

Database Team Project - Database Implementation Topic: Vacation Booking System

Section: CSC 239-02

Fall 2023

Øffshore Paradises

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Orrego



Project Identification



Project Purpose

- Develop a database for vacation booking system with related components.
- Accommodate users who prefer booking individual components for their vacation.
- Provide a user-friendly interface for effortless customization and booking.
- The system grants customers the autonomy to select their preferred mode of transportation and activities according to their individual preferences



Primary Audience

- Appeals to users wanting convenience by accessing comprehensive vacation data within a single application.
- Targets users who prefer a straightforward, hassle-free approach to vacation planning.
- Caters to those seeking a simplified booking experience rather than indulging in extensive bargain hunting and meticulous planning.



How and why the project is useful

- Maintains a centralized database encompassing customer contacts, booking details, reservation history, payment records, and preferences.
- Utilizes stored customer data, including preferences and popular destinations, to create personalized vacation plans.
- Customization provides customers with curated vacation options that match their preferences precisely.
- Beyond simplifying bookings, the system aims to craft personalized journeys for each customer.
- Strong database infrastructure ensures accuracy, contributing to an exceptional vacation planning experience.



What will the project provide?

- Provides a user-friendly interface for consumers to customize their trip bundles according to their preferences.
- Offers various travel customization choices, such as preferences and hotel/room configurations.
- Stores essential customer-related information
- Aims to ensure a personalized and satisfying travel experience throughout the trip.

Project Analysis



What is being done?

- Actual creation of database tables based on the structured design.
- Creation of entity-relationship diagrams and dependency diagrams for comprehensive data structuring and normalization.
- Construction of entities followed by populating them with sample data.
- Development of an application allowing users to access and submit vacation booking data.



How is it being done?

- Firstly, identifying data storage needs for the project.
- Population of data tables with sample or test data to simulate real-world usage scenarios.
- Rigorous testing to ensure data accuracy and proper table structuring.
- Comprehensive testing of the application to ensure functionality and user-friendliness.



Who is doing it?

- Student developers implement the database structure in Oracle Application Express.
- Team collaboration for an application and database development.
- Table creation, sample data addition, and data testing is done by each student.
- Collective effort towards a functional and robust vacation booking system.
- Unique contributions from each role for tailored customer needs.
- Constant communication and idea exchange among developers.



When is it being done?

- Initiation: Brainstorming, role assignment, and scope discussions.
- Database Planning: Designing entity relationships and finalizing structure.
- Database Implementation: Creating tables, populating data, testing, and refining.
- Milestone Completion: Targeting implementation completion by December 5, 2023.
- Continuous Development: Ongoing refinement and progressive testing.
- System Validation: Testing functionalities and user experience.
- Final Stage: Last-minute refinements and presentation content preparation by December 7, 2023.
- Presentation: Showcasing the functional system and explaining details by December 12, 2023



Why is it being done?

- The project vacation planning system is being created by a group of passionate student developers as a learning project.
- It streamlines trip planning, enabling personalized vacation packages for users.
- Prioritizes an easy and tailored experience for each user's vacation planning.
- Serves as a practical learning opportunity for student developers to create databases and applications.
- Enhances skills in teamwork, presentation, and understanding complex database systems.
- Offers insights into real project interactions and complexities involved in functional database system creation.

