

Data Changing Operations

```

CREATE TABLE Employees(
    EmployeeID INT,
    FirstName VARCHAR(50) NOT NULL,
    LastName VARCHAR(50) NOT NULL,
    Email VARCHAR(100) NOT NULL,
    Salary DECIMAL(10,2),
    BirthDate DATE NOT NULL,
    Gender CHAR(1),
    Active BOOLEAN DEFAULT TRUE,
    PRIMARY KEY(EmployeeID),
    UNIQUE(Email)
);

```

```

mysql> DESCRIBE Employees;
+-----+-----+-----+-----+-----+-----+
| Field | Type   | Null | Key  | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| EmployeeID | int      | NO   | PRI   | NULL    | auto_increment |
| FirstName | varchar(50) | NO   |       | NULL    |             |
| LastName  | varchar(50) | NO   |       | NULL    |             |
| Email     | varchar(100) | NO   | UNI   | NULL    |             |
| Salary    | decimal(10,2) | YES  |       | NULL    |             |
| BirthDate | date     | NO   |       | NULL    |             |
| Gender    | char(1)   | YES  |       | NULL    |             |
| Active    | tinyint(1) | YES  |       | 1       |             |
+-----+-----+-----+-----+-----+-----+
8 rows in set (0.02 sec)

```

05714802718 - Enrollment Number
 05714801719 - Another Person

+1

```

mysql> DROP TABLE Employees;
Query OK, 0 rows affected (0.17 sec)

mysql> SHOW TABLES;
+-----+
| Tables_in_bike_shop |
+-----+
| customers          |
| products           |
+-----+
2 rows in set (0.01 sec)

```

```
mysql> CREATE TABLE Employees(
    -> EmployeeID INT auto_increment,
    -> FirstName VARCHAR(50) NOT NULL,
    -> LastName VARCHAR(50) NOT NULL,
    -> Email VARCHAR(100) NOT NULL,
    -> Salary DECIMAL(10,2),
    -> BirthDate DATE NOT NULL,
    -> Gender CHAR(1),
    -> Active BOOLEAN DEFAULT TRUE,
    -> PRIMARY KEY(EmployeeID),
    -> UNIQUE>Email
    -> );
Query OK, 0 rows affected (0.06 sec)
```

```
mysql> DESC Employees;
```

Field	Type	Null	Key	Default	Extra
EmployeeID	int	NO	PRI	NULL	auto_increment
FirstName	varchar(50)	NO		NULL	
LastName	varchar(50)	NO		NULL	
Email	varchar(100)	NO	UNI	NULL	
Salary	decimal(10,2)	YES		NULL	
BirthDate	date	NO		NULL	
Gender	char(1)	YES		NULL	
Active	tinyint(1)	YES		1	

8 rows in set (0.07 sec)

```
mysql> INSERT INTO Employees(FirstName, LastName, Email, Salary, BirthDate)
    -> VALUES("Abhishek", "Behal", "abhishek@google.com", 56560.56, "1991-01-01");
Query OK, 1 row affected (0.24 sec)
```

```
mysql> SELECT * FROM Employees;
```

EmployeeID	FirstName	LastName	Email	Salary	BirthDate	Gender	Active
1	Abhishek	Behal	abhishek@google.com	56560.56	1991-01-01	NULL	1

1 row in set (0.01 sec)

```
mysql> INSERT INTO Employees(FirstName, LastName, Email, Salary, BirthDate)
    -> VALUES ('Riya', 'Sharma', 'riya.sharma@example.com', 62500.00, '1993-07-15'),
    -> ('Rahul', 'Verma', 'rahulv@gmail.com', 51000.75, '1989-12-05'),
    -> ('Neha', 'Kapoor', 'neha.kapoor@company.com', 72000.00, '1990-03-22'),
    -> ('Aman', 'Singh', 'aman.singh@yahoo.com', 58000.10, '1992-10-10');
Query OK, 4 rows affected (0.07 sec)
Records: 4  Duplicates: 0  Warnings: 0
```

```
mysql> SELECT * FROM Employees;
```

EmployeeID	FirstName	LastName	Email	Salary	BirthDate	Gender	Active
1	Abhishek	Behal	abhishek@google.com	56560.56	1991-01-01	NULL	1
2	Riya	Sharma	riya.sharma@example.com	62500.00	1993-07-15	NULL	1
3	Rahul	Verma	rahulv@gmail.com	51000.75	1989-12-05	NULL	1
4	Neha	Kapoor	neha.kapoor@company.com	72000.00	1990-03-22	NULL	1
5	Aman	Singh	aman.singh@yahoo.com	58000.10	1992-10-10	NULL	1

```
mysql> TRUNCATE TABLE Employees;
Query OK, 0 rows affected (0.10 sec)
```

```
mysql> SELECT * FROM Employees;
Empty set (0.01 sec)
```

```

mysql> DESC Employees;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| EmployeeID | int | NO | PRI | NULL | auto_increment |
| FirstName | varchar(50) | NO | NULL |
| LastName | varchar(50) | NO | NULL |
| Email | varchar(100) | NO | UNI | NULL |
| Salary | decimal(10,2) | YES | NULL |
| BirthDate | date | NO | NULL |
| Gender | char(1) | YES | NULL |
| Active | tinyint(1) | YES | 1 |
+-----+-----+-----+-----+-----+-----+
8 rows in set (0.11 sec)

