper understanding on database design and how it can be implemented in real life situation. I believe I can use my database designing skills also in other field's projects.

5.2 Future Work

To construct medal standing in relation to the Olympic Games is not a straightforward task. It takes some hard-work and potential to find the reliable sources.

But in addition to the several problematic surfaces especially in relation to the early Olympic Games before the First World War .One problem concerns which event one should include as part of these early games and in many cases it is not always registered when the Olympics were held and who won the bronze and so on.

At the current time Olympic Games are going on, after declaration of winners will integrate or add the data to the database and also the missing data will be include in the database in the complete set of results and records.

The project has a very vast scope in future. The Project can be implemented on internet in future. Project can be updated in near future as and when requirement for the same arises.

5.3 References

In order to work on this project titled “Indian Olympic Medals Management System”, the following books and literature are referred by me during the various phases of development of the project:

- I. Handmade notes.
- II. My class Teacher’s Lectures.
- III. 7th edition of Fundamentals of Database System by:
ELMASRI
NAVATHE
- IV. Various websites of discussion forum and software development activities.
- V. Video on YouTube.

