|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| NIC | Name | Contact | Email | Address | DOR |

**Barrower**

**1st Normal Form**

|  |  |  |  |
| --- | --- | --- | --- |
| NIC | Name\_id | First Name | Last Name |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| NIC | Ad\_id | Postal code | Street name | City |

**2nd Normal Form**

|  |  |
| --- | --- |
| NIC | DOR |

|  |  |  |
| --- | --- | --- |
| NIC | Con\_id | Contact |

|  |  |  |
| --- | --- | --- |
| NIC | Mail\_id | Email |

|  |  |  |  |
| --- | --- | --- | --- |
| NIC | Name\_id | First Name | Last Name |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| NIC | Ad\_id | Postal code | Street name | City |

**3rd Normal Form**

Table Satisfy 3rd normal Dependency

**Book**

**1st Normal Form**

|  |  |  |  |
| --- | --- | --- | --- |
| ISBN | Title | Author | Last update |

|  |  |  |
| --- | --- | --- |
| ISBN | Auth\_First\_Name | Auth\_Last\_Name |

|  |  |  |
| --- | --- | --- |
| C\_id | Book\_id | Book\_price |

**2nd Normal Form**

Table Satisfy 2nd Normal Form

**3rd Normal Form**

Table Satisfy 3rd Normal Form

**Library**

**1st Normal Form**

Table satisfy 1st Normal Form

**2nd Normal Form**

Table satisfy 2nd Normal Form

**3rd Normal Form**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Lib\_id | Name | DOR | Branch | City |

|  |  |
| --- | --- |
| City\_id | City\_Name |

|  |  |
| --- | --- |
| Type\_id | Type |

**Normal Forms**

**1st Normal Form**

In the definition of relationship tables themselves, the first normal form is defined. This rule defines that all attributes must have atomic domains in a relationship. Atomic domain values are indivisible units.

**2nd Normal Form**

The normalization of 1NF relations to 2NF involves the removal of partial dependencies on the primary key. If a partial dependency exists, we remove the functionally dependent attributes from the relation by placing them in a new relation with a copy of their determinant.

**3rd Normal Form**

For a table to be in the third normal form,

1. It should be in the Second Normal form.
2. And it should not have Transitive Dependency.
   1. What is Transitive Dependency?

If A=Rose and B=plant as Rose is plant then A->B is a transitive dependency. Can express as

|  |  |
| --- | --- |
| A | B |
| Rose | Plant |