

Travel Database

Caroline Smith | Huntington University | CS 415 Database Management – Fall 2025 - Final Project

Overview

- Database will be used for organization of travel information and efficiency of planning future trips
- Multiple tables will be used in helping organize different aspects of trip-planning

Design

- 6 tables:
 - Trip (parent table)
 - Flight
 - Hotel
 - Activity
 - Expense
 - Favorite

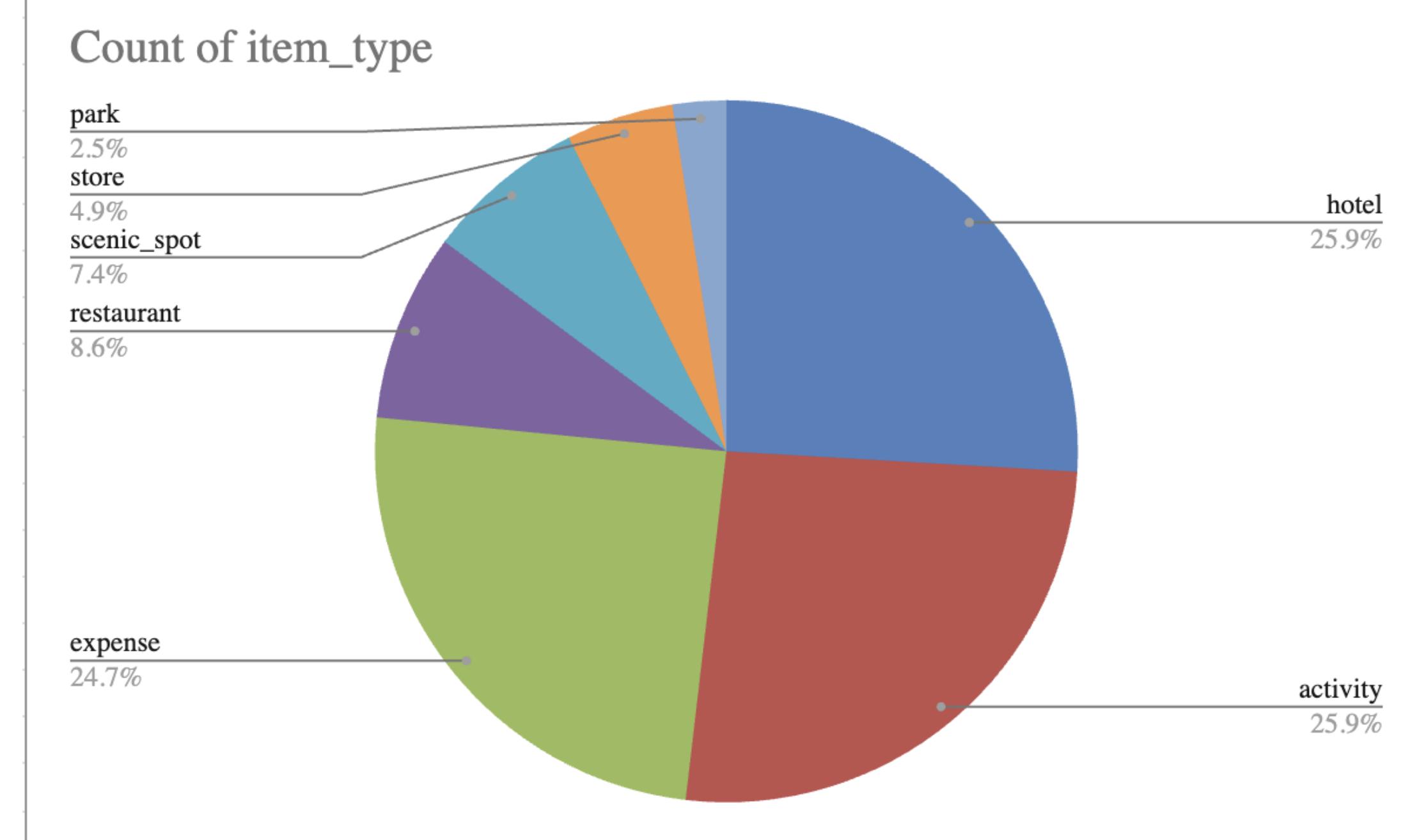
Each child table has a one-to-many relationship, keeping 3rd Normal Form

