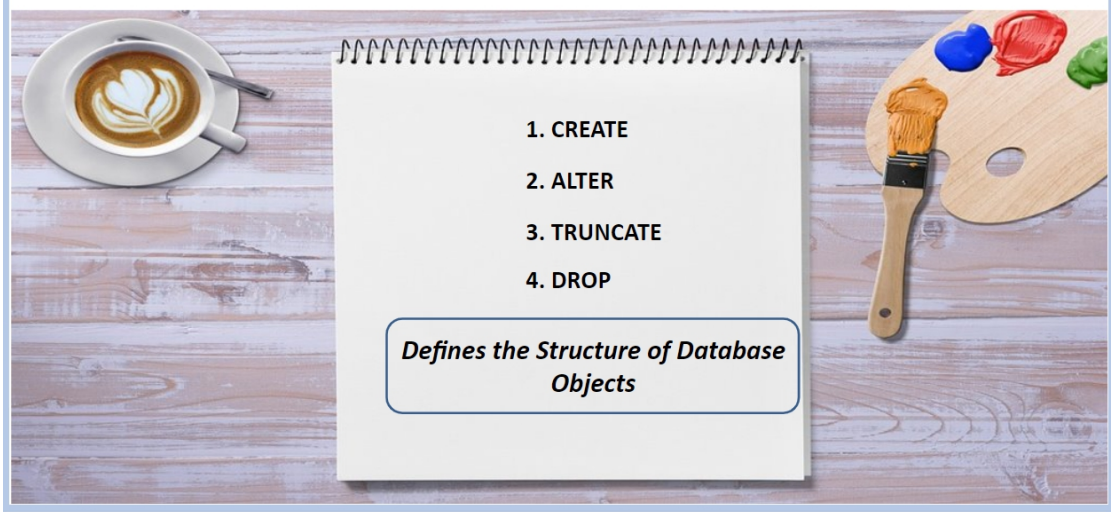
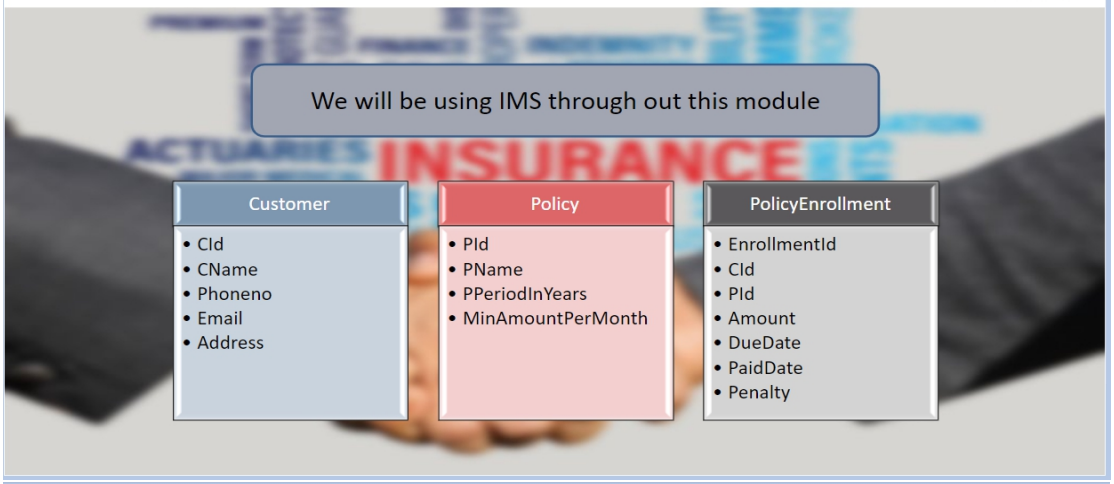
DATA DEFINITION LANGUAGE



INSURANCE MANAGEMENT SYSTEM(IMS)



