SQL

STRUCTURED QUERY LANGUAGE

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A

PROJECT REPORT

On

"WHOLESALER & PRODUCT DETAILS" AND "ELECTRONICS PRODUCT QUOTATION "

A Report Submitted To

Seven Mentors Institute, Pune

2024

Date: 16/02/2024

Submitted By: Aniket Ravsaheb Chougule

CERTIFICATE

This is to certify that the project called **"WHOLESALER & PRODUCT AND ELECTRONICS PRODUCT QUOTATION"** is the bonafide work carried out by **Aniket Ravsaheb Chougule** at **SEVEN MENTOR INSTITUTE, PUNE** under the guidance of SQL Course tutor **Mr. Sagar Gade Sir** and this project report leads the career path by exploring SQL Concepts.

DATE: 16/02/2024

PLACE: Pune

SIGNATURE OF GUIDE

DECLARATION

I hereby declare that, The project entitled is an outcome of my own efforts Under the guidance of Mr. Sagar Gade Sir. The project is submitted to the **Seven Mentor Institute Pune**. For the partial fulfilment of the "**Structure Query Language Course"** 2024-2025.

I also declare that this project report has not been previously submitted to any other institute.

DATE: 16/02/2024

PLACE: Pune

ANIKET RAVSAHEB CHOUGULE

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ACKNOWLEDGEMENT

The completion of any project is always due to the efforts from numerous people. So, no project would be considered complete without a word of acknowledge for all those who contributed to the project.

I undertook this project work, as the part of my SQL course. I had tried to apply my best of knowledge and experience, gained during the study and class work experience.

I would like to express my sincere gratitude to everyone who supported me throughout this project.

First and foremost, I thank my project guide, Mr. Sagar Gade Sir, for his valuable guidance, encouragement, and the feedback.

I also thank the other institute members of seven mentor for their suggestions and input.

I also feel indebted to my friends for the valuable suggestions during the project work.

INTRODUCTION

The project is on two case studies which are Wholesaler & product details and Electronics product quotation.

In this project, I will design and implement a database system that can store and manage the information of wholesaler and their products. The database will contain tables for wholesaler and products. I will use SQL queries to perform various data analysis and manipulation tasks, such as count the number of wholesalers for a particular city, list the wholesaler of product, the average price and quantity of products.

For Electronics product quotation I will also design and implement a database that can allow customers to request quotation for different electronics product. The database will contain tables for customer and quotation. I will use SQL queries to perform various data analysis and manipulation tasks, such as list all the customer who are demanding for a particular product, delete all the customers from a particular city, to find the total sales of each product by each wholesaler

The purpose of this project is to showcase my SQL skills and knowledge, and to provide useful information for business decision-making.

TECHNOLOGY USED IN PROJECT

"A Relational Model of Data for Large Shared Data Banks was a paper which was published by the great computer scientist E.F. Codd in 1970."

The IBM researchers Raymond Boyce and Donald Chamberlin originally developed the SEQUEL (Structured English Query Language) after learning from the paper given by E.F. Codd. They both developed the SQL at the San Jose Research laboratory of IBM Corporation in 1970.

SQL tutorial provides basic and advanced concepts of SQL. Our SQL tutorial is designed for both beginners and professionals.

SQL (Structured Query Language) is used to perform operations on the records stored in the database, such as updating records, inserting records, deleting records, creating and modifying database tables, views, etc.

SQL is not a database system, but it is a query language.

Suppose you want to perform the queries of SQL language on the stored data in the database. You are required to install any database management system in your systems, for example, Oracle, MySQL (workbench 8.0 CE), MongoDB, PostgreSQL, SQL Server, DB2, etc.

The latest support for working with MySQL is version number v5.8. It contains many essential changes, including new features added and removed, fixed bugs and security issues, etc. This version contains the release history from MySQL 8.0 to MySQL 8.0.21. It is available from April 2018 and ends the support in April 2026.

When you are going to install MySQL in your system, you must have to choose the version and distribution format to use. You can install MySQL in two ways, where first is a development release, and the

second is General Availability (GA) release. The development release provides the newest feature and is not recommended to use in production. The General Availability (GA) release, also known as production or stable release, is mainly used for production. Therefore, you must have to decide the most recent General Availability release.

SQL manages a large amount of data, especially if there is a lot of data that is being written simultaneously and there are too many data transactions.

SQL is designed for a specific purpose: to query data contained in a relational database. SQL is a set-based, declarative programming language, not an imperative programming language like C or BASIC. However, extensions to Standard SQL add procedural programming language functionality, such as control-of-flow constructs.