```

```

mysql> INSERT INTO Employees(EmployeeID,FirstName, LastName, Email, Salary, BirthDate)
-> VALUES(1212121,"Abhishek","Behal"," abhishek@google.com",56560.56,"1991-01-01");
Query OK, 1 row affected (0.03 sec)

mysql> SELECT * FROM Employees;
+-----+-----+-----+-----+-----+-----+-----+-----+
| EmployeeID | FirstName | LastName | Email | Salary | BirthDate | Gender | Active |
+-----+-----+-----+-----+-----+-----+-----+-----+
| 1212121 | Abhishek | Behal | abhishek@google.com | 56560.56 | 1991-01-01 | NULL | 1 |
+-----+-----+-----+-----+-----+-----+-----+-----+
1 row in set (0.00 sec)

```

```

mysql> INSERT INTO Employees(FirstName, LastName, Email, Salary, BirthDate)
-> VALUES ('Riya', 'Sharma', 'riya.sharma@example.com', 62500.00, '1993-07-15'),
-> ('Rahul', 'Verma', 'rahulv@gmail.com', 51000.75, '1989-12-05'),
-> ('Neha', 'Kapoor', 'neha.kapoor@company.com', 72000.00, '1990-03-22'),
-> ('Aman', 'Singh', 'aman.singh@yahoo.com', 58000.10, '1992-10-10');
Query OK, 4 rows affected (0.00 sec)
Records: 4 Duplicates: 0 Warnings: 0

mysql> SELECT * FROM Employees;
+-----+-----+-----+-----+-----+-----+-----+-----+
| EmployeeID | FirstName | LastName | Email | Salary | BirthDate | Gender | Active |
+-----+-----+-----+-----+-----+-----+-----+-----+
| 1212121 | Abhishek | Behal | abhishek@google.com | 56560.56 | 1991-01-01 | NULL | 1 |
| 1212122 | Riya | Sharma | riya.sharma@example.com | 62500.00 | 1993-07-15 | NULL | 1 |
| 1212123 | Rahul | Verma | rahulv@gmail.com | 51000.75 | 1989-12-05 | NULL | 1 |
| 1212124 | Neha | Kapoor | neha.kapoor@company.com | 72000.00 | 1990-03-22 | NULL | 1 |
| 1212125 | Aman | Singh | aman.singh@yahoo.com | 58000.10 | 1992-10-10 | NULL | 1 |
+-----+-----+-----+-----+-----+-----+-----+-----+
5 rows in set (0.01 sec)

```

Creating a clone table or filter table. [Filter Function in DAX]

```

mysql> CREATE TABLE CustomerDetails AS
-> SELECT * FROM Customers;
Query OK, 2062 rows affected (0.67 sec)
Records: 2062 Duplicates: 0 Warnings: 0

mysql> SHOW TABLES;
+-----+
| Tables_in_bike_shop |
+-----+
| customerdetails |
| customers |
| employees |
| products |
+-----+
4 rows in set (0.10 sec)

```

```
mysql> DESC customerdetails;
+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+
| CustomerKey | int | YES | NULL |
| Prefix | text | YES | NULL |
| FirstName | text | YES | NULL |
| LastName | text | YES | NULL |
| BirthDate | text | YES | NULL |
| MyUnknownColumn | text | YES | NULL |
| MaritalStatus | text | YES | NULL |
| Gender | text | YES | NULL |
| EmailAddress | text | YES | NULL |
| AnnualIncome | text | YES | NULL |
| TotalChildren | int | YES | NULL |
| EducationLevel | text | YES | NULL |
| Occupation | text | YES | NULL |
| HomeOwner | text | YES | NULL |
| Phone_number | bigint | YES | NULL |
+-----+-----+-----+-----+-----+
15 rows in set (0.05 sec)
```

```
mysql> DESC customers;
+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+
| CustomerKey | int | YES | NULL |
| Prefix | text | YES | NULL |
| FirstName | text | YES | NULL |
| LastName | text | YES | NULL |
| BirthDate | text | YES | NULL |
| MyUnknownColumn | text | YES | NULL |
| MaritalStatus | text | YES | NULL |
| Gender | text | YES | NULL |
| EmailAddress | text | YES | NULL |
| AnnualIncome | text | YES | NULL |
| TotalChildren | int | YES | NULL |
| EducationLevel | text | YES | NULL |
| Occupation | text | YES | NULL |
| HomeOwner | text | YES | NULL |
| Phone_number | bigint | YES | NULL |
+-----+-----+-----+-----+-----+
15 rows in set (0.00 sec)
```

```
mysql> SELECT Count(*) FROM CustomerDetails;
+-----+
| Count(*) |
+-----+
| 2062 |
+-----+
1 row in set (0.34 sec)

mysql> SELECT Count(*) FROM Customers;
+-----+
| Count(*) |
+-----+
| 2062 |
+-----+
1 row in set (0.01 sec)
```