Data

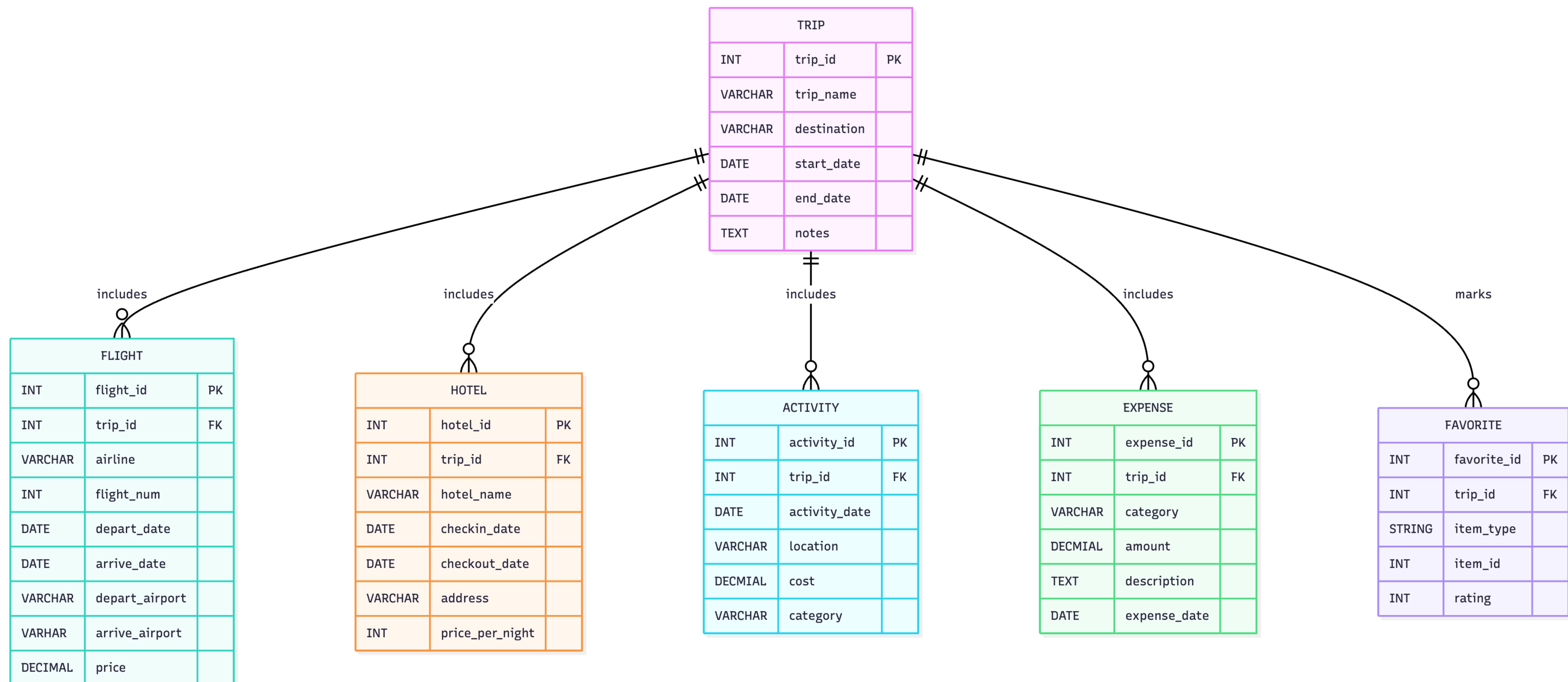
- **TRIP** (trip_name, destination, start_date, end_date, notes)
- **FLIGHT** (trip_id, airline, flight_num, depart_date, arrive_date, depart_airport, arrive_airport, price)
- **HOTEL** (trip_id, hotel_name, checkin_date, checkout_date, address, price_per_night)
- **ACTIVITY** (trip_id, activity_date, location, cost, category)
- **EXPENSE** (trip_id, category, amount, description, expense_date)
- **FAVORITE** (trip_id, item_type, item_id, rating)

Reports

Year	Month	Day	Sum of cost
2025	January	5	8
2025	January	6	0
2025	January	7	12
2025	January	8	62
2025	January	10	0
2025	January	11	15
2025	January	12	5
2025	January	13	40
2025	January	14	0
2025	January	15	12
2025	February	5	18
2025	February	6	25
2025	February	7	20
2025	February	8	60
2025	February	9	85
2025	February	10	12
2025	February	14	0
2025	February	15	50
2025	February	16	30
2025	February	17	0
2025	February	18	25
2025	March	5	20
2025	March	6	12
2025	March	7	22
2025	March	8	0
2025	March	9	8
2025	March	10	35
2025	March	12	0
2025	March	13	30
2025	March	14	10
2025	March	15	22
2025	March	16	22
Total			2332



ER Model



Queries

- **Query 1:** Shows all trips and sorts them by start date and then by name.
- **Query 2:** Shows expenses for trip 1 and calculates each amount with 10% tax.
- **Query 3:** Shows New York trips and the month number of their start dates.
- **Query 4:** Shows total expenses per trip, only for trips costing more than 100.
- **Query 5:** Joins trips, hotels, and expenses to show each trip, its hotel, and total spending.
- **Query 6:** Shows trip 3 with any matching favorite items (or none if they don't exist).
- **Query 7:** Checks a hotel's price, updates it, and confirms the new price.
- **Query 8:** Shows an expense, deletes it, and verifies it's gone.
- **Query 9:** Creates a view summarizing each trip and then displays it.
- **Query 10:** Changes hotel prices in a transaction, views the changes, then rolls them back.