OVERVIEW OF SQL

DDL (Data Definition Language) Commands

DDL or Data definition language is actually the definition or description of the database structure or schema, it won't change the data inside the database. Create, modify, and delete the database structures, but not the data. Only These commands are not done by all the users, who have access to the database via an application.

CREATE Command in SQL

SQL Create the database or its object (ie table, index, view, function, etc.).

Syntax

CREATE DATABASE databasename

```
1  CREATE DATABASE Student_data;
```

Syntax

CREATE TABLE table_name (

column1 datatype,

column2 datatype,

column3 datatype, ...);

```
1  CREATE TABLE Student (
2      StudendId int,
3      LastName varchar(255),
4      FirstName varchar(255),
5      Address varchar(255),
6      Mark int
7  );
```

DROP Command in SQL

Drop command helps to delete the object from the database (ie table, index, view, function, etc.).

Syntax

DROP object object_name

```
1  DROP TABLE Student;
```

Syntax

DROP DATABASE database_name

```
1  DROP DATABASE Student_data;
```

ALTER Command in SQL

Alter command is helpful to change or modify the structure of the database or its object.

Syntax

ALTER TABLE table_name

ADD column_name datatype

```
1  ALTER TABLE Student
2  ADD Total int;
```

Syntax

ALTER TABLE table_name

DROP COLUMN column_name

```
1  ALTER TABLE Student
2  DROP COLUMN Mark;
```

DCL (Data Control Language) Commands

DCL or Data Control Language is to provide rights, permissions, and other controls of the database system.

GRANT Command in SQL

GRANT command is helpful to provide privileges to the database.

Syntax

GRANT privileges_names

ON object TO user

```
1  GRANT SELECT, INSERT, DELETE, UPDATE ON Users TO 'Name'@'localhost;
2
3  GRANT ALL ON Users TO 'Name'@'localhost;
4
5  GRANT SELECT  ON Users TO '*'@'localhost;
```

REVOKE Command in SQL

SQL Revoke command is to withdraw the user's access privileges given by using the GRANT command.

Syntax

REVOKE privileges ON object FROM user

```
REVOKE SELECT, INSERT, DELETE, UPDATE ON Users TO 'Name'@'localhost;

REVOKE ALL ON Users TO 'Name'@'localhost;

REVOKE SELECT  ON Users TO '*'@'localhost;
```

DML (Data Manipulation Language) Commands

DML or Data Manipulation Language is to manipulate the data inside the database. With the help of DML commands, we can insert, delete, and change the data inside the database

INSERT Command in SQL

SQL Insert command is helpful to insert the data into a table. 1) All the column names are mentioned in the insert statement.

Syntax

INSERT INTO table_name (column1, column2, column3, ...)

VALUES (value1, value2, value3, ...)

```
INSERT INTO Student (StudendId, FirstName, LastName)
VALUES (12345, "Sri", "Durga");
```

Syntax

INSERT INTO table_name

VALUES (value1, value2, value3, ...)

```
INSERT INTO Student
VALUES (12345, "Sri", "Durga");
```

UPDATE Command in SQL

SQL Update command is helpful to update the existing data in a table.

Syntax

UPDATE table_name

SET column1 = value1, column2 = value2, ...

WHERE condition

```
UPDATE Student
SET FirstName = "Navin" , LastName = "Kumar"
WHERE StudentId=12345;
```

Delete Command in SQL

SQL Delete command helps to delete the records from a database table.

Syntax

DELETE FROM table_name

WHERE condition;

```
1  DELETE FROM Student WHERE StudentId=12345;
```

LOCK Command in SQL

SQL Lock command is helpful to lock the table to control concurrency.

Syntax

LOCK TABLE table-Name

IN { SHARE | EXCLUSIVE } MODE

```
1  LOCK TABLE Student IN SHARE MODE;
```

EXPERIMENT – 1

Aim:

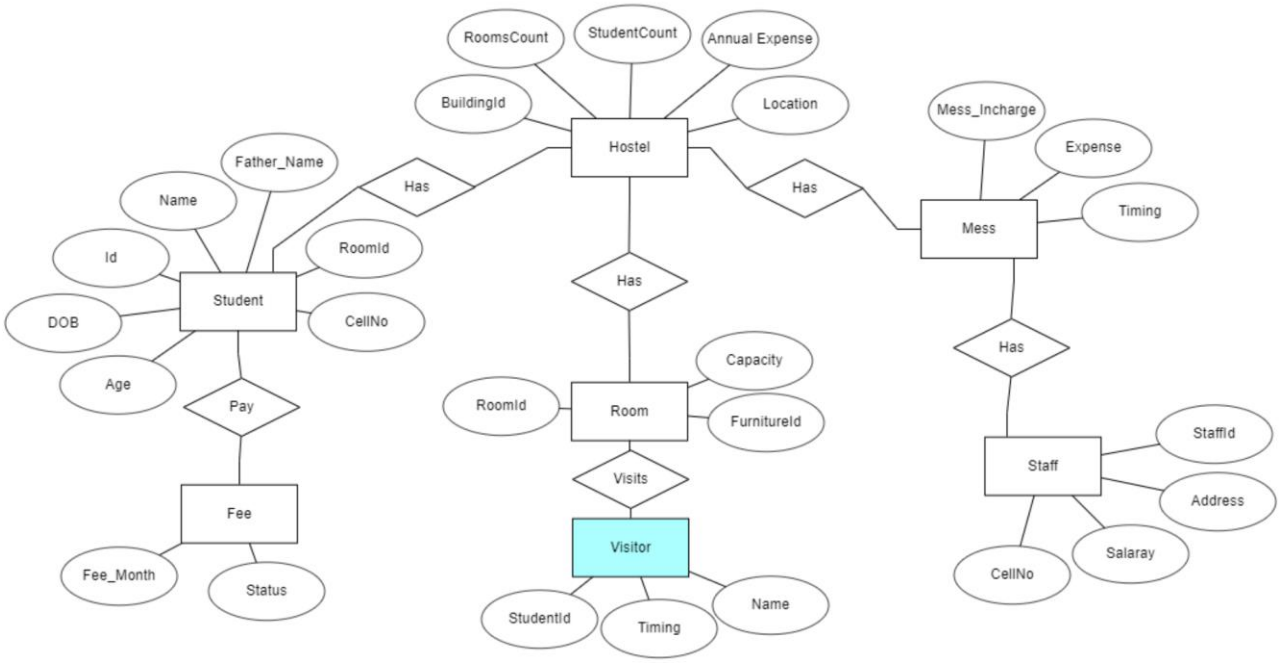
To draw the Entity Relationship Diagram (ERD) for the Restaurant management system.

Theory:

Entity Relationship Diagram is a type of structural diagram for use in database design. An ERD contains different symbols and connectors that visualize two important pieces of information:

- The major entities within the system scope
- The inter-relationships among these entities

ER Diagram:



Conclusions:

Learned about the construction of entity relationship diagram and its basic knowledge.