SAMPLE RECORDS

CID	CNAME	PHONENO	DOB	EMAILID	ADDRESS
1	Tom	9876523190	17-MAR-87	tom@gmail.com	chennai
2	John	8765432190	26-JAN-86	john@yahoo.com	delhi
3	Ram	7654321890	14-DEC-85	ram@gmail.com	pune
4	Tiny	9012365478	28-MAY-86	NULL	chennai

Customer

PID	PNAME	PPERIODINYEARS	MINAMOUNTPERMONTH
MBP	Money Back Plan	20	1000
PP	Personal Protect	15	1500

Policy

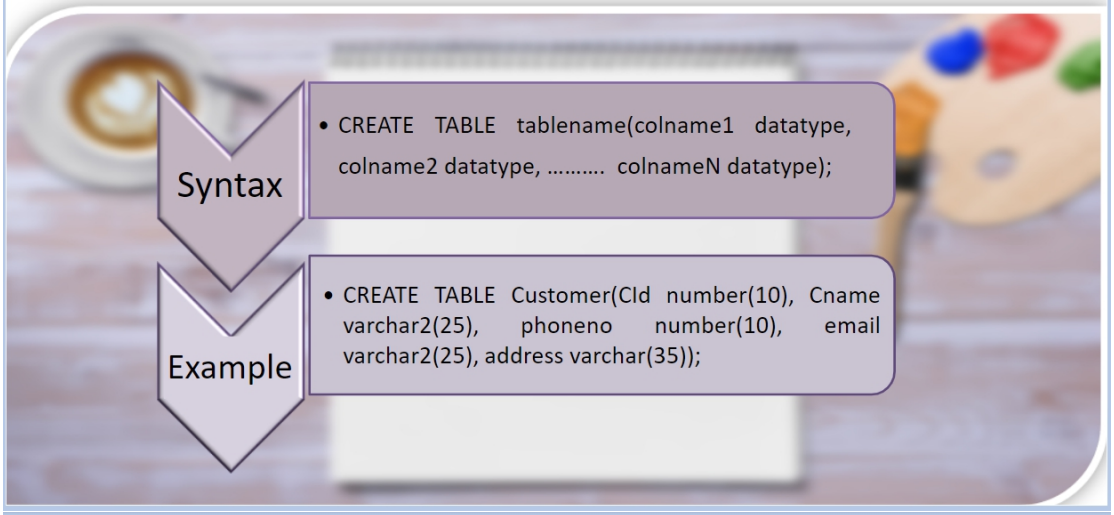
ENROLLMENTID	CID	PID	DUEDATE	PAIDDATE	AMOUNT	PENALTY
101	3	MBP	12-Dec-2017	11-Dec-2017	2000	0
102	1	PP	15-Mar-2018	13-Mar-2018	3000	0
103	2	PP	15-Feb-2018	22-Feb-2018	4000	200

PolicyEnrollment

DATA TYPES

DATATYPE	TYPE OF DATA	COLUMN DEFINITION	DESCRIPTION
Varchar2(size)	'John', 'Tom123' 'Alex@#'	NAME VARCHAR2(5)	When column 'NAME' stores data 'John' it occupies a size of 4 characters even though the column is created with a size of 5.
Char(size)	'John', 'Tom123' 'Alex@#'	NAME CHAR(5)	When column 'NAME' stores data 'John' it occupies the size of 5 characters even though the data has 4 characters.
Number(p)	123 45678	PHONENO NUMBER(8)	Column 'PHONENO' can store a number with maximum digit size of 8. Error will occur when the number of digit exceeds than specified size.
Number(p,s)	789.453 3.14	SALARY NUMBER(8,2)	Column Salary can store a value of 8 digits in which 2 digits should come after the decimal point.
Date	'17-Oct-20'	BIRTHDATE DATE	Date values are in the format 'DD -Mon-YY'. Column 'BIRTHDATE' will store date values.