UPDATE COMMAND

```
UPDATE <Table Name>
SET <ColumnName> = "Value"
WHERE <Another Column> = "Value";
```

```
mysql> SELECT FirstName , LastName , EmailAddress , HomeOwner, Occupation
-> FROM Customers WHERE LastName = "Mehta";
+-----+-----+-----+-----+-----+
| FirstName | LastName | EmailAddress | HomeOwner | Occupation |
+-----+-----+-----+-----+-----+
| MARCO | MEHTA | marco14@learnsector.com | Y | Professional |
| BRENDA | MEHTA | brenda17@learnsector.com | Y | Clerical |
| KRISTOPHER | MEHTA | kristopher12@learnsector.com | Y | Management |
| TINA | MEHTA | tina15@learnsector.com | Y | Professional |
| BRETT | MEHTA | brett13@learnsector.com | Y | Management |
| CANDACE | MEHTA | candace14@learnsector.com | N | Clerical |
| EDGAR | MEHTA | edgar15@learnsector.com | Y | Professional |
| HOLLY | MEHTA | holly13@learnsector.com | Y | Management |
| KARI | MEHTA | kari14@learnsector.com | Y | Professional |
| RUBEN | MEHTA | ruben15@learnsector.com | Y | Manual |
| DONALD | MEHTA | donald15@learnsector.com | Y | Manual |
| DOMINIQUE | MEHTA | dominique11@learnsector.com | Y | Clerical |
| TAMMY | MEHTA | tammy14@learnsector.com | Y | Manual |
| ADRIANA | MEHTA | adriana15@learnsector.com | Y | Clerical |
| MAYRA | MEHTA | mayra14@learnsector.com | N | Professional |
| DENISE | MEHTA | denise15@learnsector.com | N | Professional |
+-----+-----+-----+-----+-----+
16 rows in set (0.01 sec)
```

```
mysql> SELECT CustomerKey , FirstName , LastName , EmailAddress , HomeOwner, Occupation
-> FROM Customers WHERE LastName = "Mehta";
+-----+-----+-----+-----+-----+-----+
| CustomerKey | FirstName | LastName | EmailAddress | HomeOwner | Occupation |
+-----+-----+-----+-----+-----+-----+
| 11007 | MARCO | MEHTA | marco14@learnsector.com | Y | Professional |
| 11399 | BRENDA | MEHTA | brenda17@learnsector.com | Y | Clerical |
| 11426 | KRISTOPHER | MEHTA | kristopher12@learnsector.com | Y | Management |
| 11444 | TINA | MEHTA | tina15@learnsector.com | Y | Professional |
| 11450 | BRETT | MEHTA | brett13@learnsector.com | Y | Management |
| 11588 | CANDACE | MEHTA | candace14@learnsector.com | N "Y" | Clerical |
| 11761 | EDGAR | MEHTA | edgar15@learnsector.com | Y | Professional |
| 12180 | HOLLY | MEHTA | holly13@learnsector.com | Y | Management |
| 12322 | KARI | MEHTA | kari14@learnsector.com | Y | Professional |
| 12478 | RUBEN | MEHTA | ruben15@learnsector.com | Y | Manual |
| 12735 | DONALD | MEHTA | donald15@learnsector.com | Y | Manual |
| 12815 | DOMINIQUE | MEHTA | dominique11@learnsector.com | Y | Clerical |
| 12816 | TAMMY | MEHTA | tammy14@learnsector.com | Y | Manual |
| 12858 | ADRIANA | MEHTA | adriana15@learnsector.com | Y | Clerical |
| 12998 | MAYRA | MEHTA | mayra14@learnsector.com | N | Professional |
| 13080 | DENISE | MEHTA | denise15@learnsector.com | N | Professional |
+-----+-----+-----+-----+-----+
16 rows in set (0.02 sec)
```

```
mysql> UPDATE Customers
-> SET HomeOwner = "Y"
-> WHERE CustomerKey = 11588
Query OK, 1 row affected (0.15 sec)
Rows matched: 1 Changed: 1 Warnings: 0

mysql> SELECT CustomerKey , FirstName , LastName , EmailAddress , HomeOwner, Occupation
-> FROM Customers WHERE LastName = "Mehta";
+-----+-----+-----+-----+-----+-----+
| CustomerKey | FirstName | LastName | EmailAddress | HomeOwner | Occupation |
+-----+-----+-----+-----+-----+-----+
| 11007 | MARCO | MEHTA | marco14@learnsector.com | Y | Professional |
| 11399 | BRENDA | MEHTA | brenda17@learnsector.com | Y | Clerical |
| 11426 | KRISTOPHER | MEHTA | kristopher12@learnsector.com | Y | Management |
| 11444 | TINA | MEHTA | tina15@learnsector.com | Y | Professional |
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| 12816 | TAMMY | MEHTA | tammy14@learnsector.com | Y | Manual |
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| 12998 | MAYRA | MEHTA | mayra14@learnsector.com | N | Professional |
| 13080 | DENISE | MEHTA | denise15@learnsector.com | N | Professional |
+-----+-----+-----+-----+-----+
16 rows in set (0.02 sec)
```

```
mysql> SELECT CustomerKey , FirstName , LastName , EmailAddress , HomeOwner, Occupation
-> FROM CustomerDetails WHERE LastName = "Mehta";
+-----+-----+-----+-----+-----+-----+
| CustomerKey | FirstName | LastName | EmailAddress | HomeOwner | Occupation |
+-----+-----+-----+-----+-----+-----+
| 11007 | MARCO | MEHTA | marco14@learnsector.com | Y | Professional |
| 11399 | BRENDA | MEHTA | brenda17@learnsector.com | Y | Clerical |
| 11426 | KRISTOPHER | MEHTA | kristopher12@learnsector.com | Y | Management |
| 11444 | TINA | MEHTA | tina15@learnsector.com | Y | Professional |
| 11450 | BRETT | MEHTA | brett13@learnsector.com | Y | Management |
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| 12998 | MAYRA | MEHTA | mayra14@learnsector.com | N | Professional |
| 13080 | DENISE | MEHTA | denise15@learnsector.com | N | Professional |
+-----+-----+-----+-----+-----+
```

