1. **Normalization**
2. **List of Functional Dependencies**

***E.g. Full, Partial, Transitive, Multi-Valued Dependencies (MVD), Join Dependencies (JD), etc.***

**i)  Full Functional Dependencies**

**1. Supplier Data**

There exists a full functional dependency between *supplier\_ID* and the *supplier name* and *supplier address.*

**2. Ingredient Data**

There is a full functional dependency between *Ingredient ID* and the *Ingredient name* and *Ingredient description*

**3. Product Data**

There is a full functional dependency between *Product ID* and the *product name* and *product price*

**4. Employee Data**

There is a full functional dependency between *Employee ID* and the *Employee name* and *Employee address*

**5. Product\_Category Data**

There is a full functional dependency between *Category ID* and the *Category name.*

**6. Customer Data**

There is a full functional dependency between *Customer ID* and the *Customer name* and *Customer address*

**7. Customer\_Payment**

There is a full functional dependency between *Customer Payment ID* and the *Customer ID* and *Order ID*

**8. Shipping Data**

There is a full functional dependency between *Shipping ID* and the *Customer ID, Order ID* and *Shipping address*

**9. Order Data**

There is a full functional dependency between *Order ID* and the *Product ID* and *Customer ID.*

**ii) Partial Functional Dependencies**

1. **Supplier Data**

There is a partial functional dependency between *ingredient* and the primary key constraint. *ingredient* depends only on *supplier\_ID* and *supplier\_name* which is part of the primary key*.*

1. **Product Data**

There is a partial functional dependency between *unit\_amount* and *product\_price* and the primary key constraint. *unit\_amount* and *product\_price* depends only on *product\_ID* and *product\_name* which is part of the primary key.

**iii) Transitive Functional Dependencies**

1. **Raw Material Data**

There exists a transitive functional dependency between *ingredient\_id*  and *supply\_date* as *ingredient\_id* isrequired by *material\_amount* but *material\_amount* is not required by *supply\_date* thus showing the functional dependency *ingredient\_id* → *supply\_date* which follows from first to third by the axiom of transitivity is a transitive dependency.

1. **Supplier payment Data**

There is a transitive dependency between *Supplier payment\_id* and *supplier name*. It occurs because a non key attribute (*supplier name)* was determining another non key attribute (*payment\_description).*

**iv) Multi-Valued Functional Dependencies**

1. **Ingredient Data**

There exists a multivalued dependency between *raw\_material\_name* and *amount\_received*. This is because each of the attributes are independent of each other displaying a special kind of join namely a binary join dependency.