DR. B. R. AMBEDKAR NATIONAL INSTITUTE OF TECHNOLOGY, JALANDHAR

{ CSPC - 202 *DBMS*}



TOPIC: Order Management System

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Assignment => 4 NORMALIZATION

1 Product - Info

Model No	CP	Remarks	Desc	Product ID
1	1	1	1	

Functional Dependencies :>

Product ID -> { Model No, CP, Remarks, Desc y

3) Ad product ID is a superkey, so relation is in Boyce Codd Normal Form.

2. Order Otls

Item No	QTy	Discount	Price kitem	Product ID	Order. ID
	1		•	1	

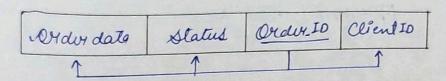
Functional Dependencies : >

- x[Order ID → { Order data, status, client. ID 3th
- "[Dudut ID is a superkey]".

 *[Dut relation]"

{ Dudy ID, ITEMNO3 > { Sty, Discount, price per item, product =03

→ OSS (Order ID + ITEM NO) is a super key, so own relation is in Boyce Loold Normal form



Functional Dependencies:>

Order_ID -> { Order Data, Status, client ID }

=) OrdutID is a superkey, our relation is in Boyce Codd Normal Form.

4. Fulfilled

Pay-Marrod	Dely-Date	OrderID
T	1	

Functional Dependencies : >

DADUNID -> Dely-Date Ondur-ID -> Pay-Mathod

=> As orderID is a surpurkey. Therefore, relation is in Boyce-Lodd Normal Form.

5. In Progress

condur-ID -> Exp-Dely Date

Boyce. Cold Normal Form.

6. Client

Dogin-ID	client. ID				
7					

Functional Dependencus: > client_ID > { Login_ID }

> As client_ID is superkey, so our relation is in

Boyce - Codd Normal Form.

7. Andividual

B-day	F. name	M-namp	L-nam	Sty-No.	city	stati	Pincode	clientro	Adding No
1	1	1	1	1	1	1	1		

Functional Dependencies :->

Addray No > { Bday, F-nome, M-name, L-name, stor. no, city, state, pincode y

Client No > { B.day, F.nony, M.non, L.nom, str.no, city, state, pincode?

Pincode > { city, state?

- (a) Pincode is not a superkey, so our relation is not in Boycee- Codd Normal Form
- (b) city and state are not prime attributes, so our relation is not in third normal form.
- (c) Every non-prime attribute is fully functionally, dependent on super key. Therefore, our relation is in second Normal form.

F-name	M-nam	L. name	sect-no	city	state	Pincode	Reg-NO	Client . Is
1	1	1	1	1	1	1		1
1	1	1	1	1	1	1		
				1	1	1		

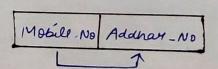
Reg. No > & F. name, M-name, L-name. Det, no, city, state.

pincode, client-No 4

Client-No > & F. name, M. name, L. vame, sort-no, city, state, pincode & Pincode > & city, state }

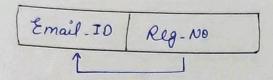
- => Here we can set that pincode is not super key, hence our relation is not in BCNF.
- > City and state are not prime attribute, therefore our relation is not in 3rd normal form.
- > In the relation, every non-prime attendent is fully functionally, dependent on super key, therefore our relation is in and normal form.

9. Mobili.No :>



Functional Dependencies: >> Mobile-No -> Address-No.

= As Mobil-No is superkey, this Helation is in BCNF.



Functional Dependencies →
Reg. No → { Email_ ID }

=> Here, Rog-No is a suprikey, therefore our relation is in Boyce- Codd Normal Gorm.