- **SQL stands for Structured Query Language**
- **SQL lets you access and manipulate databases**
- **SQL became a standard of the American National Standards Institute**
- **(ANSI) in 1986, and of the International Organization for**
- **Standardization (ISO) in 1987**
- **SQL can execute queries against a database**
- **SQL can retrieve data from a database**
- **SQL can insert records in a database**
- **SQL can update records in a database**
- **SQL can delete records from a database**
- **SQL can create new databases**
- **SQL can create new tables in a database**
- **SQL can create stored procedures in a database**
- **SQL can create views in a database**
- **SQL can set permissions on tables, procedures, and views**

- **An RDBMS database program (i.e. MS Access, SQL Server, MySQL)**
- **To use a server-side scripting language, like PHP or ASP**
- **To use SQL to get the data you want**

❖ Some of The Most Important SQL Commands:

- **SELECT - extracts data from a database**
- **UPDATE - updates data in a database**
- **DELETE - deletes data from a database**
- **INSERT INTO - inserts new data into a database**
- **CREATE DATABASE - creates a new database**
- **ALTER DATABASE - modifies a database**
- **CREATE TABLE - creates a new table**
- **ALTER TABLE - modifies a table**
- **DROP TABLE - deletes a table**
- **CREATE INDEX - creates an index (search key)**

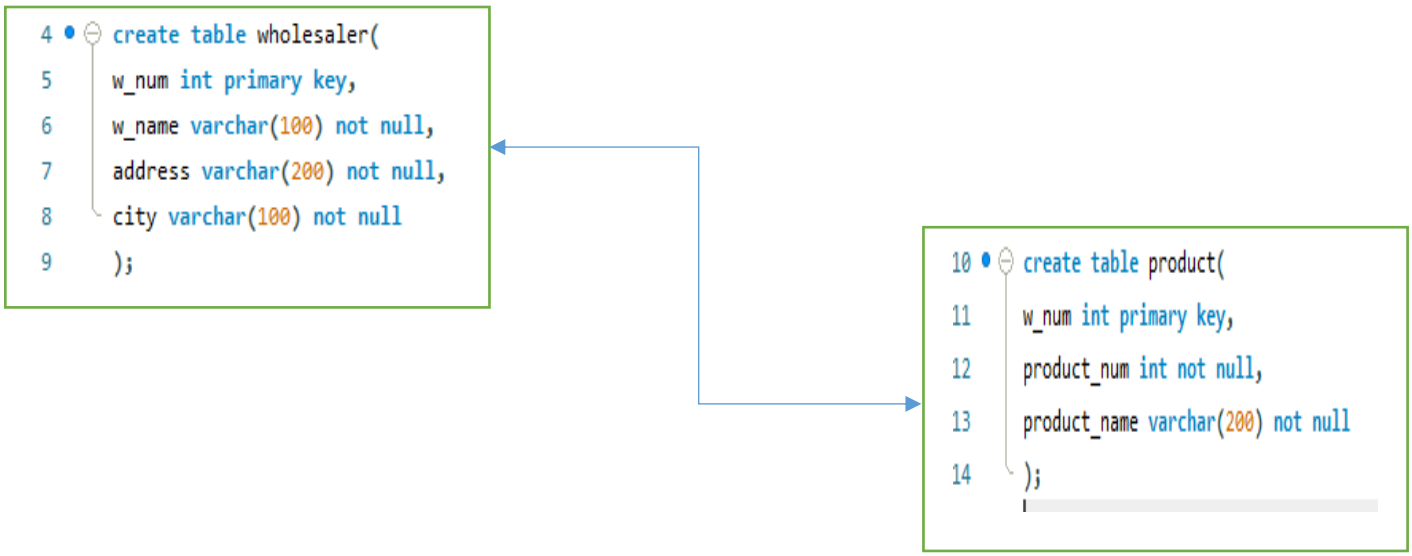

Fig-1:M Relationship Diagram for wholesaler and Product.

