**Normalization : Case Study**

Consider a scenario where people own properties. They are on the lookout for other people who would be interested in renting out these properties. The property owner has approached a real estate broker whose job is to help customers find properties on rental basis. The real estate broker has to maintain the following information

Customer : The person who will rent out the property

Owner : The person who owns the property

Rent start date :

Rent end date :

Rent amount :

Property address :

The above information is not normalized.

After applying rules of first normal form, i.e removing out the repeating groups, the following tables can be obtained

customer\_details

|  |  |
| --- | --- |
| customer\_no | customer\_name |

property\_rental\_owner\_details

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| customer\_no | property\_no | property\_ address | rent\_start | rent\_finish | rent\_amount | owner\_no | owner\_name |

After applying rules of second normal form i.e of functional dependency the following tables can be obtained

rental\_details

|  |  |  |  |
| --- | --- | --- | --- |
| customer\_no | property\_no | rent\_start | rent\_finish |

property\_owner\_details

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| property\_no | property\_address | rent\_amount | owner\_no | owner\_name |

After applying rules of third normal form i.e transitive dependencies the following tables can be obtained

Property\_rental\_Details

|  |  |  |  |
| --- | --- | --- | --- |
| property\_no | property\_address | rent\_amount | owner\_no |

Owner\_details

|  |  |
| --- | --- |
| ower\_no | owner\_name |

Finally, the tables which have been identified from the above scenario after normalization are

Customer\_Details

|  |  |
| --- | --- |
| customer\_no | customer\_name |

Rental\_Details

|  |  |  |  |
| --- | --- | --- | --- |
| customer\_no | property\_no | rent\_start | rent\_finish |

Owner\_Details

|  |  |
| --- | --- |
| owner\_no | owner\_name |

Property\_rented\_details

|  |  |  |  |
| --- | --- | --- | --- |
| property\_no | property\_address | rent | owner\_no |