FIT3171: Databases (S1/2022)

Assignment 1B: Logical Model – World Cruises (WC)

Assumptions Made

1. **PORT – TOUR Relationship**
    a. In the normalisation process, it was determined that the TOUR attributes are a repeated attribute in PORT, which means that TOUR is its own entity and has some sort of relationship between PORT and TOUR. We assume this relation is PORTs hosting TOURs.

2. **PORT – PORT_TEMP Relationship**
    a. In the normalisation process, it was also determined that the PORT_TEMP attributes are a repeated attribute in PORT, which means that PORT_TEMP is its own entity and has some sort of relationship between PORT and PORT_TEMP. We assume this relation is PORT having PORT_TEMP information.

3. **PORT Datatypes assumptions**
    a. port_name VARCHAR(50), we assume that the name of ports will not exceed 50 characters
    b. port_population NUMERIC(9), we assume that the population in port will not exceed billions, as it's illogical to fit billions in a port

4. **TOUR Datatypes assumptions**
    a. tour_desc VARCHAR(99), we assume that the description of tours will not exceed 99 characters
    b. tour_wc_access CHAR(1), as it can only have a character of either 'Y' (Yes) or 'N' (No)
    c. tour_min_participants NUMERIC(5), as the participants ID is of five numeric characters, so we assume that the participants it will have is also at most 99999 people

5. **SHIP Datatypes assumptions**
    a. ship_name VARCHAR(50), we are assuming that the name of ships will not exceed 50 characters
    b. ship_tonnage NUMERIC(7), Googling tonnages of other cruise ships, their tonnages hovers around 100,000 to 300,000 (6 digits), so to be safe from any exceptionally heavy cruise ships, our data type is a 7-digit number
    c. ship_max_guest_capacity NUMERIC(4), Googling the max capacity of other cruise ships, they usually hover around the 4-digit mark, so we are assuming that it will not exceed 4-digit numbers

6. **OPERATOR Datatypes assumptions**
    a. operator_id NUMERIC(5), we are assuming the id system of operators follows the id system of passengers which is a 5-digit number.
    b. oprator_name, operator_ceo_name VARCHAR(50), we are under the assumption the length of people's name will not exceed 50 characters.

7. **CABIN Datatypes assumptions**
    a. cabin_no NUMERIC(4), Googling how many cabins a cruise ship has on average shows 3000, so the cabin_no will be a number with 4 digits.
    b. cabin_capacity NUMERIC(1), we are assuming the maximum number of guests that can be in one cabin will not exceed 9 guests.
    c. cabin_class CHAR(1), we are assuming their cabin classing system is done by giving each cabin class a single letter.

8. **PASSENGER Datatypes assumptions**
    a. passenger_first_name, passenger_last_name VARCHAR(50), we are assuming people wouldn't have a first name or last name that exceed 50 characters.
    b. passenger_gender CHAR(1), we are assuming they use single letters to record the guest's gender, which is either 'M' (Male) or 'F' (Female)
    c. passenger_phone_no VARCHAR(15), The longest phone number allowed is 15 digits including the country code, also a varchar instead of numeric so it can include the '+' in country codes

9. **ADDRESS Datatypes assumptions**
    a. address_id NUMERIC(5), we are assuming the id system for the guest's address is done with a 5-digit number
    b. address_street, address_town VARCHAR(99), the longest street name in the world has 38 characters and the longest town name in the world has 85 characters, so we are sure no street or town name will exceed 99 characters.
    c. address_postcode VARCHAR(10), the longest post codes are from America and Iran which have 10 digits, so our data type maxes out at 10 digits, it is also a VARCHAR because places like America has a hyphen in their post codes.

10. **TOUR_REPORT_ENTRY Datatypes assumptions**
    a. pay_received CHAR(1), as it can only have a character of either 'Y' (Yes) or 'N' (No)