

Online Event Management System Normal Forms (Group - 22)

1) **event_detail** (This table is in 3NF and BCNF form)

(e_id, e_name, e_type, guests_ex, start_date, end_date, mgr_id, o_id, v_id)

{ e_id } -> e_name

{ e_id } -> e_type

{ e_id } -> guests_ex

{ e_id } -> start_date

{ e_id } -> end_date

{ e_id } -> mgr_id

{ e_id } -> o_id

{ e_id } -> v_id

CANDIDATE KEY:- { e_id }

PRIME ATTRIBUTE:- {e_id}

NON-PRIME ATTRIBUTE:- e_name, e_type, guests_ex, s_date, e_date, mgr_id, o_id, v_id

Reason:-

A relation is in third normal form and BCNF, as there is no transitive dependency for non-prime attributes as well as it is in second normal form .

2) **organizer_detail** (This table is in 3NF and BCNF form)

(o_id, fname, mname, lname, o_address, c_id)

{o_id} -> fname

{o_id} -> mname

{o_id} -> lname

{o_id} -> o_address

{o_id} -> o_city

{o_id} -> c_id

CANDIDATE KEY:- {o_id}

PRIME ATTRIBUTE:- {o_id}

NON-PRIME ATTRIBUTE:- fname, mname, lname, o_address, o_city, c_id

Reason:-

A relation is in third normal form and BCNF, as there is no transitive dependency for non-prime attributes as well as it is in second normal form.

3) organizer_contact (This table is in 3NF and BCNF form)

(c_id, o_phone1, o_phone2, o_email1, o_email2)

{c_id} -> o_phone1

{c_id} -> o_phone2

{c_id} -> o_email1

{c_id} -> o_email2

CANDIDATE KEY:- {c_id}

PRIME ATTRIBUTE:- {c_id}

NON-PRIME ATTRIBUTE:- o_phone, o_email

Reason:-

A relation is in third normal form and BCNF, as there is no transitive dependency for non-prime attributes as well as it is in second normal form .

4) venue_detail (This table is in 3NF and BCNF form)

(v_id, v_name, v_category, v_contact, v_address, v_city, v_pincode, v_rent)

{v_id} -> v_name

{v_id} -> v_category

{v_id} -> v_contact

{v_id} -> v_address

{v_id} -> v_rent

{v_id} -> v_pincode

{v_pincode} -> v_city

CANDIDATE KEY:- {v_id}

PRIME ATTRIBUTE:- v_id, u_pincode

NON-PRIME ATTRIBUTE:- v_name, v_category, v_contact, v_address, v_city, v_pincode, v_rent

Normalization to 3NF and BCNF:-

v_pincode is not unique, thus it is in 2NF form. So to convert it to BCNF v_id and v_pincode will be together declared as a super key which will uniquely identify user city and user state.

{v_id} -> v_name

{v_id} -> v_category

{v_id} -> v_contact

{v_id} -> v_address

{v_id} -> v_rent

{v_id} -> v_pincode

{v_id, v_pincode} -> v_city

5) manager_detail (This table is in 3NF and BCNF form)

(mgr_id, s_id)

{ mgr_id } -> s_id

CANDIDATE KEY:- {mgr_id}

PRIME ATTRIBUTE:- {mgr_id}

NON-PRIME ATTRIBUTE:- s_id

Reason:-

A relation is in third normal form and BCNF, as there is no transitive dependency for non-prime attributes as well as it is in second normal form.

6) Invoice (This table is in 3NF and BCNF form)

(i_id, electricity_cost, staff_cost, extra_cost, venue_rent, food_cost, e_id)

{ i_id } -> electricity_cost

{ i_id } -> staff_cost

{ i_id } -> extra_cost

{ i_id } -> venue_rent

{ i_id } -> food_cost

{ i_id } -> e_id

{i_id} -> i_status

CANDIDATE KEY:- { i_id }

PRIME ATTRIBUTE:- {i_id}

NON-PRIME ATTRIBUTE:- electricity_cost, staff_cost, extra_cost, venue_rent, food_cost, e_id, i_status

Reason:-

A relation is in third normal form and BCNF, as there is no transitive dependency for non-prime attributes as well as it is in second normal form.

7) Payment_detail (This table is in 3NF and BCNF form)

(p_id, dop, p_method ,i_id, o_id)

{ p_id } -> dop

{ p_id } -> p_method

{ p_id } -> i_id

{ p_id } -> o_id

CANDIDATE KEY:- {p_id}

PRIME ATTRIBUTE:- {p_id}

NON-PRIME ATTRIBUTE:- dop, p_method, i_id, o_id

Reason:-

A relation is in third normal form and BCNF, as there is no transitive dependency for non-prime attributes as well as it is in second normal form.

8) Staff_Detail (This table is in 3NF and BCNF form)

(s_id, s_fname, s_mname, s_lname, s_dob, s_contact, s_email);

{ s_id } -> s_fname

{ s_id } -> s_mname

{ s_id } -> s_lname

{ s_id } -> s_dob

{ s_id } -> s_contact

{ s_id } -> s_email

CANDIDATE KEY:- {s_id}

PRIME ATTRIBUTE:- {s_id}

NON-PRIME ATTRIBUTE:- s_fname, s_mname, s_lname, s_dob, s_contact, s_email

Reason:-

A relation is in third normal form and BCNF, as there is no transitive dependency for non-prime attributes as well as it is in second normal form.