Note: Where Clause in update command is very crucial, if you skip where clause it will update the complete column, which means loss of information/insights.

```

mysql> UPDATE CustomerDetails
-> SET EmailAddress = "Mehta@learnsector"
-> WHERE LastName = "Mehta";
Query OK, 16 rows affected (0.13 sec)
Rows matched: 16  Changed: 16  Warnings: 0

mysql> SELECT CustomerKey , FirstName , LastName , EmailAddress , HomeOwner , Occupation
-> FROM CustomerDetails WHERE LastName = "Mehta";
+-----+-----+-----+-----+-----+-----+
| CustomerKey | FirstName | LastName | EmailAddress | HomeOwner | Occupation |
+-----+-----+-----+-----+-----+-----+
| 11007 | MARCO | MEHTA | Mehta@learnsector | Y | Professional |
| 11399 | BRENDA | MEHTA | Mehta@learnsector | Y | Clerical |
| 11426 | KRISTOPHER | MEHTA | Mehta@learnsector | Y | Management |
| 11444 | TINA | MEHTA | Mehta@learnsector | Y | Professional |
| 11450 | BRETT | MEHTA | Mehta@learnsector | Y | Management |
| 11588 | CANDACE | MEHTA | Mehta@learnsector | N | Clerical |
| 11761 | EDGAR | MEHTA | Mehta@learnsector | Y | Professional |
| 12180 | HOLLY | MEHTA | Mehta@learnsector | Y | Management |
| 12322 | KARI | MEHTA | Mehta@learnsector | Y | Professional |
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| 12998 | MAYRA | MEHTA | Mehta@learnsector | N | Professional |
| 13080 | DENISE | MEHTA | Mehta@learnsector | N | Professional |
+-----+-----+-----+-----+-----+-----+
16 rows in set (0.01 sec)

```

```

mysql> SELECT DISTINCT HomeOwner FROM CustomerDetails;
+-----+
| HomeOwner |
+-----+
| Y |
| N |
+-----+
2 rows in set (0.41 sec)

```

```

mysql> UPDATE CustomerDetails
-> SET HomeOwner = "Y";
Query OK, 558 rows affected (0.05 sec)
Rows matched: 2062  Changed: 558  Warnings: 0

mysql> SELECT DISTINCT HomeOwner FROM CustomerDetails;
+-----+
| HomeOwner |
+-----+
| Y |
+-----+
1 row in set (0.02 sec)

```

Without Where Clause - #Dangerous

Delete With Where Clause

```

mysql> SELECT CustomerKey FROM CustomerDetails LIMIT 10;
+-----+
| CustomerKey |
+-----+
| 11000 |
| 11001 |
| 11002 |
| 11003 |
| 11004 |
| 11005 |
| 11007 |
| 11008 |
| 11009 |
| 11010 |
+-----+
10 rows in set (0.07 sec)

