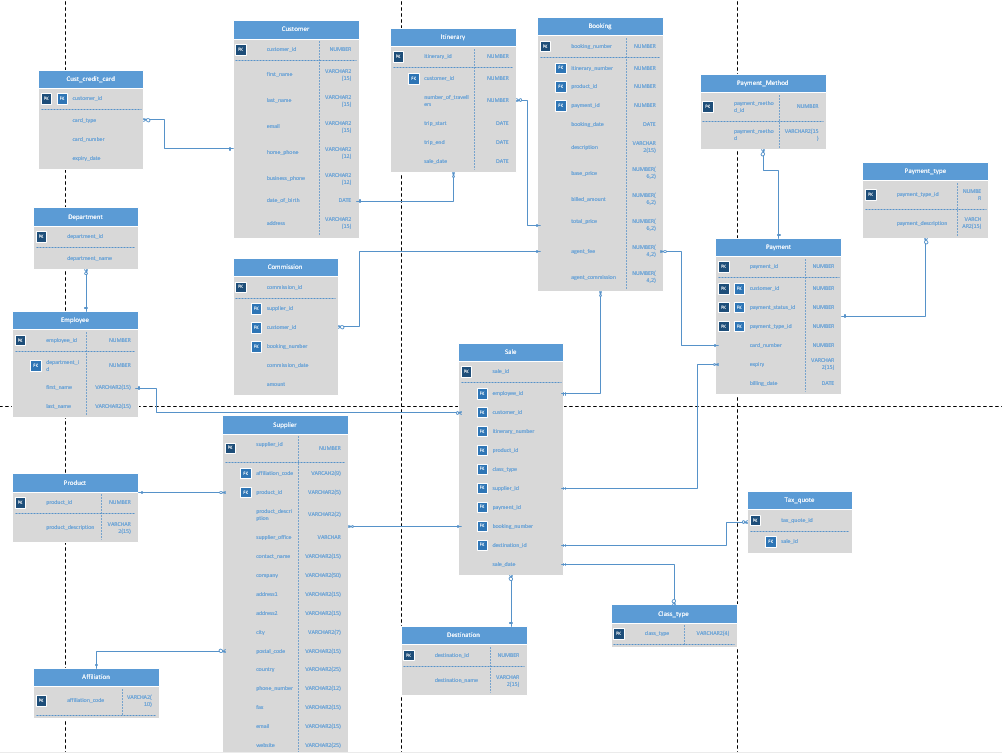
**TEA ERD DESIGN**

****

**ERD DCOUMENTATION TABLE**

|  |  |  |  |
| --- | --- | --- | --- |
| **Entity** | **Description** | **Relationship** | **Attributes** |
| 1. Customer | Stores the attributes of each customer like name, phone number, address etc. | * It connects with several bridge tables to solve the many to many relationship | * Customerid: unique value for each customer * First\_name: customer first name * Last\_name: customer last name * Email: customer email * Customer\_phone\_id: unique value for customers phone types * Date\_of\_birth: customer birthdate * Address: customer address |
| 1. Customer\_Phone | It is a bridge table to resolve the many to many relationships between customer and phone types | * Connects with Customer on Many to one relationship * Connects to phone\_type on many to one relationship | * Customer\_id: foreign key from customer table * Phone\_type\_id: foreign key from phone type table |
| 1. Phone\_type | It stores different customer phone types e.g. mobile phone, business phone e.t.c. | * Connects to customer\_phone on a one to many relationship | * Phone\_type\_id: unique value for different phone types * Phone\_name: name of the phone type |
| 1. Agent | Stores attributes of each agents like first name, last name e.t.c. | * Connects to supplier table on a many to one relationship | * Agent\_code: unique value for each agent * First\_name: agent first name * Last\_name: agent last name |
| 1. Province | Stores province name and province code | * Connects to customer on a one to one relationship * Connects to supplier on a one to one relationship | * Province\_name: name of province * Province\_code: short unique value for each province e.g YYC, YYQ |
| 1. Country | Stores country name and country code | * connects to supplier on a one to one relationship | * Country\_name: name of country * Country\_code: unique value of each country |
| 1. Class Type | Stores details about what class customer used e.g economy class, first class e.t.c. | * Connects to booking on a many to one relationship | * Class\_id: unique value for each class * Class\_name: name of class used |
| 1. Destination | Stores details about the booking destination | * Connects to booking on a many to one relationship | * Destination\_id: unique value for each booking destination * Destination\_name: name of destination |
| 1. Trip Type | Stores details about the trip whether it’s a business trip, family, leisure e.t.c. | * Connects to booking on a many to one relationship | * Trip\_id: unique value of each trip * Trip\_name: name of trip booked |
| 1. Fees | Stores details about the agent fee | * Connects to booking on a many to one relationship | * Fee\_id: unique value for each fee * Description: description of fees * Fee\_amount: amount of each fee |
| 1. Affiliation | Stores details of affiliations i.e. groups, associations | * Connects to supplier affiliation on a many to one relationship | * Affiliation\_id: unique value for each affiliation * Affiliation\_name: name of different affiliation |
| 1. Product | Stores product details | * Connects to supplier product on a many to one relationship | * Product\_id: unique value for each product * Product description: description of different product |
| 1. Supplier | Stores details about supplier information | * Connects to supplier booking on a one to many relationship * Connects to agent on a one to many relationship * Connects to supplier affiliation on a one to many relationship | * Supplier\_id: unique value of supplier * Supplier\_name: name of supplier * Contact\_name: name of contact * City: supplier city * Province\_code: foreign key from province entity * Zipcode: supplier zipcode * Country\_code: foreign key from country * Phone: supplier phone number * Email: supplier email address * Website: supplier website * Fax: supplier fax number * Product\_supplier\_id: foreign key from product supplier entity * Employee\_id: foreign key from employee entity * Agent\_id: foreign key from agent entity |
| 1. Product Supplier | Bridge table between product and supplier | * Connects to product on a many to one relationship * Connects to supplier on a many to one relationship | * Supplier\_id: foreign key and primary key * Product\_id: foreign key and primary key * Product\_supplier\_id: unique value for each product supplier |