CREATE A TABLE



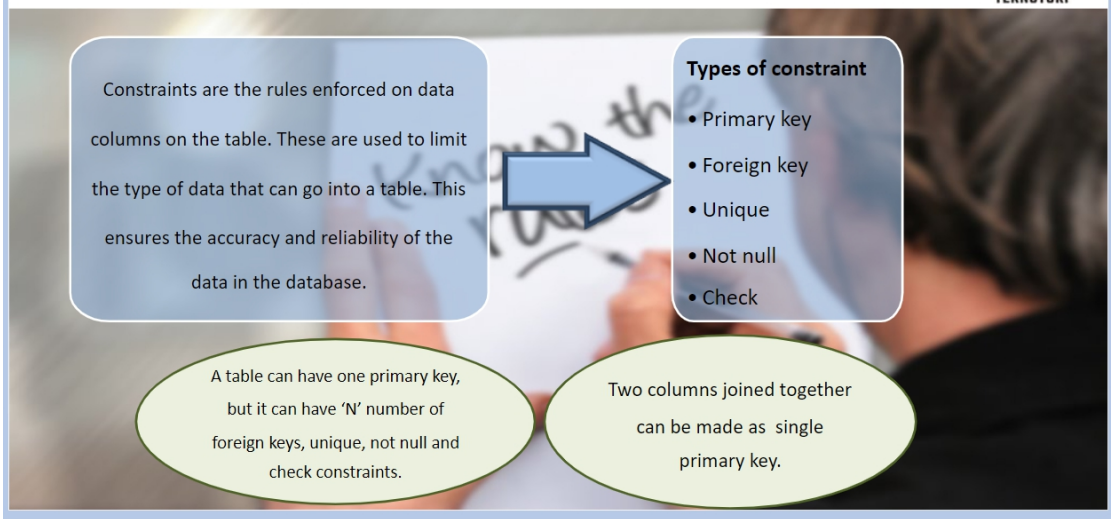
NAMING CONVENTION

- Only letters, numbers and underscore are allowed in names
- Provides a meaningful table name.

- Asdkjad
- Employee details
- 123

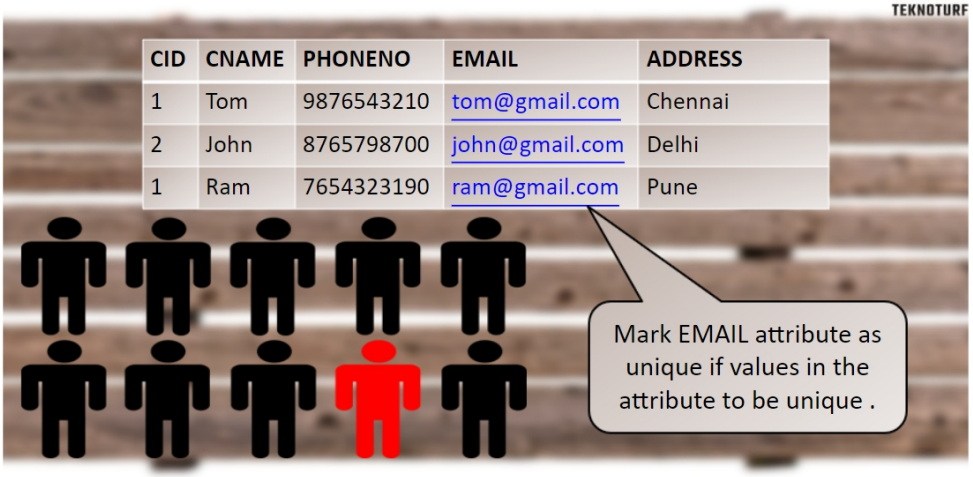
- Employee_Details
- Employee
- Employee_V1