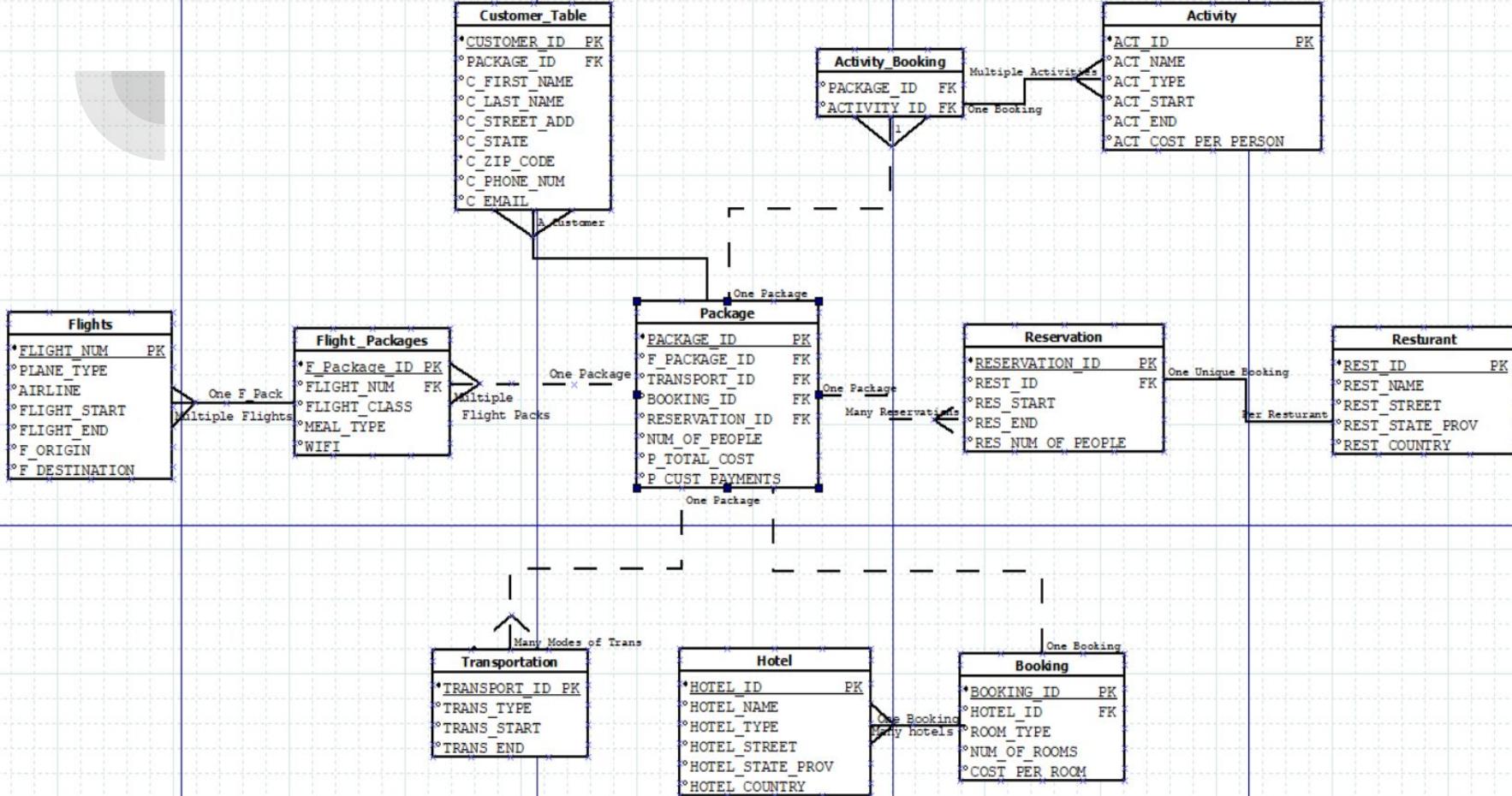


How can it be improved?

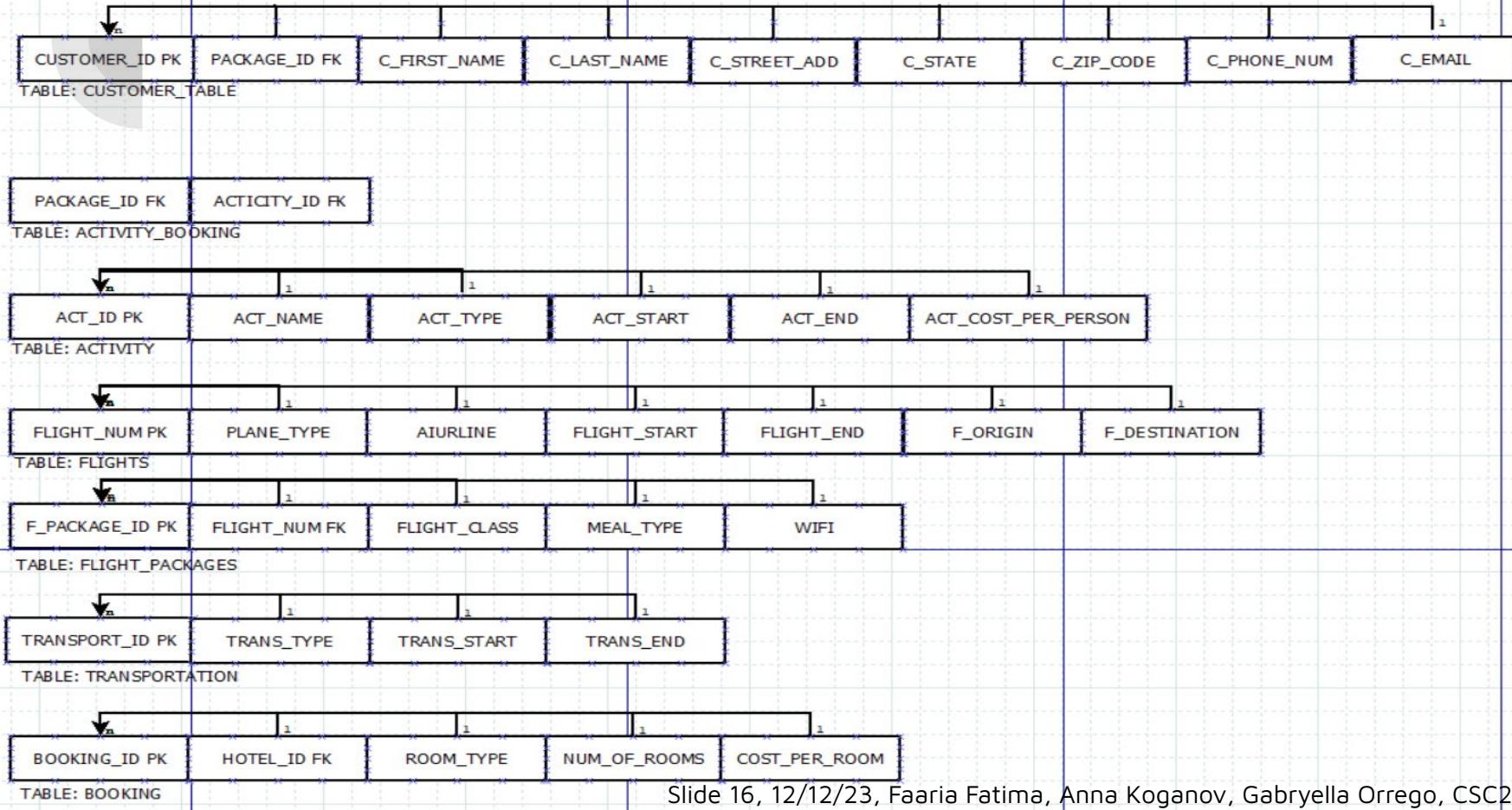
- Integration of interactive maps for visual exploration of destinations and attractions.
- Inclusion of personalized travel guides based on user preferences and history.
- Implementation of AI-powered chatbots for instant assistance and guidance.
- Providing information on environmental impact and carbon footprint estimates for mindful traveling.
- Addition of language translation services for real-time communication in foreign countries.

