SQL - FOREIGN KEY

A foreign key is a key used to link two tables together. This is sometimes called a referencing key.

Primary key field from one table and insert it into the other table where it becomes a foreign key ie. Foreign Key is a column or a combination of columns whose values match a Primary Key in a different table.

The relationship between 2 tables matches the Primary Key in one of the tables with a Foreign Key in the second table.

If a table has a primary key defined on any field(s) then you can not have two records having the same value of that field(s).

Example:

Consider the structure of the two tables as follows:

CUSTOMERS table:

```
CREATE TABLE CUSTOMERS(
      ID    INT            NOT NULL,
      NAME VARCHAR (20)    NOT NULL,
      AGE   INT            NOT NULL,
      ADDRESS  CHAR (25) ,
      SALARY   DECIMAL (18, 2),
      PRIMARY KEY (ID)
);
```

ORDERS table:

```
CREATE TABLE ORDERS (
      ID          INT        NOT NULL,
      DATE        DATETIME,
      CUSTOMER_ID INT references CUSTOMERS(ID),
      AMOUNT      double,
      PRIMARY KEY (ID)
);
```

If ORDERS table has already been created, and the foreign key has not yet been, use the syntax for specifying a foreign key by altering a table.

```
ALTER TABLE ORDERS
   ADD FOREIGN KEY (Customer_ID) REFERENCES CUSTOMERS (ID);
```

DROP a FOREIGN KEY Constraint:

To drop a FOREIGN KEY constraint, use the following SQL:

```
ALTER TABLE ORDERS
   DROP FOREIGN KEY;
```