```

```
mysql> SELECT CustomerKey, FirstName, LastName, EmailAddress , Occupation FROM CustomerDetails LIMIT 10;
+-----+-----+-----+-----+-----+
| CustomerKey | FirstName | LastName | EmailAddress | Occupation |
+-----+-----+-----+-----+
| 11000 | JON       | YANG     | jon24@learnsector.com | Professional |
| 11001 | EUGENE    | HUANG    | eugene10@learnsector.com | Professional |
| 11002 | RUBEN     | TORRES   | ruben35@learnsector.com | Professional |
| 11003 | CHRISTY   | ZHU       | christy12@learnsector.com | Professional |
| 11004 | ELIZABETH | JOHNSON  | elizabeth5@learnsector.com | Professional |
| 11005 | JULIO      | RUIZ     | julio1@learnsector.com | Professional |
| 11007 | MARCO     | MEHTA    | Mehta@learnsector | Professional |
| 11008 | ROBIN     | VERHOFF  | rob4@learnsector.com | Professional |
| 11009 | SHANNON   | CARLSON  | shannon38@learnsector.com | Professional |
| 11010 | JACQUELYN | SUAREZ   | jacquelyn20@learnsector.com | Professional |
+-----+-----+-----+-----+
10 rows in set (0.01 sec)
```

```
mysql> DELETE FROM CustomerDetails
-> WHERE CustomerKey = 11000;
Query OK, 1 row affected (0.69 sec)
```

```
mysql> SELECT CustomerKey, FirstName, LastName, EmailAddress , Occupation FROM CustomerDetails LIMIT 10;
+-----+-----+-----+-----+
| CustomerKey | FirstName | LastName | EmailAddress | Occupation |
+-----+-----+-----+-----+
| 11001 | EUGENE    | HUANG    | eugene10@learnsector.com | Professional |
| 11002 | RUBEN     | TORRES   | ruben35@learnsector.com | Professional |
| 11003 | CHRISTY   | ZHU       | christy12@learnsector.com | Professional |
| 11004 | ELIZABETH | JOHNSON  | elizabeth5@learnsector.com | Professional |
| 11005 | JULIO      | RUIZ     | julio1@learnsector.com | Professional |
| 11007 | MARCO     | MEHTA    | Mehta@learnsector | Professional |
| 11008 | ROBIN     | VERHOFF  | rob4@learnsector.com | Professional |
| 11009 | SHANNON   | CARLSON  | shannon38@learnsector.com | Professional |
| 11010 | JACQUELYN | SUAREZ   | jacquelyn20@learnsector.com | Professional |
| 11011 | CURTIS    | LU        | curtis9@learnsector.com | Professional |
+-----+-----+-----+-----+
10 rows in set (0.00 sec)
```

```
mysql> SELECT CustomerKey , FirstName , LastName , EmailAddress , HomeOwner, Occupation
-> FROM CustomerDetails WHERE LastName = "Mehta";
+-----+-----+-----+-----+-----+-----+
| CustomerKey | FirstName | LastName | EmailAddress | HomeOwner | Occupation |
+-----+-----+-----+-----+-----+
| 11007 | MARCO    | MEHTA    | Mehta@learnsector | Y | Professional |
| 11399 | BRENDA   | MEHTA    | Mehta@learnsector | Y | Clerical |
| 11426 | KRISTOPHER | MEHTA    | Mehta@learnsector | Y | Management |
| 11444 | TINA      | MEHTA    | Mehta@learnsector | Y | Professional |
| 11450 | BRETT     | MEHTA    | Mehta@learnsector | Y | Management |
| 11588 | CANDACE   | MEHTA    | Mehta@learnsector | Y | Clerical |
| 11761 | EDGAR     | MEHTA    | Mehta@learnsector | Y | Professional |
| 12180 | HOLLY     | MEHTA    | Mehta@learnsector | Y | Management |
| 12322 | KARI      | MEHTA    | Mehta@learnsector | Y | Professional |
| 12478 | RUBEN     | MEHTA    | Mehta@learnsector | Y | Manual |
| 12735 | DONALD    | MEHTA    | Mehta@learnsector | Y | Manual |
| 12815 | DOMINIQUE | MEHTA    | Mehta@learnsector | Y | Clerical |
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| 12998 | MAYRA     | MEHTA    | Mehta@learnsector | Y | Professional |
| 13080 | DENISE    | MEHTA    | Mehta@learnsector | Y | Professional |
+-----+-----+-----+-----+-----+
16 rows in set (0.07 sec)
```

```
mysql> DELETE FROM CustomerDetails
-> WHERE LastName = "Mehta";
Query OK, 16 rows affected (0.37 sec)
```

```
mysql> SELECT CustomerKey , FirstName , LastName , EmailAddress , HomeOwner, Occupation
-> FROM CustomerDetails WHERE LastName = "Mehta";
Empty set (0.01 sec)
```

```
mysql> DELETE FROM CustomerDetails ;
Query OK, 2045 rows affected (0.04 sec)

mysql> SELECT * FROM CustomerDetails;
Empty set (0.05 sec)
```

```
mysql> DESC CustomerDetails;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| CustomerKey | int | YES | | NULL | |
| Prefix | text | YES | | NULL | |
| FirstName | text | YES | | NULL | |
| LastName | text | YES | | NULL | |
| BirthDate | text | YES | | NULL | |
| MyUnknownColumn | text | YES | | NULL | |
| MaritalStatus | text | YES | | NULL | |
| Gender | text | YES | | NULL | |
| EmailAddress | text | YES | | NULL | |
| AnnualIncome | text | YES | | NULL | |
| TotalChildren | int | YES | | NULL | |
| EducationLevel | text | YES | | NULL | |
| Occupation | text | YES | | NULL | |
| HomeOwner | text | YES | | NULL | |
| Phone_number | bigint | YES | | NULL | |
+-----+-----+-----+-----+-----+-----+
15 rows in set (0.16 sec)

mysql> SHOW TABLES;
+-----+
| Tables_in_bike_shop |
+-----+
| customerdetails |
| customers |
| employees |
| products |
+-----+
4 rows in set (0.04 sec)
```

```
mysql> DROP TABLE CustomerDetails;
Query OK, 0 rows affected (0.10 sec)

mysql> DESC CustomerDetails;
ERROR 1146 (42S02): Table 'bike_shop.customerdetails' doesn't exist
mysql> SHOW TABLES;
+-----+
| Tables_in_bike_shop |
+-----+
| customers |
| employees |
| products |
+-----+
3 rows in set (0.00 sec)
```

Data Definition Language [DDL] - DROP/TRUNCATE [Removing the table]

Data Manipulation Language [DML] - CRUD [Delete] [Removing the table data]

NULL VS Empty

where ColumnName = "NULL"; [Null means something that doesn't exist]
IS NULL / IS NOT NULL.

