

Name: Jichao Liang
ID: 34274723

UNF

CRUISE (cruise_id, cruise_name, cost_per_person, (port_code, port_name, port_latitude, port_longitude, country_code, country_name, departure_date_time, arrival_date_time))

1NF

CRUISE (cruise_id, cruise_name, cost_per_person)

CK:
cruise_id

ITINERARY (port_code, departure_date_time, arrival_date_time, port_name, port_latitude, port_longitude, country_code, country_name)

CK:
port_code, departure_arrival, date_time

Partial Dependencies:
port_code -> port_name, port_latitude, port_longitude, country_code, country_name

2NF

CRUISE (cruise_id, cruise_name, cost_per_person)

ITINERARY (port_code, departure_date_time, arrival_date_time,)

PORT (port_code, port_name, port_latitude, port_longitude, country_code, country_name)

Transitive Dependencies:
port_latitude, port_longitude -> port_name, country_code, country_name
country_code -> country_name

3NF

CRUISE (cruise_id, cruise_name, cost_per_person)

ITINERARY (port_code, departure_date_time, arrival_date_time,)

PORT (port_code, port_latitude, port_longitude)

PORT_LOCATION (port_latitude, port_longitude, port_name)

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COUNTRY (country_code, country_name)

Full dependencies:

cruise_id -> cruise_name, cost_per_person

port_code -> port_latitude, port_longitude

port_latitude, port_longitude -> port_name

country_code -> country_name

FINAL 3NF

CRUISE (cruise_id, cruise_name, cost_per_person)

ITINERARY (port_code, departure_date_time, arrival_date_time)

PORT (port_code, port_latitude, port_longitude)

PORT_LOCATION (port_latitude, port_longitude, port_name)

COUNTRY (country_code, country_name)