Project Design

Entity-Relationship Diagram



Dependency Diagram



Dependency Diagram Cont.

HOTEL_ID PK	1	1	1	1	1	1
	HOTEL_NAME	HOTEL_TYPE	HOTEL_STREET	HOTEL_STATE_PROV	HOTEL_COUNTRY	

TABLE: HOTEL

RESERVATION_ID PK	1	1	1	1
	RES_ID FK	RES_START	RES_END	RES_NUM_OF_PEOPLE

TABLE: RESERVATION

REST_ID PK	1	1	1	1
	REST_NAME	REST_STREET	REST_STATE_PROV	REST_COUNTRY

TABLE: RESTURANT

PACKAGE_ID PK	1	1	1	1	1	1	1
	F_PACKAGE_ID FK	TRANSPORT_ID FK	BOOKING_ID FK	RESERVATION_ID FK	NUM_OF_PEOPLE	P_TOTAL_COST	P_CUST_PAYMENTS

TABLE: PACKAGE

Database Implementation



Flights Table Description

- Stores data about available flights
- Contains flight number, plane type, airline, flight start date and time, flight end date and time, flight origin, and flight destination
- Flight number is primary key
- Flight number becomes foreign key in flight package table
- One flight can be a part of many flight packages

Flights Table Structure

The screenshot shows the Oracle APEX Object Browser interface for the 'FLIGHTS' table. The top navigation bar includes links for APEX, App Builder, SQL Workshop, Team Development, and Gallery, along with a search bar and user information for 'Faaria Fatima us_b426_sql_s05'. The main area is titled 'Object Browser' and displays the 'FLIGHTS' table structure. The table has the following columns:

Column Name	Data Type	Nullable	Default	Primary Key
FLIGHT_NUM	VARCHAR2(7)	No	-	1
PLANE_TYPE	VARCHAR2(20)	Yes	-	-
AIRLINE	VARCHAR2(35)	Yes	-	-
FLIGHT_START	TIMESTAMP(0)	Yes	-	-
FLIGHT_END	TIMESTAMP(0)	Yes	-	-
F_ORIGIN	VARCHAR2(5)	Yes	-	-
F_DESTINATION	VARCHAR2(5)	Yes	-	-

Below the table, there are buttons for Add Column, Modify Column, Rename Column, Drop Column, Rename, Copy, Drop, Truncate, Create Lookup Table, and Create App. At the bottom left, there are 'Download | Print' links.

Flights Table Data

APEX App Builder SQL Workshop Team Development Gallery Search FF Faaria Fatima us_b426_sql_s05

Object Browser Schema US_B426_SQL_S05

FLIGHTS

Table	Data	Indexes	Model	Constraints	Grants	Statistics	UI Defaults	Triggers	Dependencies	SQL	REST	Sample Queries
	Query	Count Rows	Insert Row	Load Data								
EDIT	FLIGHT_NUM	PLANE_TYPE	AIRLINE		FLIGHT_START		FLIGHT_END		F_ORIGIN	F_DESTINATION		
	UA 345	Boeing 767	United		16-DEC-23 07.30.00.000000 AM		16-DEC-23 11.16.00.000000 AM		EWR	HNL		
	AC 8899	Embraer 175	Air Canada		19-JAN-24 10.45.00.000000 AM		19-JAN-24 05.20.00.000000 AM		JFK	YYT		
	AC 689	Airbus A321	Air Canada		28-JAN-24 06.50.00.000000 AM		28-JAN-24 03.11.00.000000 AM		YYT	JFK		
	UA 1027	Boeing 737	United		19-JAN-23 11.31.00.000000 AM		19-JAN-23 01.10.00.000000 AM		EWR	ORD		
	UA 1847	Boeing 737	United		23-JAN-24 10.55.00.000000 AM		23-JAN-24 02.10.00.000000 AM		ORD	EWR		
	AS 802	Boeing 737MAX	Alaska		17-JAN-24 09.20.00.000000 AM		18-JAN-24 02.51.00.000000 AM		HNL	EWR		
	TP 202	Airbus A321neo	Tap Air Portugal		17-JAN-24 05.40.00.000000 AM		18-JAN-24 09.30.00.000000 AM		EWR	MAD		

Download row(s) 1 - 7 of 7

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Flight Package Table Description

- Stores data about available flight packages
- Contains flight package number, flight number, meal type, wifi, and flight class.
- Flight package number is primary key
- Flight number is a foreign key from the flights table
- Many flight packages can be made from one flight

Flight Package Structure



APEX App Builder SQL Workshop Team Development Gallery

Search Faaria Fatima us_b426_sql_s05

Object Browser Schema US_B426_SQL_S05

FLIGHT_PACKAGE

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Table	Data	Indexes	Model	Constraints	Grants	Statistics	UI Defaults	Triggers	Dependencies	SQL	REST	Sample Queries
	Add Column	Modify Column	Rename Column	Drop Column	Rename	Copy	Drop	Truncate	Create Lookup Table	Create App		
Column Name	Data Type				Nullable			Default			Primary Key	
F_PACKAGE_ID	NUMBER(4,0)				No			-			1	
FLIGHT_NUM	VARCHAR2(8)				Yes			-			-	
MEAL_TYPE	VARCHAR2(20)				Yes			-			-	
WIFI	NUMBER(1,0)				Yes			-			-	
FLIGHT_CLASS	VARCHAR2(15)				Yes			-			-	

