

- 1) **Superkey (Key)** is a combination of one or more columns that is used to identify rows in a relation.
- 2) **Candidate key** is a key that determines all of the other columns in a relation (select the shortest combination key from superkey).
- 3) **Primary key** is a candidate key selected as the primary means of identifying rows in a relation.
 - **Surrogate key** is an artificial column added to a relation to serve as a primary key.
- 4) **Alternative Key** is a candidate key not selected as the primary means of identifying rows in a relation.
- 5) **Composite key** is a key that consists of two or more columns.
- 6) **Foreign key** is the primary key of one relation that is placed in another relation to form a link between the relations.
- 7) **Secondary key** is not a mandatory key, use for data retrieval purposes (other keys exclude primary key and foreign key from the relation).

Rental

RenterNo	OwnerNo	StartDate	EndDate	Rent
R0001	O0001	01/01/2010	31/12/2010	800.00
R0001	O0001	01/01/2011	31/12/2011	850.00
R0002	O0001	01/01/2010	31/12/2010	800.00
R0001	O0003	01/01/2011	31/12/2011	850.00
R0001	O0002	01/01/2012	31/12/2012	900.00
R0001	O0001	01/01/2013	31/12/2013	1000.00
R0002	O0002	01/01/2010	31/12/2010	900.00
R0002	O0001	01/01/2012	31/12/2012	950.00

Superkeys (Unique)

RenterNo, OwnerNo, StartDate

RenterNo, OwnerNo, EndDate

RenterNo, OwnerNo, StartDate, EndDate

RenterNo, OwnerNo, StartDate, Rent

RenterNo, OwnerNo, EndDate, Rent

RenterNo, OwnerNo, StartDate, EndDate, Rent

Candidate Keys (Shortest from superkeys)

RenterNo, OwnerNo, StartDate

RenterNo, OwnerNo, EndDate

Primary Keys (Select from candidate keys)

RenterNo, OwnerNo, StartDate

Alternative Keys (Extra key that not selected as primary key)

RenterNo, OwnerNo, EndDate

Composite Keys (> 1 attribute)

RenterNo, OwnerNo, StartDate

RenterNo, OwnerNo, EndDate

RenterNo, OwnerNo, StartDate, EndDate

RenterNo, OwnerNo, StartDate, Rent

RenterNo, OwnerNo, EndDate, Rent

RenterNo, OwnerNo, StartDate, EndDate, Rent

Foreign Keys (Must refer to PK in other table to get the information)

RenterNo

OwnerNo

Secondary Keys (Not PK & Not FK)

StartDate

EndDate

Rent