| 1. Supplier Affiliation | Bridge table between supplier and affiliation | * Connects to supplier on a many to one relationship * Connects to affiliation on a many to one relationship | * Product\_supplier\_id: foreign key and primary key * Affiliation\_id: foreign key and primary key |
| 1. TEA Office | Stores details about the Travel Agency Expert e.g. location, province e.t.c. | * Connects to employee on a one to many relationship | * Office\_id: unique value for each office * City: city of office * Province\_code: foreign key from province entity * Employee\_id: foreign key from employee entity |
| 1. Employee | Stores information of each employee e.g. first name, last name e.t.c. | * Connects to supplier a many to one relationship * Connects to tea office on a many to one relationship | * Employee\_id: unique value for each employee * First\_name: employee first name * Last\_name: employee last name * Office\_id: foreign key from TEA office entity |
| 1. Booking | Stores details about the booking e.g. booking date, amount, passengers e.t.c. | * Connects to destination on a one to many relationship * Connects to fee on a one to many relationship * Connects to booking payment on a one to many relationship | * Booking\_id: unique value for each booking * Booking\_date: date of booking * Customer\_id: foreign key from customer entity * Agent\_code: foreign key * Supplier\_office: office of supplier * Trip\_start: start of trip * Trip\_end: end of trip * Class\_id: foreign key from class entity * Number\_of\_travellers: number of travelers * Product\_id: foreign key from product entity * Product\_supplier: foreign key from product supplier entity * Trip\_id: foreign key from trip entity * Destination\_id: foreign key from destination entity * Fee\_id: foreign key from fee entity * Description: description of booking * Base\_price: base price of booking * Billed\_amount: booking amount including tax * Agent\_fee: fee collected by agent * Agent\_commission: commission collected by agent |
| 1. Payment Status | Stores the status of the payment if it’s a deposit or full payment | * Connects to payment on a many to one relationship | * Payment\_status\_id: unique value for payment status * Payment\_status\_description: description of payment status |
| 1. Payment Type | Stores the types of payment whether its cash, credit card, gift card e.t.c. | * Connects to payment on a many to one relationship | * Payment\_type\_id: unique value for each payment type * Payment\_description: description of payment type |
| 1. Payment | Stores details about paymemt e.g. card number, expiry e.t.c. | * Connects to booking payment on a one to many relationship * Connects to payment type on a many to one relationship | * Payment\_id: ubique value for each payment * Payment\_status-id: foreign key from payment status entity * Payment\_type\_id: foreign key from payment type entity * Card\_number: payment card number * Expiry: card expiry date * Billing\_date: date of payment |
| 1. Booking Payment | Bridge table between booking and payment | * Connects to payment on a on a many to one relationship * Connects to booking on a many to one relationship | * Payment\_id: foreign key and primary key * Booking\_id: foreign key and primary key |
| 1. Passenger | Stores details about the passenger e.g. first name, last name e.t.c. | * Connects to passenger itinerary on a one to many relationship | * First\_name: passenger first name * Last\_name: passenger last name * Date\_of\_birth: passenger birthdate * Email: passenger email * Passenger\_id: unique value of each passenger |
| 1. Itinerary | Stores details about itinerary e.g. start date, end date e.t.c. | * Connects to passenger itinerary on a one to many relationship | * Itinerary\_id: unique value for each itinerary * Customer\_id: foreign key from customer entity * Product\_name: name of product * Trip\_id: foreign key from trip entity * Class\_id: foreign key from class entity * Start\_date: start date of booking * End\_date: end date of booking |
| 1. Passenger Itinerary | Bridge table between passenger and itinerary | * Connects to passenger on a many to one relationship * Connects to itinerary on a many to one relationship | * Itinerary\_id: foreign key from itinerary entity * Passenger\_id: foreign key from passenger table |