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Flight Package Data

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Schema US_B426_SQL_S07

FLIGHT_PACKAGE

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Table	Data	Indexes	Model	Constraints	Grants	Statistics	UI Defaults	Triggers	Dependencies	SQL	REST	Sample Queries
	Query	Count Rows	Insert Row	Load Data								
EDIT		F_PACKAGE_ID			FLIGHT_NUM			MEAL_TYPE			WIFI	FLIGHT_CLASS
	301	UA 345			Vegan			1			Economy	
	302	AC 8899			Gluten free			2			Business	
	303	AC 689			Non diary			3			First	
	304	UA 1027			Regular			4			Economy	
	305	UA 1847			Standard			5			First	
	306	AS 802			Vegetarian			6			Economy	
	307	TP 202			Regular			7			Business	

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Restaurant Table Description

- Stores data about available restaurants
- Contains restaurant id, restaurant name, restaurant street address, restaurant state/province, and restaurant country.
- Restaurant id is the primary key
- Restaurant id is a foreign key in the reservation table
- One restaurant can be found in many reservations.

Restaurant Table Structure

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Object Browser Schema US_B426_SQL_S05

RESTAURANT

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Table	Data	Indexes	Model	Constraints	Grants	Statistics	UI Defaults	Triggers	Dependencies	SQL	REST	Sample Queries
	Add Column	Modify Column	Rename Column	Drop Column	Rename	Copy	Drop	Truncate	Create Lookup Table	Create App		
Column Name	Data Type				Nullable		Default			Primary Key		
REST_ID	NUMBER(5,0)				No		-			1		
REST_NAME	VARCHAR2(30)				Yes		-			-		
REST_STREET	VARCHAR2(45)				Yes		-			-		
REST_STATE_PROV	VARCHAR2(20)				Yes		-			-		
REST_COUNTRY	VARCHAR2(30)				Yes		-			-		

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Restaurant Table Data

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Schema US_B426_SQL_S07

RESTAURANT

Table	Data	Indexes	Model	Constraints	Grants	Statistics	UI Defaults	Triggers	Dependencies	SQL	REST	Sample Queries
Query	Count Rows	Insert Row	Load Data									
EDIT	REST_ID	REST_NAME			REST_STREET				REST_STATE_PROV		REST_COUNTRY	
	31	Miss Ricky's			203 N Wabash, Chicago				IL		USA	
	32	Eddie V's Prime Seafood			521 N Rush St, Chicago				IL		USA	
	33	Piatto			377 Duckworth St.				St.John		Canada	
	34	Lucky Belly			50 N Hotel St Smith St, Honolulu				Hawaii		USA	
	35	KoKo Head Cafe			1145 12th Ave Ste C, Honolulu				Hawaii		USA	
	36	Los Montes De Galicia			Calle Azcona 46				Madrid		Spain	
	37	Zenith Brunch & Cocktails			Calle del Desengano 24				Madrid		Spain	

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Reservation Table Description

- Stores data about the reservations made.
- Contains reservation id, restaurant id, reservation start and end date and number of people.
- Reservation id is primary key
- Restaurant id is a foreign key from the restaurant table.
- Many reservations can be made from one restaurant.

Reservation Table Structure

APEX App Builder SQL Workshop Team Development Gallery Search FF Faaria Fatima us_b426_sql_s05

Object Browser Schema US_B426_SQL_S05

RESERVATION

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Table	Data	Indexes	Model	Constraints	Grants	Statistics	UI Defaults	Triggers	Dependencies	SQL	REST	Sample Queries
	Add Column	Modify Column	Rename Column	Drop Column	Rename	Copy	Drop	Truncate	Create Lookup Table	Create App		
Column Name	Data Type				Nullable		Default		Primary Key			
RESERVATION_ID	NUMBER(5,0)				No		-		1			
REST_ID	NUMBER(5,0)				Yes		-		-			
RES_START	TIMESTAMP(0)				Yes		-		-			
RES_END	TIMESTAMP(0)				Yes		-		-			
RES_NUM_OF_PEOPLE	NUMBER(5,0)				Yes		-		-			

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Reservation Table Data

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Object Browser Schema: US_B426_SQL_S05

RESERVATION

Table	Data	Indexes	Model	Constraints	Grants	Statistics	UI Defaults	Triggers	Dependencies	SQL	REST	Sample Queries
	Query	Count Rows	Insert Row	Load Data								
EDIT	RESERVATION_ID	REST_ID	RES_START			RES_END			RES_NUM_OF_PEOPLE			
	1345	32	20-JAN-24 06.30.00.000000 AM			20-JAN-24 09.00.00.000000 AM			4			
	1346	32	20-JAN-24 06.30.00.000000 AM			20-JAN-24 09.00.00.000000 AM			2			
	1347	36	22-JAN-24 04.30.00.000000 AM			22-JAN-24 06.00.00.000000 AM			4			
	1348	34	23-JAN-24 07.30.00.000000 AM			23-JAN-24 09.00.00.000000 AM			3			
	1349	37	21-JAN-24 10.45.00.000000 AM			21-JAN-24 02.00.00.000000 AM			2			
	1350	35	22-JAN-24 07.30.00.000000 AM			22-JAN-24 10.00.00.000000 AM			8			
	1351	31	23-JAN-24 04.00.00.000000 AM			23-JAN-24 06.00.00.000000 AM			1			