There is a space that can be filled with something.

CustomerKey	Prefix	FirstName	LastName	EmailAddress	HomeOwner	Occupation
11025	NULL	ALEJANDRO	BECK	alejandro45@learnsector.com	Y	Clerical
11035	WENDY	DOMINGUEZ		wendy12@learnsector.com	Y	Clerical
11082	ANGELA	BUTLER		angela17@learnsector.com	N	Management
11234	ANNA	GRIFFIN		anna46@learnsector.com	Y	Professional
11475	CESAR	SUBRAM		cesar12@learnsector.com	N	Manual
11526	KATHERINE	DIAZ		katherine48@learnsector.com	Y	Clerical
11623	ANGELA	PERRY		angela10@learnsector.com	Y	Skilled Manual
11643	NAOMI	MUNOZ		naomi7@learnsector.com	Y	Skilled Manual
11965	KATIE	SHE		katie3@learnsector.com	Y	Skilled Manual
12276	ALISHA	SHAN		alisha34@learnsector.com	Y	Clerical
12283	TODD	ZENG		todd19@learnsector.com	Y	Manual
12300	ADRIANA	GONZALEZ		adriana19@learnsector.com	Y	Professional
12372	DARREN	PRASAD		darren12@learnsector.com	N	Professional
12446	JASMINE	HALL		jasmine21@learnsector.com	Y	Clerical
12517	ALEXA	WATSON		alexa9@learnsector.com	N	Clerical
12765	ROBYN	GILL		robyn11@learnsector.com	N	Manual
12790	BRANDON	KUMAR		brandon25@learnsector.com	Y	Skilled Manual
12936	RENEE	MORENO		renee6@learnsector.com	Y	Professional

18 rows in set (0.00 sec)

having a space, but doesn't assign with some value.

```
mysql> SELECT CustomerKey , Prefix , FirstName , LastName , EmailAddress , HomeOwner , Occupation  
-> FROM Customers WHERE Prefix = "";
```

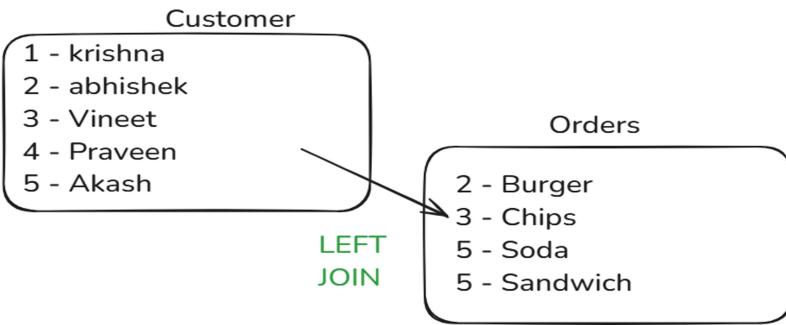
Empty set (0.05 sec)

```
mysql> UPDATE Customers  
-> SET Prefix = NULL  
-> WHERE Prefix = "";  
Query OK, 18 rows affected (0.18 sec)  
Rows matched: 18 Changed: 18 Warnings: 0
```

```
mysql> SELECT CustomerKey , Prefix , FirstName , LastName , EmailAddress , HomeOwner , Occupation  
-> FROM Customers WHERE Prefix = "";  
Empty set (0.01 sec)
```

CustomerKey	Prefix	FirstName	LastName	EmailAddress	HomeOwner	Occupation
11025	NULL	ALEJANDRO	BECK	alejandro45@learnsector.com	Y	Clerical
11035	NULL	WENDY	DOMINGUEZ	wendy12@learnsector.com	Y	Clerical
11082	NULL	ANGELA	BUTLER	angela17@learnsector.com	N	Management
11234	NULL	ANNA	GRIFFIN	anna46@learnsector.com	Y	Professional
11475	NULL	CESAR	SUBRAM	cesar12@learnsector.com	N	Manual
11526	NULL	KATHERINE	DIAZ	katherine48@learnsector.com	Y	Clerical
11623	NULL	ANGELA	PERRY	angela10@learnsector.com	Y	Skilled Manual
11643	NULL	NAOMI	MUNOZ	naomi7@learnsector.com	Y	Skilled Manual
11965	NULL	KATIE	SHE	katie3@learnsector.com	Y	Skilled Manual
12276	NULL	ALISHA	SHAN	alisha34@learnsector.com	Y	Clerical
12283	NULL	TODD	ZENG	todd19@learnsector.com	Y	Manual
12300	NULL	ADRIANA	GONZALEZ	adriana19@learnsector.com	Y	Professional
12372	NULL	DARREN	PRASAD	darren12@learnsector.com	N	Professional
12446	NULL	JASMINE	HALL	jasmine21@learnsector.com	Y	Clerical
12517	NULL	ALEXA	WATSON	alexa9@learnsector.com	N	Clerical
12765	NULL	ROBYN	GILL	robyn11@learnsector.com	N	Manual
12790	NULL	BRANDON	KUMAR	brandon25@learnsector.com	Y	Skilled Manual
12936	NULL	RENEE	MORENO	renee6@learnsector.com	Y	Professional