**ERD TABLE INSTANCE CHART**

TABLE NAME: **CUSTOMERS**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Column Name | Key Type | Nulls/  Unique | FK Ref Table | FK Ref Columns | Data Type | Maximum Length | Sample Data 1 |
| Customer\_id | PK | NN, U |  |  | Number | 5 | 001 |
| First\_name |  | NN |  |  | Varchar2 | 15 | Femi |
| Last\_name |  | NN |  |  | Varchar2 | 15 | Adams |
| Email |  |  |  |  | Varchar2 | 15 | [adams@gmail.com](mailto:adams@gmail.com) |
| Customer\_phone\_id | FK |  | Customer\_phone | Customer\_phone\_id | Number | 5 | 1 |
| Date\_of\_birth |  | NN |  |  | Date |  | 13/01/1997 |
| Address |  |  |  |  | Varchar2 | 25 | 13 main street |

TABLE NAME: **AGENT**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Column Name | Key Type | Nulls/  Unique | FK Ref Table | FK Ref Columns | Data Type | Maximum Length | Sample Data 1 |
| Agent\_code | PK | NN, U |  |  | Number | 5 | BK |
| First\_name |  | NN |  |  | Varchar2 | 15 | Bryan |
| Last\_name |  | NN |  |  | Varchar2 | 15 | Kelly |

TABLE NAME: **PROVINCE**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Column Name | Key Type | Nulls/  Unique | FK Ref Table | FK Ref Columns | Data Type | Maximum Length | Sample Data 1 |
| Province\_code | PK | NN, U |  |  | Varchar2 | 5 | ON |
| Province\_name |  | NN |  |  | Varchar2 | 15 | Ontario |

TABLE NAME: **COUNTRY**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Column Name | Key Type | Nulls/  Unique | FK Ref Table | FK Ref Columns | Data Type | Maximum Length | Sample Data 1 |
| Country\_code | PK | NN, U |  |  | Varchar2 | 5 | CA |
| Country\_name |  | NN |  |  | Varchar2 | 15 | Canada |

TABLE NAME: **CLASS TYPE**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Column Name | Key Type | Nulls/  Unique | FK Ref Table | FK Ref Columns | Data Type | Maximum Length | Sample Data 1 |
| Class\_id | PK | NN, U |  |  | Number | 5 | 100 |
| Class\_name |  | NN |  |  | Varchar2 | 15 | First Class |

TABLE NAME: **DESTINATION**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Column Name | Key Type | Nulls/  Unique | FK Ref Table | FK Ref Columns | Data Type | Maximum Length | Sample Data 1 |
| Destination\_id | PK | NN, U |  |  | Number | 5 | 010 |
| Destination\_name |  | NN |  |  | Varchar2 | 15 | Florida |

TABLE NAME: **TRIP TYPE**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Column Name | Key Type | Nulls/  Unique | FK Ref Table | FK Ref Columns | Data Type | Maximum Length | Sample Data 1 |
| Trip\_id | PK | NN, U |  |  | Number | 5 | 110 |
| Trip\_name |  | NN |  |  | Varchar2 | 15 | Business trip |

TABLE NAME: **FEE**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Column Name | Key Type | Nulls/  Unique | FK Ref Table | FK Ref Columns | Data Type | Maximum Length | Sample Data 1 |
| Fee\_id | PK | NN, U |  |  | Number | 5 | 100 |
| Description |  | NN |  |  | Varchar2 | 25 | Holland, Germany, England |

TABLE NAME: **AFFLIATION**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Column Name | Key Type | Nulls/  Unique | FK Ref Table | FK Ref Columns | Data Type | Maximum Length | Sample Data 1 |
| Affiliation\_id | PK | NN, U |  |  | Varchar2 | 15 | ACTA |
| Affiliation\_name |  | NN |  |  | Varchar2 | 25 | Association of Canadian Travel Agents |