Download row(s) 1 - 7 of 7

Open in APEX | Open in SQL Workshop | javascript:obj_PPR_TAB('f?p=4500:TABLE_DATA:4247124136375:T:RP::%27)

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Activity Table Description

- Stores data about fun vacation activities
- Contains activity ID, activity name, activity type, activity start, activity end, and activity cost per person
- Primary key is activity ID
- Becomes a foreign key in the activity booking table
- One activity can be a part of many activity bookings

Activity Table Structure

Workshop ▾ Team Development ▾ Gallery

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Schema US_B426_SQL_S07

ACTIVITY

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Table	Data	Indexes	Model	Constraints	Grants	Statistics	UI Defaults	Triggers	Dependencies	SQL	REST	Sample Queries
	Add Column	Modify Column	Rename Column	Drop Column	Rename	Copy	Drop	Truncate	Create Lookup Table	Create App		
Column Name	Data Type						Nullable		Default		Primary Key	
ACT_ID	NUMBER(4,0)						No		-		1	
ACT_NAME	VARCHAR2(100)						Yes		-		-	
ACT_TYPE	VARCHAR2(20)						Yes		-		-	
ACT_START	TIMESTAMP(0)						Yes		-		-	
ACT_END	TIMESTAMP(0)						Yes		-		-	
ACT_COST_PER_PERSON	NUMBER(7,2)						Yes		-		-	

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Activity Table Data

ACTIVITY

Activity													
Table	Data	Indexes	Model	Constraints	Grants	Statistics	UI Defaults	Triggers	Dependencies	SQL	REST	Sample Queries	
Query	Count Rows		Insert Row		Load Data								
EDIT	ACT_ID	ACT_NAME			ACT_TYPE		ACT_START		ACT_END		ACT_COST_PER_PERSON		
	1	Surfing			Active		17-DEC-23 09.30.00.000000 AM		17-DEC-23 01.00.00.000000 AM		115		
	2	Spa Massage			Relaxing		17-DEC-23 11.00.00.000000 AM		17-DEC-23 12.00.00.000000 PM		85		
	3	The Baths and White Bay			Relaxing/Sightseeing		21-JAN-24 09.00.00.000000 AM		21-JAN-24 04.00.00.000000 AM		345		
	4	Skydeck Willis Tower			Sightseeing		21-JAN-24 10.00.00.000000 AM		21-JAN-24 06.00.00.000000 AM		44		
	5	Food Tour			Sightseeing		22-JAN-24 09.30.00.000000 AM		22-JAN-24 09.00.00.000000 AM		185		
	6	Hop on Hop off			Sightseeing		21-JAN-24 09.00.00.000000 AM		21-JAN-24 06.00.00.000000 AM		65		
	7	Horseback Riding on the Beach			Relaxing		21-JAN-24 04.30.00.000000 AM		21-JAN-24 06.00.00.000000 AM		95		

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Activity Booking Table Description

- Stores data about the activities booked.
- Contains package ID and activity ID
- Package ID and activity ID make up a composite primary key
- Package ID and activity ID are foreign keys from the package and activity tables
- Many activity bookings can be made from one activity

Activity Booking Table Structure

The screenshot shows the Oracle SQL Workshop interface with the following details:

- Top Navigation:** APEX, App Builder, SQL Workshop (selected), Team Development, Gallery.
- Search Bar:** Search icon and input field.
- User Profile:** Faaria Fatima, us_b426_sql_s05.
- Breadcrumbs:** Object Browser.
- Schema:** US_B426_SQL_S05.
- Table Structure View:** Title ACTIVITY_BOOKING. The table has the following columns:

Column Name	Data Type	Nullable	Default	Primary Key
PACKAGE_ID	NUMBER(5,0)	No	-	1
ACTIVITY_ID	NUMBER(5,0)	No	-	2
- Action Buttons:** Add Column, Modify Column, Rename Column, Drop Column, Rename, Copy, Drop, Truncate, Create Lookup Table, Create App.
- Table Options:** Table, Data, Indexes, Model, Constraints, Grants, Statistics, UI Defaults, Triggers, Dependencies, SQL, REST, Sample Queries.
- Bottom Links:** Download | Print.

Activity Booking Table Data

Workshop ▾ Team Development ▾ Gallery

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Schema US_B426_SQL_S07

ACTIVITY_BOOKING

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Table	Data	Indexes	Model	Constraints	Grants	Statistics	UI Defaults	Triggers	Dependencies	SQL	REST	Sample Queries
	Query Count Rows Insert Row Load Data											
EDIT				PACKAGE_ID				ACTIVITY_ID				
	12345											1
	12346											2
	12347											3
	12348											4
	12349											5
	12350											5
	12351											7

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Hotel Table Description

- Stores data about hotels that can be booked for the vacation
- Contains hotel ID, hotel name, hotel type, hotel street address, hotel state/province, and hotel country
- Primary key is hotel ID
- Hotel ID becomes a foreign key in the booking table
- One hotel can be a part of many bookings

Hotel Table Structure

APEX App Builder SQL Workshop Team Development Gallery Search FF Faaria Fatima us_b426_sql_s05

Object Browser Schema US_B426_SQL_S05

HOTEL

+ ▾

Table	Data	Indexes	Model	Constraints	Grants	Statistics	UI Defaults	Triggers	Dependencies	SQL	REST	Sample Queries
	Add Column	Modify Column	Rename Column	Drop Column	Rename	Copy	Drop	Truncate	Create Lookup Table	Create App		
Column Name	Data Type				Nullable		Default		Primary Key			
HOTEL_ID	NUMBER(6,0)				No		-		1			
HOTEL_NAME	VARCHAR2(40)				Yes		-		-			
HOTEL_TYPE	VARCHAR2(30)				Yes		-		-			
HOTEL_STREET	VARCHAR2(30)				Yes		-		-			
HOTEL_STATE_PROV	VARCHAR2(40)				Yes		-		-			
HOTEL_COUNTRY	VARCHAR2(30)				Yes		-		-			

