Different Type of Keys…

Candidate Key

- A Candidate key is an attribute or set of attributes that uniquely identifies a record.

- Table can have multiple candidate keys.

- Among the set of candidate, one candidate key is chosen as Primary Key.

StudentID	Name	Class	DOB	Email
1001	John	1st Year	01-08-2008	john1@mycollege.com
1002	Edward	3rd Year	04-12-2005	edward@mycollege.com
1003	Peter	4th Year	03-09-2003	peter@mycollege.com
1004	Smith	2nd Year	09-30-2006	smith@mycollege.com
1005	John	1st Year	01-17-2007	john2@mycollege.com

studentInfo Table

Primary Key

- Primary key is a set of one or more fields (columns) of a table that uniquely identify a record in database table.

- A table can have only one primary key and one candidate key can select as a primary key.

- The primary key should be chosen such that its attributes are never or rarely changed.

- Cannot contain "**NULL**".

- Primary key field contain a clustered index.

StudentID	Name	Class	DOB	Email
1001	John	1st Year	01-08-2008	john1@mycollege.com
1002	Edward	3rd Year	04-12-2005	edward@mycollege.com
1003	Peter	4th Year	03-09-2003	peter@mycollege.com
1004	Smith	2nd Year	09-30-2006	smith@mycollege.com
1005	John	1st Year	01-17-2007	john2@mycollege.com

studentInfo Table

Secondary Key

- Candidate keys that are not selected as primary key.

- Can also work as a primary key.

- Also called Alternate key.

StudentID	Name	Class	DOB	Email
1001	John	1st Year	01-08-2008	john1@mycollege.com
1002	Edward	3rd Year	04-12-2005	edward@mycollege.com
1003	Peter	4th Year	03-09-2003	peter@mycollege.com
1004	Smith	2nd Year	09-30-2006	smith@mycollege.com
1005	John	1st Year	01-17-2007	john2@mycollege.com

studentInfo Table

Unique Key:

- A unique key is a set of one or more attribute that can be used to uniquely identify the records in table.

- Unique key is similar to primary key but unique key field can contain a "**Null**" value but primary key doesn't allow "**Null**" value.

- Unique field contain a non-clustered index.

StudentID	Name	Class	DOB	Email
1001	John	1st Year	01-08-2008	john1@mycollege.com
1002	Edward	3rd Year	04-12-2005	edward@mycollege.com
1002	Peter	4th Year	03-09-2003	peter@mycollege.com
1004	Smith	2nd Year	09-30-2006	smith@mycollege.com
1005	John	1st Year	01-17-2007	john2@mycollege.com

studentInfo Table

Composite Key:

- Composite key is a combination of more than one attributes that can be used to uniquely identity each record.

- A composite key may be a candidate or primary key.

StudentID	Name	Class	DOB	Email
1001	John	1st Year	01-08-2008	john1@mycollege.com
1002	Edward	3rd Year	04-12-2005	edward@mycollege.com
1003	Peter	4th Year	03-09-2003	peter@mycollege.com
1004	Smith	2nd Year	09-30-2006	smith@mycollege.com
1005	John	1st Year	01-17-2007	john2@mycollege.com

studentInfo Table

Foreign Key:

- Foreign Key is a field in database table that is Primary key in another table.

- Foreign key is used to generate the relationship between the tables.

- A foreign key can accept null and duplicate value.

studentInfo Table

invoiceInfo Table

StudentID	Name	Class	DOB	Email
1001	John	1st Year	01-08-2008	john1@mycollege.com
1002	Edward	3rd Year	04-12-2005	edward@mycollege.com
1003	Peter	4th Year	03-09-2003	peter@mycollege.com
1004	Smith	2nd Year	09-30-2006	smith@mycollege.com
1005	John	1st Year	01-17-2007	john2@mycollege.com

StudentID	InvoiceNo	Amount	InvoiceDate
1001	A-5789	$1500.00	04-11-2020
1002	A-8854	$1000.00	05-17-2019
1002	A-9845	$250.00	07-25-2020
1004	A-2323	$750.00	01-18-2021
1011	A-6841	$70.00	12-13-2021