TABLE NAME: **PRODUCT**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Column Name | Key Type | Nulls/  Unique | FK Ref Table | FK Ref Columns | Data Type | Maximum Length | Sample Data 1 |
| Product\_id | PK | NN, U |  |  | Number | 5 | 150 |
| Product\_name |  | NN |  |  | Varchar2 | 15 | Cruise Line |

TABLE NAME: **SUPPLIER**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Column Name | Key Type | Nulls/  Unique | FK Ref Table | FK Ref Columns | Data Type | Maximum Length | Sample Data 1 |
| Supplier\_id | PK | NN, U |  |  | Number | 5 | 101 |
| Contact\_name |  | NN |  |  | Varchar2 | 15 | Terry |
| Address |  |  |  |  | Varchar2 | 25 | 14, downtown street |
| City |  | NN |  |  | Varchar2 | 15 | Calgary |
| Province\_code | FK |  | Province | Province\_code | Varchar2 | 5 | YYC |
| Zipcode |  |  |  |  | Varchar2 | 7 | T3E 4F7 |
| Country\_code | FK |  | Country | Country\_code | Varchar2 | 5 | CA |
| Phone |  |  |  |  | Varchar2 | 15 | 403-271-2785 |
| Website |  | U |  |  | Varchar2 | 15 | Encorecruise.com |
| Fax |  |  |  |  | Varchar2 | 15 | 309-456-6345 |
| Product\_supplier\_id | FK |  | Product\_supplier | Product\_supplier\_id | Number | 5 | 10100 |
| Employee\_id | FK |  | Employee | Employee\_id | Number | 5 | 5100 |
| Agent\_id | FK |  | Agent | Agen\_id | Number | 5 | BK |

TABLE NAME: **SUPPLIER AFFILIATION**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Column Name | Key Type | Nulls/  Unique | FK Ref Table | FK Ref Columns | Data Type | Maximum Length | Sample Data 1 |
| Supplier\_id | PK, FK | NN | Supplier | Supplier\_id | Number | 5 | 102 |
| Affiliation\_id | PK, FK | NN | Affiliation | Affiliation\_id | Varchar2 | 15 | ACTA |

TABLE NAME: **TEA OFFICE**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Column Name | Key Type | Nulls/  Unique | FK Ref Table | FK Ref Columns | Data Type | Maximum Length | Sample Data 1 |
| Office\_id | PK | NN, U |  |  | Number | 5 | 01100 |
| City |  |  |  |  | Varchar2 | 15 | Calgary |
| Province\_code | FK |  | Province | Province\_code | Varchar2 | 5 | YYC |
| Employee\_id | FK | NN | Employee | Employee\_id | Number | 5 | 51001 |

TABLE NAME: **BOOKING**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Column Name | Key Type | Nulls/  Unique | FK Ref Table | FK Ref Columns | Data Type | Maximum Length | Sample Data 1 |
| Booking\_id | PK | NN, U |  |  | Number | 5 | 78900 |
| Booking\_date |  | NN |  |  | Date |  | 16/11/2022 |
| Customer\_id | FK | NN | Customer | Customer\_id | Number | 5 | 001 |
| Agent\_code | FK | NN | Agent | Agent\_code | Varchar2 | 5 | BK |
| Supplier\_office |  |  |  |  | Varchar2 | 15 | 23, ends road |
| Trip\_start |  | NN |  |  | Date |  | 16/11/2022 |
| Trip\_end |  | NN |  |  | Date |  | 25/12/2022 |
| Class\_id | FK | NN | Class | Class\_id | Number | 5 | 101 |
| Number\_of\_travellers |  | NN |  |  | Number | 5 | 4 |
| Product\_id | FK | NN | Product | Product\_id | Number | 5 | 151 |
| Product\_supplier\_id | FK | NN | Product\_supplier | Product\_supplier\_id | number | 5 | 2001 |
| Trip\_id | FK | NN | Trip | Trip\_id | Number | 5 | 115 |
| Destination\_id | FK | NN | Destination | Destination\_id | Number | 5 | 020 |
| Fee\_id | FK | NN | Fee | Fee\_id | Number | 5 | 150 |
| Description |  |  |  |  | Varchar2 | 15 | Holland, Germany |
| Base\_price |  | NN |  |  | Number | 6,2 | 2000.00 |
| Billed\_amount |  | NN |  |  | Number | 6,2 | 2300.45 |
| Agent\_fee |  | NN |  |  | Number | 6,2 | 50.00 |
| Agent\_commission |  | NN |  |  | Number | 6,2 | 210.00 |