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Hotel Table Data

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Object Browser Schema: US_B426_SQL_S05 +

HOTEL

Table	Data	Indexes	Model	Constraints	Grants	Statistics	UI Defaults	Triggers	Dependencies	SQL	REST	Sample Queries
		Query	Count Rows	Insert Row	Load Data							
EDIT	HOTEL_ID	HOTEL_NAME		HOTEL_TYPE	HOTEL_STREET		HOTEL_STATE_PROV		HOTEL_COUNTRY			
	101	Winsor House		Bed and Breakfast	1 Forest Rd		St.John's NL A1C 2B8		Canada			
	102	Alohilani		Resort	2490 Kalākaua Ave		Honolulu		Hawaii			
	103	Hostal La Fontana		Hostel	C. de Valverde		Madrid		Spain			
	104	Madrid Marriott Auditorium		Hotel	Ave. de Argon		Madrid		Spain			
	105	Devele Inn		Hotel	26 Monkstown Rd		St.John's		Canada			
	106	Sentral Michigan Avenue		Hotel	808 S Michigan Ave		IL		USA			
	107	Chicago Oakdale Apt		Apartment	W oakdale Avenue		IL		USA			

Download row(s) 1 - 7 of 7

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Booking Table Description

- Stores data about hotel bookings
- Contains booking ID, hotel ID, room type, number of rooms, and cost per room
- Hotel ID is a foreign key from the hotel table
- Many hotel bookings can be made from one hotel

Booking Table Structure

APEX App Builder SQL Workshop Team Development Gallery Search FF Faaria Fatima us_b426_sql_s05

Object Browser Schema US_B426_SQL_S05

BOOKING

Table	Data	Indexes	Model	Constraints	Grants	Statistics	UI Defaults	Triggers	Dependencies	SQL	REST	Sample Queries
	Add Column	Modify Column	Rename Column	Drop Column	Rename	Copy	Drop	Truncate	Create Lookup Table	Create App		
Column Name	Data Type				Nullable		Default			Primary Key		
BOOKING_ID	NUMBER(5,0)				No		-			1		
HOTEL_ID	NUMBER(6,0)				Yes		-			-		
ROOM_TYPE	VARCHAR2(18)				Yes		-			-		
NUM_OF_ROOMS	NUMBER(5,0)				Yes		-			-		
COST_PER_ROOM	NUMBER(6,2)				Yes		-			-		

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Booking Table Data

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Object Browser Schema US_B426_SQL_S05

BOOKING

Table	Data	Indexes	Model	Constraints	Grants	Statistics	UI Defaults	Triggers	Dependencies	SQL	REST	Sample Queries
	Query	Count Rows	Insert Row	Load Data								
EDIT		BOOKING_ID		HOTEL_ID		ROOM_TYPE		NUM_OF_ROOMS		COST_PER_ROOM		
	701		101			Suite		2				140
	702		102			Single		1				100
	703		103			Double		3				210
	704		104			Suite		2				140
	705		105			Double		3				210
	706		106			Single		1				100
	707		107			Suite		2				140

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Transportation Table Description

- Stores data about a single booking for a method of transportation
- Contains transportation ID, transportation type, start timestamp, and end timestamp
- Additional transportation is not available through this database
- Transportation ID is the primary key
- Transportation is a foreign key in the package table
- One transportation booking can be a part of one vacation package

Transportation Table Structure

The screenshot shows the Oracle APEX SQL Workshop interface. At the top, there are navigation links: App Builder, SQL Workshop, Team Development, and Gallery. A search bar is also present. On the right, there are user profile icons and the current schema: US_B426_SQL_S05.

The main area displays the "TRANSPORTATION" table structure. The table has the following columns:

Column Name	Data Type	Nullable	Default	Primary Key
TRANSPORT_ID	NUMBER(5,0)	No	-	1
TRANS_TYPE	VARCHAR2(15)	Yes	-	-
TRANS_START	TIMESTAMP(0)	Yes	-	-
TRANS_END	TIMESTAMP(0)	Yes	-	-

Below the table, there are buttons for Add Column, Modify Column, Rename Column, Drop Column, Rename, Copy, Drop, Truncate, Create Lookup Table, and Create App. At the bottom left, there are links for Download and Print.

Transportation Table Data

APEX App Builder SQL Workshop Team Development Gallery Search FF Faaria Fatima us_b426_sql_s05

Object Browser Schema US_B426_SQL_S05 +

TRANSPORTATION

Table	Data	Indexes	Model	Constraints	Grants	Statistics	UI Defaults	Triggers	Dependencies	SQL	REST	Sample Queries
	Query Count Rows Insert Row Load Data											
EDIT	TRANSPORT_ID	TRANS_TYPE	TRANS_START				TRANS_END					
	607	Bus	16-DEC-23 09.00.00.000000 AM				16-DEC-23 11.00.00.000000 AM					
	608	Train	18-DEC-23 06.00.00.000000 AM				18-DEC-23 11.00.00.000000 AM					
	609	Flight	21-DEC-23 05.00.00.000000 AM				21-DEC-23 10.00.00.000000 AM					
	610	Flight	05-DEC-23 05.00.00.000000 AM				05-DEC-23 09.00.00.000000 AM					
	611	Car	01-DEC-23 03.00.00.000000 AM				01-DEC-23 11.00.00.000000 AM					
	612	Flight	19-DEC-23 08.00.00.000000 AM				19-DEC-23 11.00.00.000000 AM					
	613	Bus	14-DEC-23 05.00.00.000000 AM				14-DEC-23 11.00.00.000000 AM					