18 rows in set (0.01 sec)



1 - Krishna - NULL
 2 - Abhishek - Burger
 3 - Vineet - Chips
 4 - Praveen - NULL
 5 - Akash - Soda
 5 - Akash - Sandwich

```
18 rows in set (0.01 sec)

mysql> SELECT Count(*) FROM Customers;
+-----+
| Count(*) |
+-----+
| 2062 |
+-----+
1 row in set (0.16 sec)

mysql> SELECT CustomerKey , Prefix , FirstName , LastName , EmailAddress , HomeOwner , Occupation
-> FROM Customers WHERE Prefix IS NOT NULL;
+-----+-----+-----+-----+-----+-----+-----+
| CustomerKey | Prefix | FirstName | LastName | EmailAddress | HomeOwner | Occupa
+-----+-----+-----+-----+-----+-----+-----+
2044 rows in set (0.01 sec)
```

ALTER Command

Alter command will manipulate the constraints or the structure of a table.

```
mysql> DESC Customers;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| CustomerKey | int | YES | NULL | NULL | |
| Prefix | text | YES | NULL | NULL | |
| FirstName | text | YES | NULL | NULL | |
| LastName | text | YES | NULL | NULL | |
| BirthDate | text | YES | NULL | NULL | |
| MyUnknownColumn | text | YES | NULL | NULL | |
| MaritalStatus | text | YES | NULL | NULL | |
| Gender | text | YES | NULL | NULL | |
| EmailAddress | text | YES | NULL | NULL | |
| AnnualIncome | text | YES | NULL | NULL | |
| TotalChildren | int | YES | NULL | NULL | |
| EducationLevel | text | YES | NULL | NULL | |
| Occupation | text | YES | NULL | NULL | |
| HomeOwner | text | YES | NULL | NULL | |
| Phone_number | bigint | YES | NULL | NULL | |
+-----+-----+-----+-----+-----+-----+
15 rows in set (0.07 sec)
```

CustomerKey - P.K

```
mysql> ALTER TABLE Customers  
      -> ADD PRIMARY KEY(CustomerKey);  
Query OK, 0 rows affected (0.19 sec)  
Records: 0  Duplicates: 0  Warnings: 0
```

```
mysql> DESC Customers;  
+-----+-----+-----+-----+-----+-----+  
| Field      | Type   | Null  | Key   | Default | Extra  |  
+-----+-----+-----+-----+-----+-----+  
| CustomerKey | int    | NO    | PRI   | NULL    |        |  
| Prefix      | text   | YES   |       | NULL    |        |  
| FirstName   | text   | YES   |       | NULL    |        |  
| LastName    | text   | YES   |       | NULL    |        |  
| BirthDate   | text   | YES   |       | NULL    |        |  
| MyUnknownColumn | text   | YES   |       | NULL    |        |  
| MaritalStatus | text   | YES   |       | NULL    |        |  
| Gender      | text   | YES   |       | NULL    |        |  
| EmailAddress | text   | YES   |       | NULL    |        |  
| AnnualIncome | text   | YES   |       | NULL    |        |  
| TotalChildren | int    | YES   |       | NULL    |        |  
| EducationLevel | text   | YES   |       | NULL    |        |  
| Occupation   | text   | YES   |       | NULL    |        |  
| HomeOwner    | text   | YES   |       | NULL    |        |  
| Phone_number | bigint | YES   |       | NULL    |        |  
+-----+-----+-----+-----+-----+-----+  
15 rows in set (0.00 sec)
```

```
-- ALTER COMMAND  
ALTER TABLE Customers  
ADD PRIMARY KEY(CustomerKey);
```

alter_option: {
 table_options
 | ADD [COLUMN] col_name column_definition

For making the concepts easy -
Always write column in the syntax.

