



Normalization Tool

EDIT ATTRIBUTES

LEARNING RESOURCES

LOAD EXAMPLE

Functions

FIND A MINIMAL COVER

FIND ALL CANDIDATE KEYS

CHECK NORMAL FORM

NORMALIZE TO 2NF

NORMALIZE TO 3NF METHOD 1

NORMALIZE TO 3NF METHOD 2

NORMALIZE TO BCNF

Find Minimal Cover

roll_number	→	user_name
roll_number	→	name
roll_number	→	contact_no
roll_number	→	room_no
roll_number	→	hostel_name
hostel_name	→	gender
complaint_id	→	complaint_type
complaint_id	→	c_description
complaint_id	→	complaint_status
complaint_id	→	c_location
complaint_id	→	upvotes
complaint_id	→	c_roomno
complaint_id	→	roll_number
complaint_id	→	c_hostel
complaint_id	→	free_time
warden_name	→	user_name
warden_name	→	warden_phone_no
user_name	→	privileges
user_name	→	password
item_id	→	lost_found

< 1 min to Spread

item_id → user_name

item_id → item_title

item_id → item_description

item_id → lf_date

item_id → lf_location

item_id → item_photo

item_id → item_contact_person

item_id → item_contact_email

item_id → lf_status

Show Steps

Step 1: Rewrite the FD into those with only one attribute on RHS. We obtain:

roll_number → user_name

roll_number → name

roll_number → gender

roll_number → contact_no

roll_number → room_no

roll_number → hostel_name

hostel_name → gender

complaint_id → user_name

complaint_id → complaint_type

complaint_id → c_description

complaint_id → complaint_status

complaint_id → c_location

complaint_id → upvotes

complaint_id → c_roomno

complaint_id → roll_number

complaint_id → c_hostel

complaint_id → free_time

warden_name → user_name

warden_name → warden_phone_no

user_name → privileges

user_name → password

item_id → lost_found

item_id → user_name

item_id → item_title

item_id → item_description

item_id → lf_date

item_id → lf_location

item_id → item_photo

item_id → item_contact_person

item_id → item_contact_email

item_id → lf_status

Step 2: Remove trivial FDs (those where the RHS is also in the LHS). We obtain:

roll_number → user_name

roll_number → name

roll_number → gender

roll_number → contact_no

roll_number → room_no

roll_number → hostel_name

hostel_name → gender

complaint_id → user_name

complaint_id → complaint_type

complaint_id → c_description

complaint_id → complaint_status

complaint_id → c_location

complaint_id → upvotes

complaint_id → c_roomno

complaint_id → roll_number

complaint_id → c_hostel

complaint_id → free_time

warden_name → user_name

warden_name → warden_phone_no

user_name → privileges

user_name → password

item_id → lost_found

item_id → user_name

item_id → item_title

item_id → item_description

item_id → lf_date

item_id → lf_location

item_id → item_photo

item_id → item_contact_person

item_id → item_contact_email

item_id → lf_status

Step 3: Minimize LHS of each FD. We obtain:

roll_number → user_name

roll_number → name

roll_number → gender

roll_number → contact_no

roll_number → room_no

roll_number → hostel_name

hostel_name → gender

complaint_id → user_name

complaint_id → complaint_type

complaint_id → c_description

complaint_id → complaint_status

complaint_id → c_location

complaint_id → upvotes

complaint_id → c_roomno

complaint_id → roll_number

complaint_id → c_hostel

complaint_id → free_time

warden_name → user_name

warden_name → warden_phone_no

user_name → privileges

user_name → password

item_id → lost_found

item_id → user_name

item_id → item_title

item_id → item_description

item_id → lf_date

item_id → lf_location

item_id → item_photo

item_id → item_contact_person

item_id → item_contact_email

item_id → lf_status

Step 4: Remove redundant FDs (those that are implied by others). We obtain:

roll_number → user_name

roll_number → name

roll_number → contact_no

roll_number → room_no

roll_number → hostel_name

hostel_name → gender

complaint_id → complaint_type

complaint_id → c_description

complaint_id → complaint_status

complaint_id → c_location

complaint_id → upvotes

complaint_id	→	c_roomno
complaint_id	→	roll_number
complaint_id	→	c_hostel
complaint_id	→	free_time
warden_name	→	user_name
warden_name	→	warden_phone_no
user_name	→	privileges
user_name	→	password
item_id	→	lost_found
item_id	→	user_name
item_id	→	item_title
item_id	→	item_description
item_id	→	lf_date
item_id	→	lf_location
item_id	→	item_photo
item_id	→	item_contact_person
item_id	→	item_contact_email
item_id	→	lf_status

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