CONSTRAINT

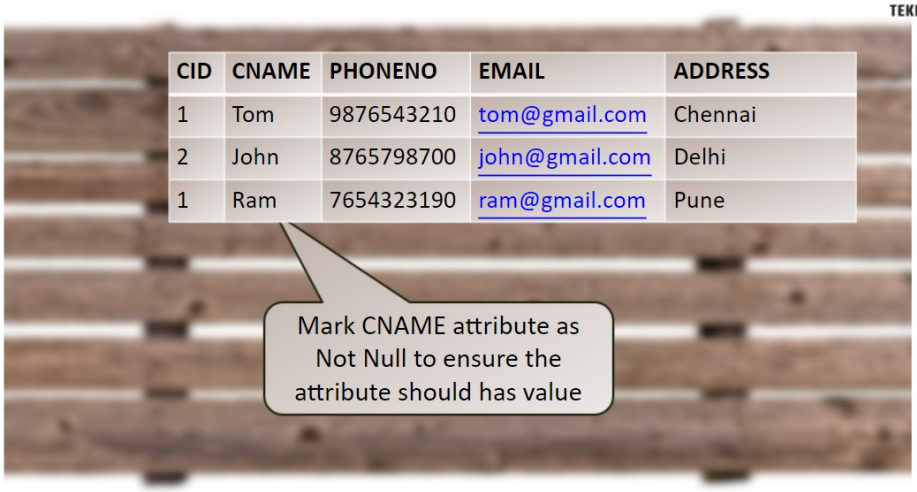


PRIMARY KEY

UNIQUE



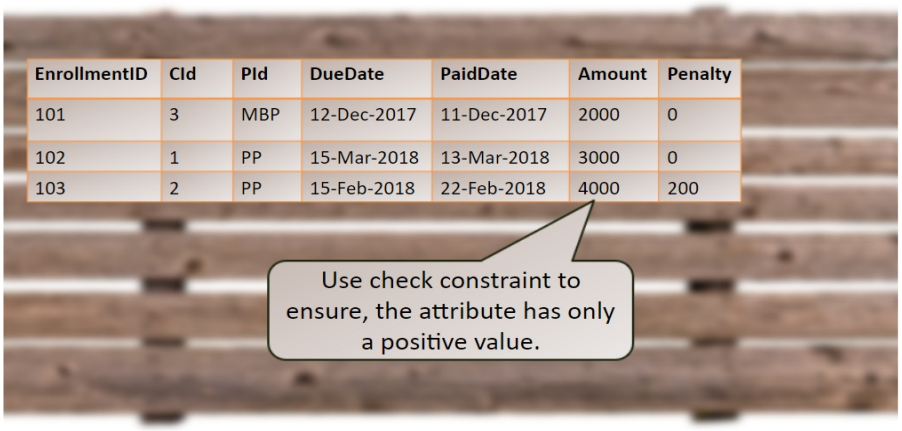
NOT NULL



CID	CNAME	PHONENO	EMAIL	ADDRESS
1	Tom	9876543210	tom@gmail.com	Chennai
2	John	8765798700	john@gmail.com	Delhi
1	Ram	7654323190	ram@gmail.com	Pune

