# MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR

(A Govt. Aided UGC Autonomous & NAAC Accredited Institute Affiliated to RGPV, Bhopal)



**Soft Skills Project Report**

**On**

**Data Management System**

**Submitted By:**

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July – December 2021

# MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR

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## CERTIFICATE

This is certified that **Mohit Singh Pal** (0901CA211033) has submitted the project report titled **Data Management System** under the mentorship of **Dr. Parul Saxena** (Assistant Professor), as the skills based mini project in 1st year of Master of Computer Application in Computer Science and Engineering from Madhav Institute of Technology and Science, Gwalior.

**Dr. Parul Saxena**

(Assistant Professor)Computer
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## DECLARATION

I hereby declare that the work being presented in this project report, for the requirement of skill based mini project in Master of Computer Application in Computer Science and Engineering at Madhav Institute of Technology andScience, Gwalior is an authenticated and original record of my work under the mentorship of Dr. Parul Saxena (Assistant Professor).

I declare that that I have not submitted the matter embodied in this report anywhere else.

Mohit Singh Pal

0901CA211033
2021-2023 Year,
Master of Computer Application,
Computer Science and Engineering

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# ACKNOWLEDGEMENT

The full semester project has proved to be pivotal to my career. I am thankful to my institute, **Madhav Institute of Technology and Science** to allow me to continue my disciplinary project. I extend my gratitude to the Director of the institute, **Dr. R. K. Pandit** and Dean Academics, **Dr. Manjaree Pandit** for this.

I would sincerely like to thank my department, **Department of Computer Science and Engineering, for allowing** me to explore this project. I humbly thank **Dr. Manish Dixit**, Professor and Head, Department of Computer Science and Engineering, for his continued support during the course of this engagement, which eased the process and formalities involved.

I am sincerely thankful to my faculty coordinator. I am grateful to the guidance of **Dr. Parul Saxena**, Assistant Professor, Computer Science and Engineering, for his continued support and guidance throughout the project. I am also very thankful to the faculty and staff of the department.

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Master of Computer Application,
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# ABSTRACT

This project work has been done for the purpose of understanding of database management system, because in today time any project, institute, organization is incomplete without database connection.

As there is English language to communicate with the people, there is machine language to communicate with machines same there is SQL (Structured Query Language) is used to communicate with database. In this we have kept the data of the client in the form of a table with the help of attributes and with the help of SQL, we insert, update, delete the data.

# CONTENTS

# 1. INTRODUCTION

Structure Query Language (SQL) is a database query language used for storing and managing data in Relational DBMS. SQL was the first commercial language introduced for E.F Codd's Relational model of database. Today almost all RDBMS (MySQL, Oracle, Infomax, Sybase, MS Access) use SQL as the standard database query language. SQL is used to perform all types of data operations in RDBMS.

It uses tables to manipulate and retrieve information from databases for analysis. SQL is a language that is used to manage data that is held in a relational database management

As an early coder, you will have likely heard the acronym SQL among your peers, colleagues or teachers. However, if you want to get to grips with database management, SQL is certainly something you will need to learn

SQL is used for database architecture and management. Thus, it is a vital tool used by any individual who seeks to pursue a career as a database administrator. For those unfamiliar with programming languages and website architecture, the work of SQL will often go unnoticed. Still, those who have seen behind the curtain will know it as one of the fundamental building blocks of modern database architecture.

# 2. OBJECTIVE

SQL is one of the most used computer languages in the world. Most of the world's data is kept in relational databases. SQL is the language used to create, update, and operate on such databases.

In contrast to other responders who always want to see names as acronyms, SQL is not an acronym for Structured Query Language, just as C is not an acronym for some word that starts with the letter C. SQL was originally named SEQUEL and is still pronounced that way today by many practitioners. SEQUEL was an acronym for Structured English Query Language. A trademark dispute caused the name to be changed to SQL. When that happened, the name ceased to be an acronym. SQL is not a structured query language. It is not a structured language at all. It's syntax merely resembles structured English.

# 3.TABLES

## #3.1 Example

### ALBUMS

| ID | TITLE | ARTIST | YEAR |
|---|---|---|---|
| 1 | Folklore | Taylor Swift | 2020 |
| 2 | We Are | Jon Batiste | 2021 |
| 3 | 25 | Adele | 2015 |
| 4 | The Suburbs | Arcade Fire | 2010 |
| 5 | Babel | Mumford & Sons | 2012 |

### SONGS

| Listing | Name | Stream _Count | Ref | ID |
|---|---|---|---|---|
| 1 | The Suburbs | 123,279,815 | A7 | 4 |
| 1 | Hello | 1,265,392,506 | BF | 3 |
| 5 | Remedy | 192,535,913 | 99B | 3 |
| 14 | Betty | 152,682,271 | 01C | 1 |
| 4 | Exile | 365,585,370 | 22 | 1 |

**Q. "What are the song names stored, how many streams did they have and what album are they in"?**

**Query to fetch the required details from the given tables is:**

**SELECT Name, Stream _Count, Title FROM Albums, Songs WHERE Albums.ID = Songs.ID;**

## OUTPUT: -

| Name | Stream _Count | Title |
|---|---|---|
| The  Suburbs | 123,279,815 | The Suburbs |
| Hello | 1,265,392,506 | 25 |
| Remedy | 192,535,913 | 25 |
| Betty | 152,682,271 | Folklore |
| Exile | 365,585,370 | Folklore |

- **NOTE: -** WHERE is needed to match up the records.

## 3.2 Example #2

**Q. "Who is the teacher and what room are 12B/It in?"**

## Teachers

| Teacher Code | Name | Department | Lessons |
|---|---|---|---|
| ABN | **Mr. Brown** | **Computing** | **19** |
| RHG | **Ms Holding** | **Science** | **20** |
| TBN | **Mr. Brown** | **Science** | **19** |
| CCI | **Dr Choi** | **Math's** | **17** |

## Classes

| Name | NO_ Of _Pupils | Rooms | Subject | Teacher_ Code |
|---|---|---|---|---|
| 11A/Co | **24** | **F.1.7** | **ComputerScience** | **ABN** |
| 128/It | **19** | **F.1.3** | **IT** | **ABN** |
| 10x2/Sc | **29** | **F.3.8** | **Biology** | **RHG** |

**Query to fetch the required details from the given tables is:**

SELECT Teachers.Name, Room FROM Teachers, ClassesWHERE Teachers.TeacherCode = Classes.TeacherCode AND Classes.Name = "12B/IT";

## OUTPUT:

| Name | Room |
|------|------|
| Mr. Brown | F.1.3 |

**NOTE: -** When searching across tables, match the foreign key to the Primary key (Teachers.TeacherCode=Classes.TeacherCode)

# 4. CONCLUSION

In this, we learned how to construct and execute a SELECT query to fetch data from multiple databases using "MySQL" Editor. MySQL helps fast with code completion and customizable code snippets by getting suggestion for keywords and stripping the repetition from coding.

We learned following things related to dbms are:

1. How to organize data in to the table.
2. How to make changes in the database and fetch those details.
3. How to use structure query language.
4. About a primary key, that is uniquely identifies a record.
5. About a foreign key, that is a primary key of another table.
6. To join data from two related tables, you need to match the foreign key to the primary key using WHERE