Download row(s) 1 - 7 of 7



Customer Table Description

- Stores data about customers
- Contains customer ID, package ID, customer first name, customer last name, customer street address, customer state, customer zip code, customer phone number, and customer email.
- The primary key is customer ID
- Package ID is a foreign key in the customer table and links to package
- One customer can buy many packages

Customer Table Structure

APEX App Builder SQL Workshop Team Development Gallery Search FF Faaria Fatima us_b426_sql_s05

Object Browser Schema US_B426_SQL_S05

CUSTOMER_TABLE

Table	Data	Indexes	Model	Constraints	Grants	Statistics	UI Defaults	Triggers	Dependencies	SQL	REST	Sample Queries
	Add Column	Modify Column	Rename Column	Drop Column	Rename	Copy	Drop	Truncate	Create Lookup Table	Create App		
Column Name	Data Type				Nullable			Default			Primary Key	
CUSTOMER_ID	NUMBER(5,0)				No			-			1	
PACKAGE_ID	NUMBER(5,0)				Yes			-			-	
C_FIRST_NAME	VARCHAR2(18)				Yes			-			-	
C_LAST_NAME	VARCHAR2(18)				Yes			-			-	
C_STREET_ADD	VARCHAR2(20)				Yes			-			-	
C_STATE	VARCHAR2(3)				Yes			-			-	
C_ZIP_CODE	NUMBER(5,0)				Yes			-			-	
C_PHONE_NUM	NUMBER(10,0)				Yes			-			-	
C_EMAIL	VARCHAR2(40)				Yes			-			-	

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Customer Table Data

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us_b426_sql_s07

Schema US_B426_SQL_S07 ▾



CUSTOMER_TABLE

Table Data Indexes Model Constraints Grants Statistics UI Defaults Triggers Dependencies SQL REST Sample Queries

Query Count Rows Insert Row Load Data

EDIT	CUSTOMER_ID	PACKAGE_ID	C_FIRST_NAME	C_LAST_NAME	C_STREET_ADD	C_STATE	C_ZIP_CODE	C_PHONE_NUM	C_EMAIL
	1101	12345	Faaria	Fatima	203 Elizabeth	NJ	7633	7324983737	faaria@mcc.org
	1102	12345	Anna	Koganov	162 Morris Ave	NJ	8342	7322343447	anna@mcc.org
	1103	12345	Gabryella	Orrego	735 Omori Str	NJ	8367	9084952373	gaby@mcc.org
	1104	12346	Sung	Jinwoo	10 S Rank	NJ	14324	2075434234	jinwoo@rankers.net
	1105	12346	Klara	Bohringer	18 Germany Ave	TX	3423	6547329885	kj@agent.val
	1106	12349	Yohan	Omen	23 shrouded lane	LA	83234	2097654389	omen@agent.val
	1107	12349	Lim	Jaebeom	345 Beautiful Sky Rd	NY	7777	3201162014	ahgase@got7.nest

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Package Table Description

- Stores data about vacation packages
- Contains package ID, flight package ID, transportation ID, booking ID, reservation ID, number of people, total cost, and customer payments.
- The primary key is package ID.
- Flight package ID, transportation ID, booking ID, and reservation ID are all foreign keys from other tables in the package table
- One package contains one flight package, one transport, one hotel booking, and one restaurant reservation.

Package Table Structure

SQL Workshop Team Development Gallery Search Gabryella Orrego us_b426_sq_l508 Schema US_B426_SQL_S08

PACKAGE

+ ▾

Table	Data	Indexes	Model	Constraints	Grants	Statistics	UI Defaults	Triggers	Dependencies	SQL	REST	Sample Queries
	Add Column	Modify Column	Rename Column	Drop Column	Rename	Copy	Drop	Truncate	Create Lookup Table	Create App		
Column Name	Data Type				Nullable			Default		Primary Key		
PACKAGE_ID	NUMBER(5,0)				No			-		1		
F_PACKAGE_ID	NUMBER(4,0)				Yes			-		-		
TRANSPORT_ID	NUMBER(5,0)				Yes			-		-		
BOOKING_ID	NUMBER(5,0)				Yes			-		-		
RESERVATION_ID	NUMBER(5,0)				Yes			-		-		
NUM_OF_PEOPLE	NUMBER(3,0)				Yes			-		-		
P_TOTAL_COST	NUMBER(6,2)				Yes			-		-		
P_CUST_PAYMENTS	NUMBER(6,2)				Yes			-		-		

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Package Table Data

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Schema US_B426_SQL_S08

PACKAGE

Table	Data	Indexes	Model	Constraints	Grants	Statistics	UI Defaults	Triggers	Dependencies	SQL	REST	Sample Queries
	Query	Count Rows	Insert Row	Load Data								
EDIT	PACKAGE_ID	F_PACKAGE_ID	TRANSPORT_ID	BOOKING_ID	RESERVATION_ID	NUM_OF_PEOPLE	P_TOTAL_COST	P_CUST_PAYMENTS				
	12345	303	607	701	1345	3	1345.42	745.42				
	12346	301	608	702	1346	2	856.43	856.43				
	12347	302	609	703	1347	7	3822.54	2822.54				
	12348	304	610	704	1348	1	452	452				
	12349	305	611	705	1349	2	839.73	234				
	12350	306	612	706	1350	3	742.97	742.97				
	12351	307	613	707	1351	5	2345.32	2345.32				

