

Port-Tour Available Report

UNF

PORT(port_code, port_name, country_code, country_name, (month, avg_high, avg_low), (tour_num, tour_name, tour_descrip, hours_req, tour_cost_per_person, wheel_chair_access, tour_avil, start_time))

1NF

PORT(port_code, port_name, country_code, country_name)

PORT_TEMPERATURE(port_code, month, avg_high, avg_low)

TOUR(tour_num, port_code, tour_name, tour_descrip, hours_req, tour_cost_per_person, wheel_chair_access, tour_avil, start_time)

Partial Dependencies:

No Partial Dependencies

2NF

PORT(port_code, port_name, country_code, country_name)

PORT_TEMPERATURE(port_code, month, avg_high, avg_low)

TOUR(tour_num, port_code, tour_name, tour_descrip, hours_req, tour_cost_per_person, wheel_chair_access, tour_avil, start_time)

Transitive Dependencies:

country_code → country_name

3NF

PORT(port_code, port_name, country_code)

PORT_TEMPERATURE(port_code, month, avg_high, avg_low)

TOUR(tour_num, port_code, tour_name, tour_descrip, hours_req,
tour_cost_per_person, wheel_chair_access, tour_avil, start_time)

COUNTRY(country_code, country_name)

Full Dependencies:

port_code → port_name, country_code

port_code, month → avg_high, avg_low

tour_num, port_code → tour_name, tour_descrip, hours_req,

tour_cost_per_person, wheel_chair_access, tour_avil, start_time

country_code → country_name

Port-Tour Participant Report

UNF

PORT_TOUR(port_code, tour_num, tour_name, tour_date, tour_start_time, (pas_id, pas_fname, pas_lname, principal_spoken_language, cruise_id, cruise_name, payment_received))

1NF

PORT_TOUR(port_code, tour_num, tour_date, tour_name, tour_start_time)

TOUR_REPORT(pas_id, port_code, tour_num, tour_date, pas_fname, pas_lname, principal_spoken_language, cruise_id, cruise_name, payment_received)

Partial dependencies :

pas_id → pas_fname, pas_lname, principal_spoken_language

port_code, tour_num → tour_name, tour_start_time

2NF

PORT_TOUR(port_code, tour_num, tour_date)

TOUR_REPORT(pas_id, port_code, tour_num, tour_date, cruise_id, cruise_name, payment_received)

PASSENGER(pas_id, pas_fname, pas_lname, principal_spoken_language)

TOUR(port_code, tour_num, tour_name, tour_start_time)

Transitive dependencies :

cruise_id → cruise_name

3NF

PORT_TOUR(port_code, tour_num, tour_date)

TOUR_REPORT(pas_id, port_code, tour_num, tour_date, cruise_id, payment_received)

PASSENGER(pas_id, pas_fname, pas_lname, principal_spoken_language)

CRUISE(cruise_id, cruise_name)

TOUR(port_code, tour_num, tour_name, tour_start_time)

Full dependencies :

pas_id, port_code, tour_num, tour_date → cruise_id, payment_received

pas_id → pas_fname, pas_lname, principal_spoken_language

cruise_id → cruise_name

port_code, tour_num → tour_name, tour_start_time

Attribute Synthesis:

Collected 3NF

1. PORT(port_code, port_name, country_code)
2. PORT_TEMPERATURE(port_code, pt_month, pt_avg_high, pt_avg_low)
3. TOUR(tour_num, port_code, tour_name, tour_descrip, tour_hours_req, tour_cost_per_person, tour_wheel_chair_access, tour_avil, tour_start_time)
4. COUNTRY(country_code, country_name)
5. PORT_TOUR(port_code, tour_num, tour_date)
6. TOUR_REPORT(pas_id, port_code, tour_num, tour_date, cruise_id, tr_payment_received)
7. PASSENGER(pas_id, pas_fname, pas_lname, pas_principal_spoken_language)
8. CRUISE(cruise_id , cruise_name)

9. TOUR(port_code, tour_num, tour_name, tour_start_time)

Combine 1 and 9

Final 3NF

port_code → port_name, country_code

port_code, pt_month → pt_avg_high, pt_avg_low

tour_num, port_code → tour_name, tour_descrip, tour_hours_req,

tour_cost_per_person, tour_wheel_chair_access, tour_avil, tour_start_time

country_code → country_name

pas_id, port_code, tour_num, tour, date → cruise_id, tr_payment_received

pas_id → pas_fname, pas_lname, pas_principal_spoken_language

cruise_id → cruise_name