

Ocean Odyssey Assumptions

OPERATOR Relation

- Ocean Odyssey owns many companies known as operators, where the operator ID contains a 7 digit number.
- Each Ocean Odyssey operator is operated by a CEO with an optional first name and last name (a PL/SQL trigger is required to check at least one name is keyed in) for reaching all possible individuals with no first name or last name.

OPERATOR – SHIP Relationship:

- Each operator operates one or more ships and each ship is operated by one operator. No ship should be operated without an operator.

SHIP Relation

- Ocean Odyssey records the ship code that contains at least a 6 digit characters and numbers to identify a ship, such as AUS123.

SHIP – CRUISE Relationship:

- Each ship is used for zero or many cruise, where there can be a ship without a cruise yet, and each created cruise uses a ship from Ocean Odyssey.

SHIP – CABIN Relationship:

- Each ship consists of one or more cabins and each cabin belongs to a ship. No ship should be operated without a cabin.

CRUISE Relation

- Ocean Odyssey records the cruise ID that contains a 4 digit number to identify a cruise, such as 1234.

CRUISE – ITINERARY Relationship:

- Each cruise schedules for an itinerary and each itinerary is scheduled for a cruise. Any cruise created should schedules an itinerary.

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CRUISE – MANIFEST Relationship:

- Each cruise is recorded by zero or many manifest entry, where there can be a cruise without a manifest entry yet, and each manifest entry records a cruise.

CABIN Relation

- Ocean Odyssey records the cabin number that contains a 3 digit character and numbers to identify a cabin, such as D1 and D10.

CABIN – MANIFEST Relationship:

- Each cabin is assigned by zero or many manifest entry, where there can be a cabin without a manifest entry yet, and each manifest entry assigns a cabin for the passenger.

MANIFEST Relation

- Ocean Odyssey records a manifest entry with an optional boarding date and time attribute as passengers can book a cruise without boarding it.

PASSENGER Relation

- Passenger is registered into the Ocean Odyssey database once a cruise booking is made, where the passenger ID and phone number contains a 7 digit number.
- Each Ocean Odyssey passenger is registered with an optional first name and last name (a PL/SQL trigger is required to check at least one name is keyed in) for reaching all possible individuals with no first name or last name.

PASSENGER – MANIFEST Relationship:

- Each passenger books for one or more manifest entry, where one passenger can have many cruise booking, and each manifest entry is booked by a passenger. No passenger should be registered without an manifest entry.

PASSENGER (guardian) – PASSENGER (minor) Relationship:

- Some passengers are a guardian of one or more passengers (who are minors), and each minor must have a guardian, but not all passengers are a guardian.

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ADDRESS Relation

- Address relation is required for a database due to the possibility of many passenger sharing the same home address.
- Each passenger address is identified by a surrogate key due to the existence of natural key with 4 attributes.

ADDRESS – PASSENGER Relationship:

- Each home address is stayed by one or more passengers and each passenger stays in one home address. All passenger should have a house address to stay in.

GENDER Relation

- Gender Relation is required in logical model by creating a lookup table for reaching all possible genders and adding more other genders in the future.

GENDER – PASSENGER Relationship:

- Each gender identifies one or more passengers and each passenger is identified by one and only gender.

ITINERARY Relation

- Ocean Odyssey schedules an itinerary with an itinerary activity for a cruise departure and arrival.

PORT Relation

- Ocean Odyssey stores all ports to be arranged for itinerary activity for cruise, where the port code contains a 5 digit characters, such as AUSYD and AUBNE.

PORT – ITINERARY Relationship:

- Each port is arranged for zero or many itinerary activity, where there can be a port without an itinerary activity yet, and each itinerary activity arranges on a port.

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COUNTRY Relation

- Ocean Odyssey stores all countries around the world, each identified by a country code and name, to ensure consistency in data related to ports, ships and passenger addresses, minimising human error like inconsistent or incorrect entry of country names in various forms and abbreviations.

COUNTRY – PORT Relationship:

- Each country owns zero or many ports for cruise departure and arrival, where there can be a country without a port, and each port belongs to one country.

COUNTRY – SHIP Relationship:

- Each country registers zero or many ships used for cruise, where there can be a country without a ship, and each ship belongs to one country.

COUNTRY – ADDRESS Relationship:

- Each country has zero or many passenger addresses used for passenger details record, where there can be no passenger not staying in a particular country, and each passenger address belongs to one country.