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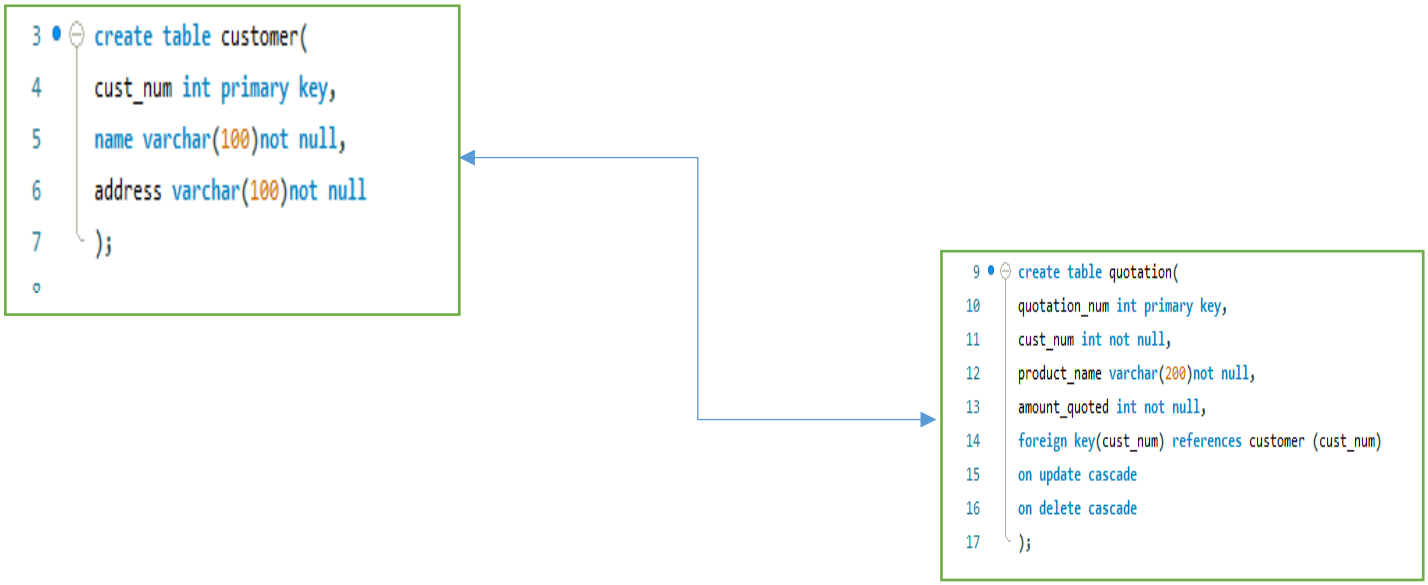


Fig-1:M Relationship Diagram for Customer and Quotation

EXPLAINATION

Making of the Project

SAMPLE CODES FOR ELECTRONICS PRODUCTS QUOTATION:

```
CREATE DATABASE SQL_Project01;

USE SQL_Project01

CREATE  TABLE  wholesaler

create table wholesaler (

w_ num  int   primary key,

w_name  varchar(100) not null,

address  varchar(200) not null,

city  varchar(100) not null

);

create table product(

w_num int primary key,

product_num int not null,

product_name varchar(200) not null

);


insert into wholesaler

(w_num,w_name,address,city)

values
```

(1,'Abhi','Shiroli','Kolhapur'),

(2,'Atul','Titve','Radhanagri'),

(3,'Abhishek','Gandhinagar','Kolhapur'),

(4,'Shushant','Dhudhgav','Sangli'),

(5,'Sourabh','Shiavji Nagar','Pune'),

(6,'Vinayak','Karjat','Ahmednagar'),

(7,'Akshay','Shaniwar wada','pune');

insert into product

(w_num,product_num,product_name)

values

(1,10,'Book'),

(2,11,'Mobile Phone'),

(3,12,'Refrigerator'),

(4,13,'Watch'),

(5,14,'Washing Machine'),

(6,15,'laptop'),

(7,16,'Tablet');

select * from wholesaler;

select * from product;

select * from wholesaler

```
where w_num in ( select w_num from product where product_name = 'Book');


select count(w_num)
from wholesaler
where city = 'Ahmednagar';


insert into wholesaler
(w_num,w_name,address,city)
values
(8,'Shubham','Herle','Kolhapur');


select * from wholesaler;


select w.w_name,p.product_name
from wholesaler w
join product p
on w.w_num = p.w_num;
```

Input/Output Screens:

Query 1) <u>List the wholesaler of Product "Book"</u>

```
select * from wholesaler
```

where w_num in (select w_num from product where product_name = 'Book');

```
42 •  select * from wholesaler
43    where w_num in ( select w_num from product where product_name = 'Book');
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell

w_num	w_name	address	city
1	Abhi	Shiroli	Kolhapur
NULL	NULL	NULL	NULL

Query 2) <u>Count the number of wholesaler in city ''Ahmednagar'</u>

select count(w_num)

from wholesaler

where city = 'Ahmednagar';