Mark CNAME attribute as Not Null to ensure the attribute should has value

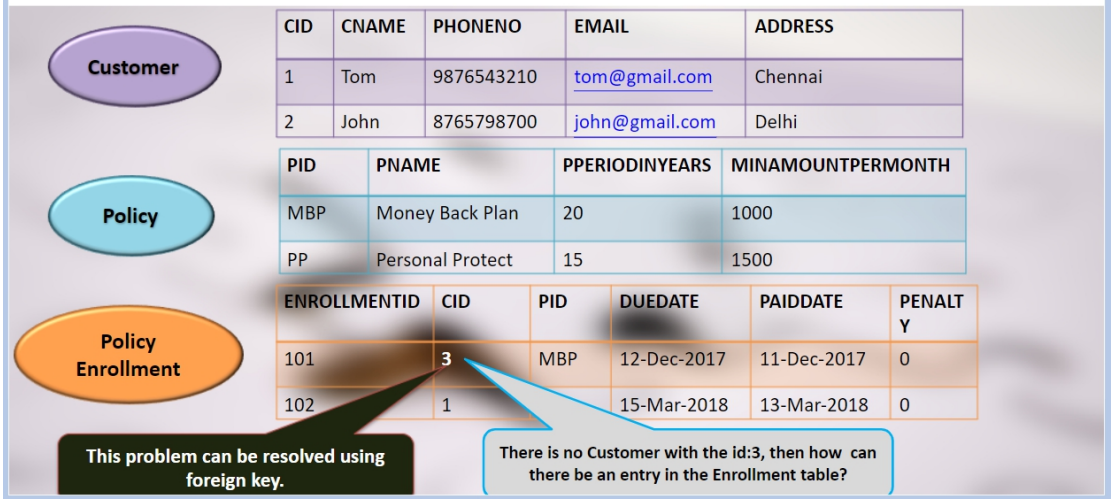
CHECK



EnrollmentID	CId	PId	DueDate	PaidDate	Amount	Penalty
101	3	MBP	12-Dec-2017	11-Dec-2017	2000	0
102	1	PP	15-Mar-2018	13-Mar-2018	3000	0
103	2	PP	15-Feb-2018	22-Feb-2018	4000	200

Use check constraint to ensure, the attribute has only a positive value.

FOREIGN KEY



Customer

CID	CNAME	PHONENO	EMAIL	ADDRESS
1	Tom	9876543210	tom@gmail.com	Chennai
2	John	8765798700	john@gmail.com	Delhi

Policy

PID	PNAME	PPERIODINYEARS	MINAMOUNTPERMONTH
MBP	Money Back Plan	20	1000
PP	Personal Protect	15	1500

Policy Enrollment

ENROLLMENTID	CID	PID	DUEDATE	PAIDDATE	PENALTY
101	3	MBP	12-Dec-2017	11-Dec-2017	0
102	1		15-Mar-2018	13-Mar-2018	0

This problem can be resolved using foreign key.

There is no Customer with the id:3, then how can there be an entry in the Enrollment table?

FOREIGN KEY

- Foreign key is used to enforce the link between tables.
- The referenced table is called the ***parent table*** while the table with the foreign key is called the ***child table.***
- The primary or unique column of the parent table can be created as the foreign key column in the child table.

ENROLLMENTID	CID	PID	DUEDATE	PAIDDATE	PENALTY
101	3 ✖	MBP	12-Dec-2017	11-Dec-2017	0
102	1	PP	15-Mar-2018	13-Mar-2018	0

We can mark ***CId*** and ***PId*** as foreign keys to ensure integrity.

PRIMARY AND FOREIGN KEY

CID	CNAME	PHONENO	EMAIL	ADDRESS
1	Tom	9876543210	tom@gmail.com	Chennai
2	John	8765798700	john@gmail.com	Delhi

Foreign Key

ENROLLMENTID	CID	PID	DUEDATE	PAIDDATE	PENALTY
101	1	MBP	12-Dec-2017	11-Dec-2017	0
102	1	PP	15-Mar-2018	13-Mar-2018	0

Foreign Key

PID	PNAME	PPERIODINYEARS	MINAMOUNTPERMONTH
MBP	Money Back Plan	20	1000
PP	Personal Protect	15	1500

CREATE TABLE WITH CONSTRAINTS

```
CREATE TABLE Customer(Cid number(10)PRIMARY KEY, CName varchar2(25)NOT NULL, phoneno number(10),email varchar2(25)UNIQUE);
```

```
CREATE TABLE Policy(Pid varchar2(10)PRIMARY KEY, Pname varchar2(25), PPeriodInYears varchar2(25) NOT NULL, MinAmount number(10)CHECK (MinAmount>0));
```


```
CREATE TABLE PolicyEnrollment(EnrollmentId number(5) PRIMARY KEY, Cid number(10) REFERENCES customer(Cid),Pid varchar2(10), Duedate date, Paiddate date, penalty number(10));
```

CONSTRAINT NAME

- On creating a table with a constraint, oracle provides default name to it.
- The constraint names are stored in the built in table called "**USER_CONSTRAINTS**".
- User can override the default constraint name with the user defined constraint name.
- Example:

