

Journey master

database analysis II

SET OF ALL ATTRIBUTES

u_id, u_email, u_role_str, u_password, ue_name,
ue_surname, ue_nickname, ue_dob, ue_uri_avatar,
ue_level, w_id, w_short_name, w_fullname, q_id, q_start,
q_end, qt_id, qt_name, qt_type, qt_difficulty, qt_uri_data,
qt_uri_badge, qi_id, qi_name, qi_data, qi_uri_image,
qi_evaluation, j_id, j_points, j_points_max, j_status, i_id,
i_name, i_type, i_content

FUNCTIONAL DEPENDENCES

w_id -> w_short_name, w_fullname

u_id -> u_email, u_password, u_role_str, ue_name, ue_surname,
ue_dob, ue_uri_avatar, ue_level

u_email -> u_password, u_role_str, ue_surname, ue_dob,
ue_uri_avatar, ue_level

j_id -> j_points, j_points_max

q_id -> q_end, (q_start)

qt_id -> q_name, q_type, q_difficulty

qi_id -> qi_name, qi_name, qi_data, qi_evaluation, qi_uri_image

i_id -> i_name

COMPOSITION OF RELATIONS

R1 (w_id, w_short_name, w_fullname)

R2 (u_id, u_email, u_password, u_role_str, ue_name, ue_surname, ue_dob, ue_uri_avatar, ue_level)

R3 (j_id, j_points)

R4 (q_id, q_start, q_stop)

R5 (qt_id, qt_name, qt_type, qt_difficulty, qt_uri_data, qt_uri_image)

R6 (qi_id, qi_name, qi_data, qi_uri_badge, qi_evaluation)

R7 (i_id, i_type, i_name)

REDUNDANT FD for R1

- Relation R1(w_id, w_short_name, w_fullname)
- Function dependencies FD1 = (w_id \rightarrow w_short_name, course_id \rightarrow w_fullname)
- Picked dependence w_id \rightarrow w_short_name
- Rest of the dependences is only w_id which doesn't contain w_short_name
- Therefore, the rule is not redundant

WE CHECK ALL OTHER ATTRIBUTES FOR ALL Rs

u_id	->	u_email, u_password, u_role_str, ue_name, ue_surname, ue_dob, ue_uri_avatar, ue_level
u_email	->	u_password, u_role_str, ue_name, ue_surname, ue_dob, ue_uri_avatar, ue_level

- following rules
 - u_email -> u_password, u_role_str, ue_name, ue_surname, ue_dob, ue_uri_avatar

ARE REDUNDANT

SET KEY for ALL Rs

- R1(**w_id**, w_short_name, w_fullname)
- R2 (**u_id**, **u_email**, u_password, u_role_str, ue_name, ue_surname, ue_dob, ue_uri_avatar)
- R3 (**j_id**, j_points)
- R4 (**q_id**, q_start, q_stop)
- R5 (**qt_id**, qt_name, qt_type, qt_difficulty, qt_uri_data, qt_uri_image)
- R6 (**qi_id**, qi_name, qi_data, qi_uri_image, qi_evaluation)

NORMAL FORMS

- BCNF
- 3NF
 - email is candidate for a key

Differences in CM

project.UserDetails		
* ue_name		VARCHAR (8)
ue_surname		VARCHAR (1
ue_nickname		VARCHAR (3
* ue_dob		DATETIME
ue_uri_avatar		TEXT
* ue_level		SMALLINT
F * User_u_id		BIGINT
U * u_id		BIGINT
* u_password		VARCHAR (1
* u_email		VARCHAR (2
* u_role_str		VARCHAR (6

Merged redundant UserDetails with User