```
45 •    select count(w_num)
46      from wholesaler
47      where city = 'Ahmednagar';
48
```

Result Grid | Filter Rows:

count(w_num)
1

Query 3) <u>Insert a record wholesaler</u>.

insert into wholesaler

(w_num,w_name,address,city)

values

(8,'Shubham','Herle','Kolhapur');

```
50      (w_num,w_name,address,city)
51      values
52      (8,'Shubham','Herle','Kolhapur');
53
54 •    select * from wholesaler;
55
```

Result Grid | Filter Rows: | Edi

w_num	w_name	address	city
1	Abhi	Shiroli	Kolhapur
2	Atul	Titve	Radhanagri
3	Abhishek	Gandhinagar	Kolhapur
4	Shushant	Dhudhgav	Sangli
5	Sourabh	Shiavji Nagar	Pune
6	Vinayak	Karjat	Ahmednagar
7	Akshay	Shaniwar wada	pune
8	Shubham	Herle	Kolhapur
NULL	NULL	NULL	NULL

Query 4) <u>To print wholesaler product</u>

select * from wholesaler;

select w.w_name,p.product_name

from wholesaler w

join product p

on w.w_num = p.w_num;

```
56 •    select w.w_name,p.product_name
57      from wholesaler w
58      join product p
59      on w.w_num = p.w_num;
60
```

Result Grid | Filter Rows: | Export: | Wrap

w_name	product_name
Abhi	Book
Atul	Mobile Phone
Abhishek	Refrigerator
Shushant	Watch
Sourabh	Washing Machine
Vinayak	laptop
Akshay	Tablet

SAMPLE CODES FOR THE "ELECTRONICS PRODUCT QUOTATION" DETAILS:

```
create table customer(
cust_num int primary key,
name varchar(100)not null,
address varchar(100)not null
);

create table quotation(
quotation_num int primary key,
cust_num int not null,
product_name varchar(200)not null,
amount_quoted int not null,
```

```
foreign key(cust_num) references customer (cust_num)
on update cascade
on delete cascade
);

insert into customer
(cust_num,name,address)
values
(1,'Abhi','Kolhapur'),
(2,'Atul','Radhanagri'),
(3,'Abhishek','Kolhapur'),
(4,'Shushant','Sangli'),
(5,'Sourabh','Pune'),
(6,'Vinayak','pune'),
(7,'Akshay','pune');

insert into quotation
(quotation_num,cust_num,product_name,amount_quoted)
values
(10,1,'Book',500),
(11,2,'Mobile Phone',20000),
(12,3,'fridge',25000),
(13,4,'Watch',5000),
(14,5,'Washing Machine',35000),
(15,6,'laptop',40000),
(16,7,'Tablet',15000);


select * from customer;
```

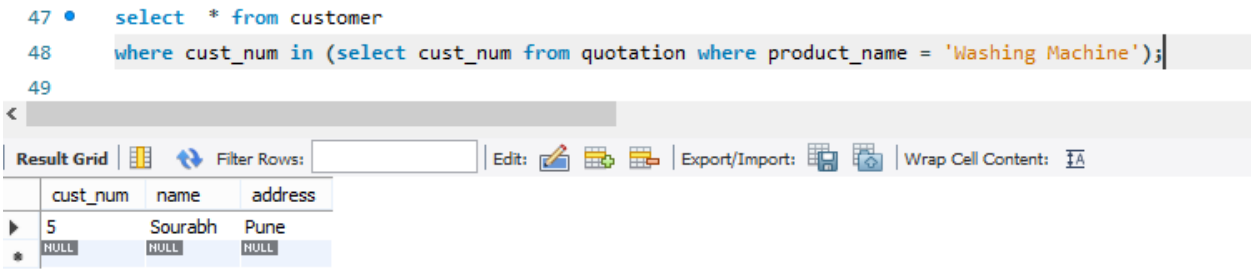
```
select * from quotation;



select  * from customer

where cust_num in (select cust_num from quotation where product_name = 'Washing
Machine');


select cust_num,name

from customer

where cust_num in (select cust_num from quotation where product_name = 'fridge');


set sql_safe_updates =0;

delete from customer

where address = 'pune';


select * from customer;