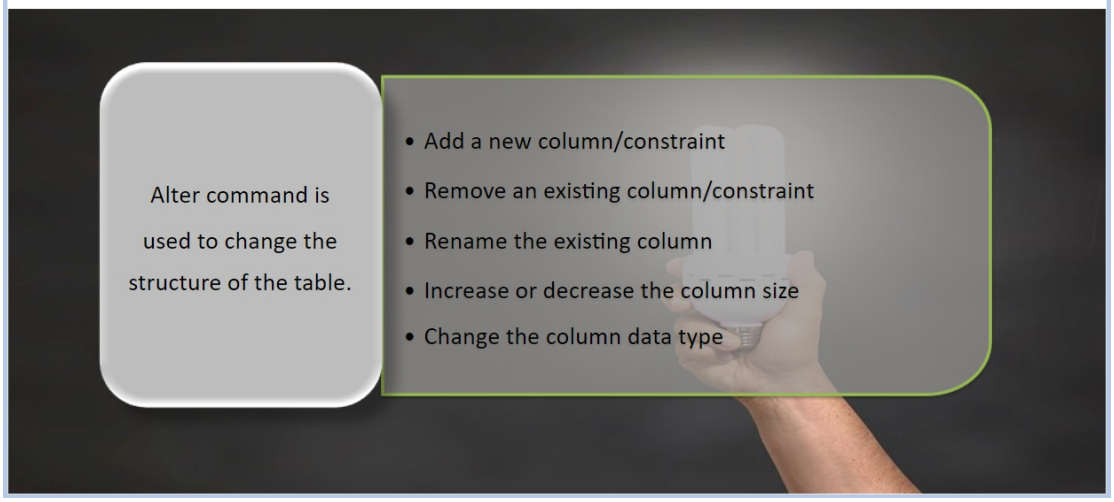
CREATE TABLE Policy(Pid varchar2(10) **CONSTRAINT pk_pid** primary key, Pname varchar2(25), PPeriodInYears varchar2(25) Not Null, MinAmount number(10) **CONSTRAINT ck_minamount** check (MinAmount>0));

ALTER

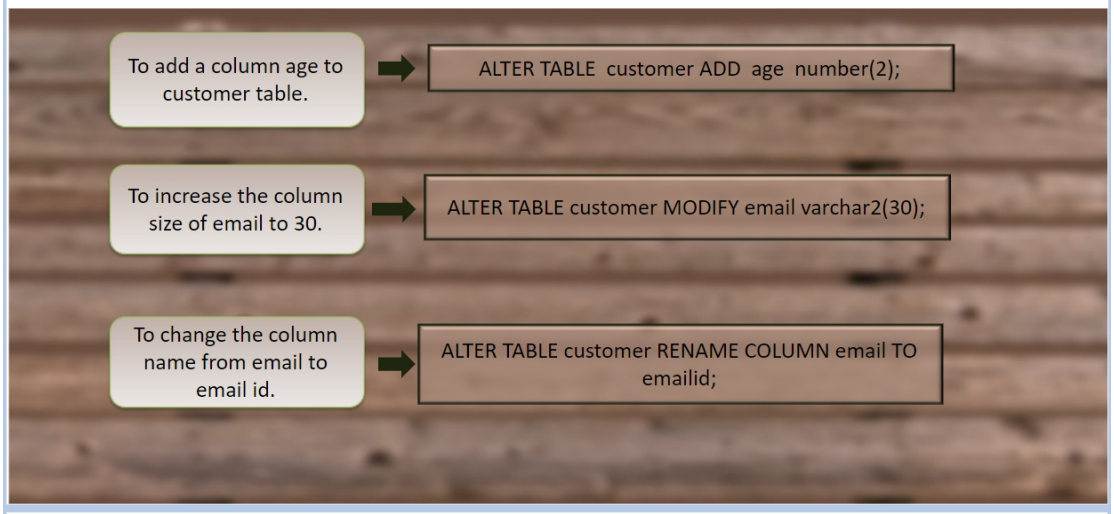
CREATE TABLE PolicyEnrollment(EnrollmentId number(5) primary key, Cid number(10) references customer(Cid),Pid varchar2(10), Duedate date, Paiddate date, penalty number(10));

Alter table PolicyEnrollment add foreign key(Pid) references Policy(Pid);

