

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:

tour_name → tour_descrip

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, hours_req, tour_cost_per_person, wheel_chair_access, tour_avil, start_time)

TOUR_DESCRIPTION(tour_name, tour_descrip)

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, hours_req, tour_cost_per_person, wheel_chair_access, tour_avil, start_time

tour_name → tour_descrip

country_code → country_name

Port-Tour Participant Report

UNF

TOUR(port_code, tour_num, tour_name, tour_date, start_time,
(pas_id,pas_fname, pas_lname , principal_spoken_language, cruise_id,
cruise_name, payment_received))

1NF

TOUR (port_code, tour_num, tour_name, tour_date, start_time)

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

Partial dependencies :

$\text{pas_id} \rightarrow \text{pas_fname}, \text{pas_lname}, \text{principal_spoken_language}$

2NF

TOUR(port_code, tour_num, tour_name, tour_date, start_time)

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

PASSENGER(pas_id, pas_fname,pas_lname, principal_spoken_language)

Transitive dependencies :

$\text{cruise_id} \rightarrow \text{cruise_name}$

3NF

TOUR(port_code, tour_num, tour_name, tour_date, start_time)

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

PASSENGER(pas_id, pas_fname, pas_lname, principal_spoken_language)

CRUISE(cruise_id , cruise_name)

Full dependencies :

port_code, tour_num, tour_date → tour_name, tour_start_time

pas_id , port_code , tour_num , tour_date → payment_received , cruise_id

pas_id → pas_fname, pas_lname, principal_spoken_language

cruise_id → cruise_name

Attribute Synthesis:

Collected 3NF

1. TOUR(port_code, tour_num, tour_name, tour_date, start_time)
2. TOUR_REPORT(pas_id , cruise_id, payment_received, port_code, tour_num, tour_date)
3. PASSENGER(pas_id, pas_fname, pas_lname, principal_spoken_language)
4. CRUISE(cruise_id , cruise_name)
5. PORT(port_code, port_name, country_code)
6. PORT_TEMPERATURE(port_code, month, avg_high, avg_low)
7. TOUR(tour_num, port_code, tour_name, hours_req, tour_cost_per_person, wheel_chair_access, tour_avil, start_time)
8. TOUR_DESCRIPTION(tour_name, tour_descrip)
9. COUNTRY(country_code, country_name)

Combine 1 and 7

Final 3NF

TOUR(port_code,tour_num, tour_date, tour_name,tour_hours_req, tour_start_time,
tour_cost_per_person, tour_wheel_chair_access)

COUNTRY(country_code, country_name)

TOUR_DESCRIPTION(tour_name, tour_descrip)

PORT_TEMPERATURE(port_code, port_temp_month, port_temp_avg_high,
port_temp_avg_low)

PORT(port_code, port_name, port_country_code)

CRUISE(cruise_id , cruise_name)

PASSENGER(pas_id, pas_fname,pas_lname,pas_principal_spoken_language)

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

