

Genre(Name, Overview)

- Name -> Overview
- Based on the right hand rule all possible ck is (**name**)
 - Name -> Name, Overview
- 1st normal as all attributes are defined as atomic
- 2nd normal as all non candidate keys (**overview**) fully functionally dependent on a candidate key (**name**)
- 3rd normal as no non candidate key attribute is transitively dependent on a candidate key
- BCNF as every functional dependency contains a candidate key

Book(ISBN, Title, Publish_Date, Description)

- ISBN -> Title, Publish_Date, Description
- Based on the right hand rule all possible ck is (**ISBN**)
 - ISBN -> Title, Publish_Date, Description
- 1st normal as all attributes are defined as atomic
- 2nd normal as all non candidate keys (**Title, Publish_Date, Description**) fully functionally dependent on a candidate key (**ISBN**)
- 3rd normal as no non candidate key attribute is transitively dependent on a candidate key
- BCNF as every functional dependency contains a candidate key

Author(Author_ID, FName, LName, Bio)

- Author_ID -> FName, LName, Bio
- Based on the right hand rule all possible ck is (**Author_ID**)
 - Author_ID -> FName, LName, Bio
- 1st normal as all attributes are defined as atomic
- 2nd normal as all non candidate keys (**FName, LName, Bio**) fully functionally dependent on a candidate key (**Author_ID**)
- 3rd normal as no non candidate key attribute is transitively dependent on a candidate key
- BCNF as every functional dependency contains a candidate key

User(User_Id, FName, Lname, DOB, Status, password, email)

- User_ID -> FName, Lname, DOB, Status, password, email
- Based on the right hand rule all possible ck is (**User_ID**)
 - User_ID -> FName, Lname, DOB, Status, password, email
- 1st normal as all attributes are defined as atomic
- 2nd normal as all non candidate keys (**Fname, Lname, DOB, Status, password, email**) fully functionally dependent on a candidate key (**User_ID**)
- 3rd normal as no non candidate key attribute is transitively dependent on a candidate key
- BCNF as every functional dependency contains a candidate key

UserRole(roleID, Role_name)

- RoleID -> Role_name
- Based on the right hand rule all possible ck is (**roleID**)
 - roleID -> Role_name
- 1st normal as all attributes are defined as atomic
- 2nd normal as all non candidate keys (**Role_name**) fully functionally dependent on a candidate key (**roleID**)
- 3rd normal as no non candidate key attribute is transitively dependent on a candidate key
- BCNF as every functional dependency contains a candidate key

Review(Review_Id, Content)

- Review_ID -> Content
- Based on the right hand rule all possible ck is (**review_ID**)
 - review_ID -> Content
- 1st normal as all attributes are defined as atomic
- 2nd normal as all non candidate keys (**Content**) fully functionally dependent on a candidate key (**review_ID**)
- 3rd normal as no non candidate key attribute is transitively dependent on a candidate key
- BCNF as every functional dependency contains a candidate key

BookCheckout(CheckoutID, CheckoutDate)

- CheckoutID -> CheckoutDate
- Based on the right hand rule all possible ck is (**CheckoutID**)
 - CheckoutID -> CheckoutDate
- 1st normal as all attributes are defined as atomic
- 2nd normal as all non candidate keys (**CheckoutDate**) fully functionally dependent on a candidate key (**CheckoutID**)
- 3rd normal as no non candidate key attribute is transitively dependent on a candidate key
- BCNF as every functional dependency contains a candidate key

Likes(UserID, Name)

Genre(Name, Overview)

Is_Genre(ISBN, Name)

Book(ISBN, Title, Publish_Date, Description, ~~ISBN~~)

Writes(ISBN, Author_ID)

Author(Author_ID, FName, LName, Bio)

Favorites(Author_ID, User_Id)

User(User_Id, FName, Lname, DOB, Status, password, email)

IsRole(User_Id, roleID)

UserRole(roleID, Role_name)

Rates(UserID, ISBN)

Has(ISBN, Review_Id)

Review(Review_Id, ~~ISBN~~, ~~ISBN~~, Content)

Posts(ReviewID, User ID, PublishDate)

Has(CheckoutID, ISBN)

BookCheckout(CheckoutId, CheckoutDate, ~~ISBN~~, ~~ISBN~~, ~~ISBN~~)

Has(CheckoutID, UserID)

ProvidesRecs(ISBN, UserID)

Genre(Name, Overview)

- Name -> Overview

Is_Genre(ISBN,Name)

Book(ISBN, Title, Publish_Date, Description)

- ISBN -> Title, Publish_Date, Description

Writes(ISBN, Author_ID)

Author(Author_ID, FName, LName, Bio)

- Author_ID -> FName, LName, Bio

Favorites(Author_ID, User_Id)

User(User_Id, FName, Lname, DOB, Status, password, email)

- User_ID -> FName, Lname, DOB, Status, password, email

IsRole(User_Id, roleID)

UserRole(roleID, Role_name)

- RoleID -> Role_name

Rates(UserID, ISBN)

Has(ISBN, Review_Id)

Review(Review_Id, Content)

- Review_ID -> Content

Posts(ReviewID, User ID, PublishDate)

Has(CheckoutID, ISBN)

BookCheckout(CheckoutId, CheckoutDate)

- CheckoutID -> CheckoutDate

Has(CheckoutID, UserID)

ProvidesRecs(ISBN, UserID)