Optional

| RENAME COLUMN old_col_name TO new_col_name

Not Optional

| ADD [COLUMN] col_name column_definition
 [FIRST | AFTER col_name]

Before / After [Column Name] - To specify the location.

```

mysql> ALTER TABLE Customers
-> ADD COLUMN COUNTRY VARCHAR(50);
Query OK, 0 rows affected (0.05 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> DESC Customers;
+-----+-----+-----+-----+-----+-----+
| Field | Type  | Null | Key  | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| CustomerKey | int    | NO   | PRI   | NULL    |       |
| Prefix      | text   | YES  |       | NULL    |       |
| FirstName   | text   | YES  |       | NULL    |       |
| LastName    | text   | YES  |       | NULL    |       |
| BirthDate   | text   | YES  |       | NULL    |       |
| MyUnknownColumn | text   | YES  |       | NULL    |       |
| MaritalStatus | text   | YES  |       | NULL    |       |
| Gender      | text   | YES  |       | NULL    |       |
| EmailAddress | text   | YES  |       | NULL    |       |
| AnnualIncome | text   | YES  |       | NULL    |       |
| TotalChildren | int    | YES  |       | NULL    |       |
| EducationLevel | text   | YES  |       | NULL    |       |
| Occupation   | text   | YES  |       | NULL    |       |
| HomeOwner    | text   | YES  |       | NULL    |       |
| Phone_number | bigint | YES  |       | NULL    |       |
+-----+-----+-----+-----+-----+-----+
16 rows in set (0.01 sec)

```

```

mysql> ALTER TABLE Customers
-> DROP COLUMN COUNTRY;
Query OK, 0 rows affected (0.02 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> DESC Customers;
+-----+-----+-----+-----+-----+-----+
| Field | Type  | Null | Key  | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| CustomerKey | int    | NO   | PRI   | NULL    |       |
| Prefix      | text   | YES  |       | NULL    |       |
| FirstName   | text   | YES  |       | NULL    |       |
| LastName    | text   | YES  |       | NULL    |       |
| BirthDate   | text   | YES  |       | NULL    |       |
| MyUnknownColumn | text   | YES  |       | NULL    |       |
| MaritalStatus | text   | YES  |       | NULL    |       |
| Gender      | text   | YES  |       | NULL    |       |
| EmailAddress | text   | YES  |       | NULL    |       |
| AnnualIncome | text   | YES  |       | NULL    |       |
| TotalChildren | int    | YES  |       | NULL    |       |
| EducationLevel | text   | YES  |       | NULL    |       |
| Occupation   | text   | YES  |       | NULL    |       |
| HomeOwner    | text   | YES  |       | NULL    |       |
| Phone_number | bigint | YES  |       | NULL    |       |
+-----+-----+-----+-----+-----+-----+
15 rows in set (0.00 sec)

```

```

mysql> ALTER TABLE Customers
-> ADD COLUMN COUNTRY VARCHAR(50)
-> FIRST;
Query OK, 0 rows affected (0.02 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> DESC Customers;
+-----+-----+-----+-----+-----+-----+
| Field | Type  | Null | Key  | Default | Extra |
+-----+-----+-----+-----+-----+-----+
+-----+-----+-----+-----+-----+-----+
| COUNTRY | varchar(50) | YES |       | NULL    |       |
| CustomerKey | int    | NO   | PRI   | NULL    |       |
| Prefix      | text   | YES  |       | NULL    |       |
| FirstName   | text   | YES  |       | NULL    |       |
| LastName    | text   | YES  |       | NULL    |       |
| BirthDate   | text   | YES  |       | NULL    |       |
| MyUnknownColumn | text   | YES  |       | NULL    |       |
| MaritalStatus | text   | YES  |       | NULL    |       |
| Gender      | text   | YES  |       | NULL    |       |
| EmailAddress | text   | YES  |       | NULL    |       |
| AnnualIncome | text   | YES  |       | NULL    |       |
| TotalChildren | int    | YES  |       | NULL    |       |
| EducationLevel | text   | YES  |       | NULL    |       |
| Occupation   | text   | YES  |       | NULL    |       |
| HomeOwner    | text   | YES  |       | NULL    |       |
| Phone_number | bigint | YES  |       | NULL    |       |
+-----+-----+-----+-----+-----+-----+
16 rows in set (0.00 sec)

```

DROP

```
mysql> ALTER TABLE Customers
-> ADD COLUMN COUNTRY VARCHAR(50)
-> AFTER MaritalStatus;
Query OK, 0 rows affected (0.03 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> DESC Customers;
+-----+-----+-----+-----+-----+-----+
| Field | Type   | Null | Key  | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| CustomerKey | int    | NO   | PRI   | NULL    |       |
| Prefix      | text   | YES  |       | NULL    |       |
| FirstName   | text   | YES  |       | NULL    |       |
| LastName    | text   | YES  |       | NULL    |       |
| BirthDate   | text   | YES  |       | NULL    |       |
| MyUnknownColumn | text   | YES  |       | NULL    |       |
| MaritalStatus | text   | YES  |       | NULL    |       |
| COUNTRY     | varchar(50) | YES  |       | NULL    |       |
| Gender      | text   | YES  |       | NULL    |       |
| EmailAddress | text   | YES  |       | NULL    |       |
| AnnualIncome | text   | YES  |       | NULL    |       |
| TotalChildren | int    | YES  |       | NULL    |       |
| EducationLevel | text   | YES  |       | NULL    |       |
| Occupation   | text   | YES  |       | NULL    |       |
| HomeOwner    | text   | YES  |       | NULL    |       |
| Phone_number | bigint | YES  |       | NULL    |       |
+-----+-----+-----+-----+-----+-----+
16 rows in set (0.00 sec)
```

<https://dev.mysql.com/doc/refman/8.4/en/alter-table.html>