ALTER



ALTER - EXAMPLE



ALTER - SYNTAX

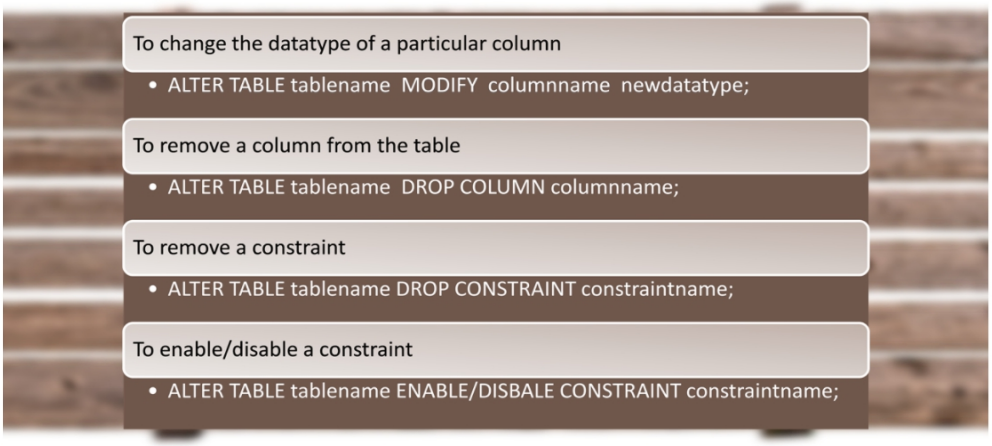
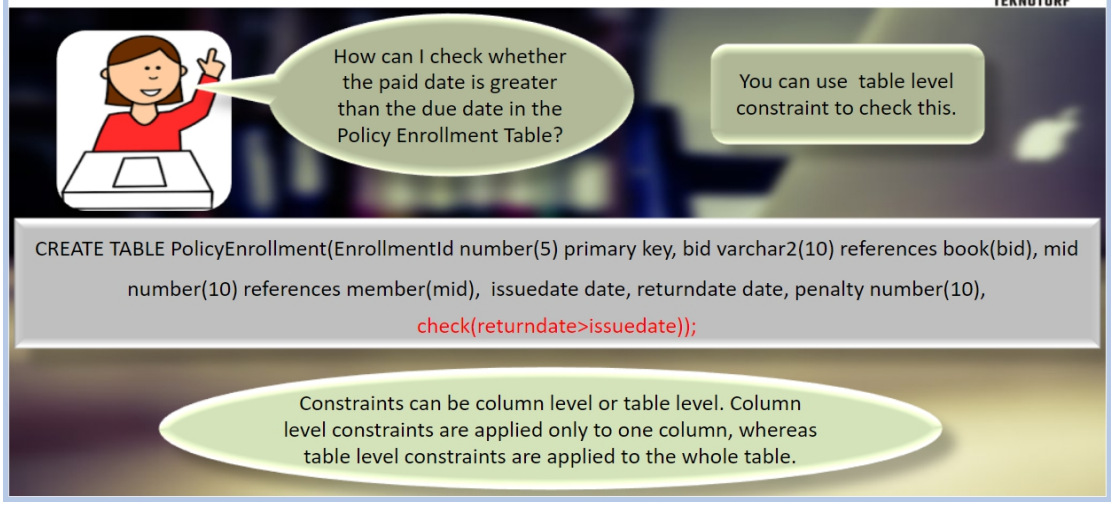


TABLE LEVEL CONSTRAINT



TRUNCATE

Removes all rows from the table

Restriction

- You cannot truncate the table if it is linked with another table

Syntax

- TRUNCATE TABLE <Table_name>;

Example

- TRUNCATE TABLE Customer;

DROP

Drops the entire table structure

Syntax

- DROP TABLE <TABLE_NAME>

Example

- DROP TABLE Customer;

TRUNCATE VS DROP

Table

Table after truncate

Table after drop

In truncate only the data is removed,
whereas,
in drop the entire structure is removed.