

1. Book

Let:

- a. ISBN = A
- b. B_name = B
- c. Author = C
- d. Genre = D
- e. Publisher_number = E
- f. Number_of_pages = F
- g. Price = G
- h. Number_in_stock = H
- i. Publisher_sales_percentage = I
- j. Date_published = J

$R = (A, B, C, D, E, F, G, H, I, J)$

$F = \{$
 $A \rightarrow BCDEFGHI$
 $B, C \rightarrow ADEFGHI$
 $\}$

The Table is in BCNF due to the fact that all α are super keys for R

2. User

Let:

- a. U_ID = A
- b. U_name = B
- c. Billing_address = C
- d. Address = D
- e. U_Password = E

$R = (A, B, C, D, E)$

$F = \{$
 $A \rightarrow BCDE$
 $B, E \rightarrow ACD$
 $\}$

The Table is in BCNF due to the fact that all α are super keys for R

3. Order

Let:

- a. Order_number = A
- b. Shipping_cost = C
- c. Billing_address = D
- d. Order_price = E
- e. Tracking_number = F
- f. U_ID = G

R=(A,B,C,D,E,F)

F={

- A→BCDEF
- F→ABCDE

}

The Table is in BCNF due to the fact that all α are super keys for R

4. Publisher

Let:

- a. Publisher_number = A
- b. P_name = B
- c. Address = C
- d. Email_address = D
- e. Bank_Account = E
- f.

R=(A,B,C,D,E)

F={

- A→BCDE
- D→ABCE

}

The Table is in BCNF due to the fact that all α are super keys for R

5. Phone_number

Let:

- a. Phone_number = A
- b. Publisher_number = B

R=(A,B)

F={

- A→B

}

The Table is in BCNF due to the fact that all α are super keys for R

6. Address

Let:

- a. $A_ID = A$
- b. $Address = B$

 $R=(A,B,C,D,E)$ $F=\{$

- $A \rightarrow B$

 $\}$

The Table is in BCNF due to the fact that all α are super keys for R

7. Cart

Let:

- a. $U_ID = A$
- b. $ISBN = B$
- c. $Quantity = C$

 $R=(A,B,C)$ $F=\{$

- $A, B \rightarrow C$

 $\}$

The Table is in BCNF due to the fact that all α are super keys for R

8. Books in Cart

Let:

- a. $ISBN = A$
- b. $Order_number = B$
- c. $Quantity = C$

 $R=(A,B,C)$ $F=\{$

- $AB \rightarrow C$

 $\}$

The Table is in BCNF due to the fact that all α are super keys for R