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row(s) 1 - 7 of 7

SQL Statements

Record Updates

```
-- Update a Record from each table
UPDATE FLIGHT_PACKAGE
SET FLIGHT_CLASS= 'Business'
WHERE F_PACKAGE_ID='301' AND FLIGHT_NUM
='UA 345';

UPDATE ACTIVITY
SET ACT_COST_PER_PERSON=300
WHERE ACT_ID=3;

UPDATE ACTIVITY_BOOKING
SET ACTIVITY_ID=5
WHERE PACKAGE_ID=12348;

UPDATE BOOKING
SET COST_PER_ROOM=125
WHERE BOOKING_ID=706;

UPDATE CUSTOMER_TABLE
SET C_ZIP_CODE=08831
WHERE C_LAST_NAME='Koganov';
```

```
UPDATE FLIGHTS
SET F_DESTINATION= 'JFK'
WHERE FLIGHT_NUM='UA 1847';

UPDATE HOTEL
SET HOTEL_STATE_PROV='NL'
WHERE HOTEL_STATE_PROV='St.John's NL A1C
2B8';

UPDATE PACKAGE
SET NUM_OF_PEOPLE=6
WHERE PACKAGE_ID=12347;

UPDATE RESERVATION
SET REST_ID=36
WHERE RESERVATION_ID=1345;

UPDATE RESTAURANT
SET REST_STATE_PROV= 'Barcelona'
WHERE REST_ID=36;

UPDATE TRANSPORTATION
SET TRANS_TYPE='Train'
WHERE TRANSPORT_ID=611;
```



Using an alias and a join

```
--Perform a calculation in at least one table and store the results of  
--the calculation(s) as an alias.
```

```
SELECT BOOKING_ID, NUM_OF_ROOMS, COST_PER_ROOM, NUM_OF_ROOMS*COST_PER_ROOM AS  
TOTAL_COST  
FROM BOOKING;  
--Demonstration of a Join
```

```
SELECT PACKAGE_ID, TRANSPORTATION.TRANSPORT_ID, TRANS_TYPE  
FROM PACKAGE JOIN TRANSPORTATION  
ON PACKAGE.TRANSPORT_ID=TRANSPORTATION.TRANSPORT_ID;
```

Using an alias and a join

```
SELECT BOOKING_ID, NUM_OF_ROOMS, COST_PER_ROOM, NUM_OF_ROOMS*COST_PER_ROOM AS TOTAL_COST FROM BOOKING
```

BOOKING_ID	NUM_OF_ROOMS	COST_PER_ROOM	TOTAL_COST
701	2	140	280
702	1	100	100
703	3	210	630
704	2	140	280
705	3	210	630
706	1	125	125
707	2	140	280

7 rows selected. 0.07 seconds

7 rows selected. 0.07 seconds

```
SELECT PACKAGE_ID, TRANSPORTATION.TRANSPORT_ID, TRANS_TYPE FROM PACKAGE JOIN TRANSPORTATION ON PACKAGE.TRANSPORT_ID=TRANSPORTATION.TRANSPORT_ID
```

PACKAGE_ID	TRANSPORT_ID	TRANS_TYPE
12345	607	Bus
12346	608	Train
12347	609	Flight
12348	610	Flight
12349	611	Train
12350	612	Flight
12351	613	Bus



2 level select statement and multiple table query

```
--Two Level Select Statement
SELECT BOOKING_ID, HOTEL_NAME, COST_PER_ROOM
FROM HOTEL, BOOKING
WHERE HOTEL.HOTEL_ID=BOOKING.HOTEL_ID AND
COST_PER_ROOM<=(SELECT AVG(COST_PER_ROOM)
                  FROM BOOKING
                  WHERE HOTEL.HOTEL_ID=BOOKING.HOTEL_ID);
```

```
--One Multiple table query useful to your specific project.
--allows people to see all packages that contain a certain
--activity
```

```
SELECT ACT_ID, ACT_NAME, PACKAGE_ID
FROM ACTIVITY, ACTIVITY_BOOKING
WHERE ACTIVITY.ACT_ID=ACTIVITY_BOOKING.ACTIVITY_ID AND
ACT_ID=5;
```

2 level select statement and multiple table query

BOOKING_ID	HOTEL_NAME	COST_PER_ROOM	FROM BOOKING	WHERE
701	Winsor House	140		
702	Alohilani	100		
703	Hostal La Fontana	210		
704	Madrid Marriott Auditorium	140		
705	Devele Inn	210		
706	Sentral Michigan Avenue	125		
707	Chicago Oakdale Apt	140		

7 rows selected. 0.06 seconds

```
SELECT ACT_ID, ACT_NAME, PACKAGE_ID FROM ACTIVITY, ACTIVITY_BOOKING WHERE ACTIVITY.ACT_ID=ACTIVITY_BOOKING.ACTIVITY_ID AND ACT_ID=5
```

ACT_ID	ACT_NAME	PACKAGE_ID
5	Food Tour	12348
5	Food Tour	12349
5	Food Tour	12350

3 rows selected. 0.02 seconds

Conclusion



Conclusion

- This database is here to solve your data storage and management needs.
- The system is set up in a way that allows users to search for and select the data they need
- Users can create invoices for the vacation package they created.
- Allows for the further development of an application to streamline the process of booking a vacation.