TABLE NAME: **PHONE TYPE**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Column Name | Key Type | Nulls/  Unique | FK Ref Table | FK Ref Columns | Data Type | Maximum Length | Sample Data 1 |
| Phone\_type\_id | PK | NN, U |  |  | Number | 5 | 001 |
| Phone\_name |  | NN |  |  | Varchar2 | 15 | Business phone |

TABLE NAME: **CUSTOMER PHONE**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Column Name | Key Type | Nulls/  Unique | FK Ref Table | FK Ref Columns | Data Type | Maximum Length | Sample Data 1 |
| Customer\_id | PK, FK | NN | Customer | Customer\_id | Number | 5 | 009 |
| Phone\_type\_id | PK, FK | NN | Phone\_type | Phone\_type\_id | Number | 5 | 001 |

TABLE NAME: **PAYMENT\_STATUS**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Column Name | Key Type | Nulls/  Unique | FK Ref Table | FK Ref Columns | Data Type | Maximum Length | Sample Data 1 |
| Payment\_status\_id | PK | NN, U |  |  | Number | 5 | 7001 |
| Payment\_status\_description |  | NN |  |  | Varchar2 | 25 | Deposit |

TABLE NAME: **PAYMENT TYPE**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Column Name | Key Type | Nulls/  Unique | FK Ref Table | FK Ref Columns | Data Type | Maximum Length | Sample Data 1 |
| Payment\_type\_id | PK | NN, U |  |  | Number | 5 | 008 |
| Payment\_description |  | NN |  |  | Varchar2 | 15 | Credit card |

TABLE NAME: **PASSENGER ITINERARY**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Column Name | Key Type | Nulls/  Unique | FK Ref Table | FK Ref Columns | Data Type | Maximum Length | Sample Data 1 |
| Passenger\_id | PK, FK | NN | Passenger | Passenger\_id | Number | 5 | 1001 |
| Itinerary\_id | PK, FK | NN | Itinerary | Itinerary\_id | Number | 5 | 5009 |

TABLE NAME: **PAYMENT**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Column Name | Key Type | Nulls/  Unique | FK Ref Table | FK Ref Columns | Data Type | Maximum Length | Sample Data 1 |
| Payment\_id | PK | NN, U |  |  | Number | 5 | 20082 |
| Payment\_status\_id | FK | NN | Payment\_status | Payment\_status\_id | Number | 5 | 7002 |
| Payment\_type\_id | FK | NN | Payment\_type | Payment\_type\_id | Number | 5 | 009 |
| Card\_number |  | NN, U |  |  | Number | 5 | 789012341765 |
| Expiry |  | NN |  |  | Date |  | 17/11/2022 |
| Billing\_date |  | NN |  |  | Date |  | 16/11/2022 |

TABLE NAME: **ITINERARY**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Column Name | Key Type | Nulls/  Unique | FK Ref Table | FK Ref Columns | Data Type | Maximum Length | Sample Data 1 |
| Itinerary\_id | PK | NN, U |  |  | Number | 5 | 7001 |
| Customer\_id | FK | NN | Customer | Customer\_id | Number | 5 | 010 |
| Product\_name |  | NN |  |  | Varchar2 | 15 | Cruise Line |
| Trip\_id | FK | NN | Trip | Trip\_id | Number | 5 | 111 |
| Class\_id | FK | NN | Class | Class\_id | Number | 5 | 003 |
| Start\_date |  | NN |  |  | Date |  | 28/11/2022 |
| End\_date |  | NN |  |  | Date |  | 17/12/2022 |

TABLE NAME: **BOOKING PAYMENT**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Column Name | Key Type | Nulls/  Unique | FK Ref Table | FK Ref Columns | Data Type | Maximum Length | Sample Data 1 |
| Payment\_id | PK, FK | NN | Payment | Payment\_id | Number | 5 | 26780 |
| Booking\_id | PK, FK | NN | Booking | Booking\_id | Number | 5 | 67098 |

TABLE NAME: **PASSENGER**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Column Name | Key Type | Nulls/  Unique | FK Ref Table | FK Ref Columns | Data Type | Maximum Length | Sample Data 1 |
| Passenger\_id | PK | NN, U |  |  | Number | 5 | 0087 |
| First\_name |  | NN |  |  | Varchar2 | 15 | Nkem |
| Last\_name |  | NN |  |  | Varchar2 | 15 | Mba |
| Date\_of\_birth |  | NN |  |  | Date |  | 13/12/1985 |
| Email |  |  |  |  | Varchar2 | 15 | [nkem@gmail.com](mailto:nkem@gmail.com) |