select * from customer

join quotation

on customer.cust_num = quotation.cust_num

where amount_quoted > 5000;
```

Input/Output Screens:

Query 1): <u>List all the customer who are demanding for quotation of “washine machine”</u>

select * from customer

where cust_num in (select cust_num from quotation where product_name = 'Washing Machine');

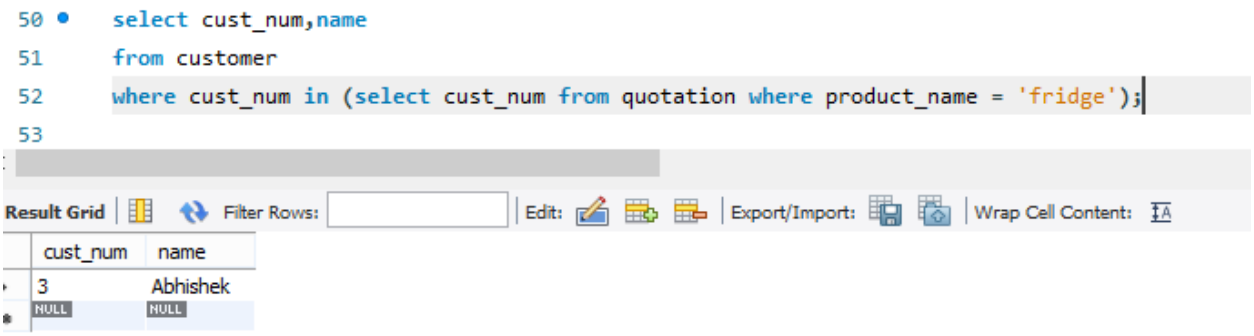


Query 2): <u>List all the customer who are demanding for the quotation of ‘fridge’</u>

select cust_num,name

from customer

where cust_num in (select cust_num from quotation where product_name = 'fridge');



Query 3): <u>Delete all customer with address “pune”</u>

set sql_safe_updates =0;

delete from customer

where address = 'pune';

```
54 •  set sql_safe_updates =0;
55 •  delete from customer
56    where address = 'pune';
57
58 •  select * from customer;
59
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content:

cust_num	name	address
1	Abhi	Kolhapur
2	Atul	Radhanagri
3	Abhishek	Kolhapur
4	Shushant	Sangli
NULL	NULL	NULL

Query 4): <u>To print customer wise list of quotation but only quotation whose amount > 5000</u>

select * from customer

join quotation

on customer.cust_num = quotation.cust_num

where amount_quoted > 5000;

```
60 •  select * from customer
61    join quotation
62    on customer.cust_num = quotation.cust_num
63    where amount_quoted > 5000;
64
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

cust_num	name	address	quotation_num	cust_num	product_name	amount_quoted
2	Atul	Radhanagri	11	2	Mobile Phone	20000
3	Abhishek	Kolhapur	12	3	fridge	25000

PROBLEM STATEMENT

In this project I had some queries to run, while doing that I faced problem such as the queries were correct but still it used to not be executed.

The MYSQL workbench gets updated if the updates are available sometimes the software give problem (giving syntax error).

So I tried to run the queries on other device. surprisingly, It could run on that device.

CONCLUSION

This module has presented all the basic hurdles to using and understanding SQL. You should understand, play with, and feel comfortable with these statements because you will use them constantly when you work with an SQL database system.
You will be using the SELECT statement in extracting the information needed for the class project. It's the core of most of the work you will be doing with SQL.

It would be a good idea to review this module before continuing. From here, we will build on the SELECT statement and show how you can do more advanced database queries. The balance of the language is built on the INSERT, SELECT, UPDATE, and DELETE statements.

SQL statements let you perform simple tasks with a database such as creating a new table or inserting a record. By combining many SQL statements into a script, you can perform elaborate procedures such as creating and initializing a database from scratch. It describes the benefits of using scripts to create databases and discusses some of the issues that you should understand before writing those scripts.

FUTURE SCOPE

- **SQL Server Integration Services (SSIS):** This service helps you with the integration of multiple databases, database objects and entities as per your requirement.
- **Microsoft SQL Server:** This is the most difficult yet intriguing job for SQL developer where he has to work on server performance, integrity as well as server maintenance. This is one of the highly paid SQL Developer skills where developers get attractive remuneration and other opportunities too.
- **Analytical skills:** Developers must analyse and understand the needs of the user and then design the software accordingly to meet those needs.
- **Creativity:** Developers must be creative enough to find new solutions to conventional problems.
- **Detail-oriented:** Developers usually work on several parts of an application or system simultaneously and therefore must be able to focus and pay attention to even the minute details.
- **Interpersonal skills:** Developers must be able to work in harmony with others who help in developing and creating successful software.
- **Problem-solving skills:** Since developers are in charge of software from beginning to end, they should be capable of solving problems that may occur along the design process.
- **Communication skills:** Developers must be capable of giving able to give clear instructions to their teammates. They should also be able to explain to their customers how the software works and answer any queries that arise

REFERENCES

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