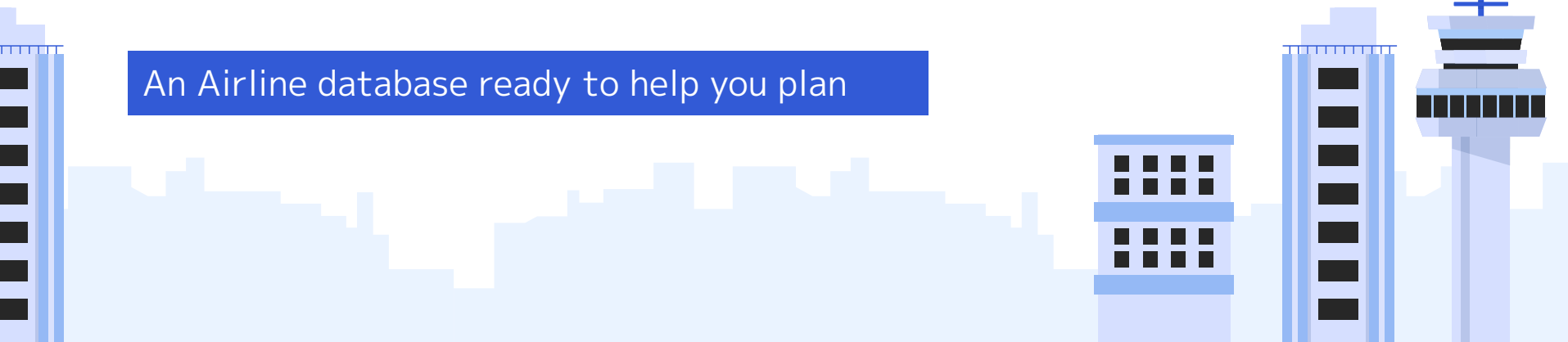
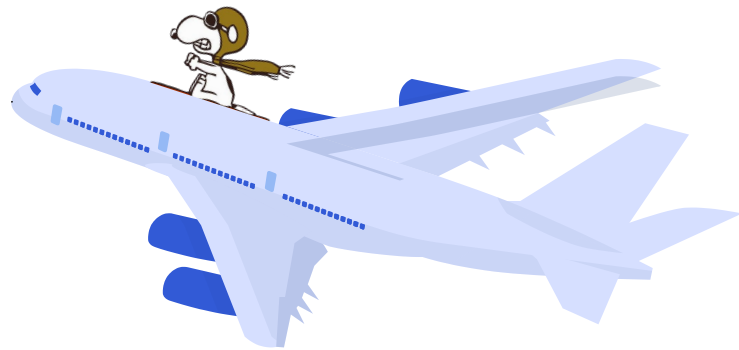


# ***Snoopy*** ***Airlines***

An Airline database ready to help you plan





# ***Meet the team***

Danielle Bryan [CS]  
Wei Yuan Liew [CS]  
Tanvi Nair [DS]

Dandan Wang [CS]  
Mandy Hardono [CE]  
Laura Pinto [CE]  
Shreyaa Arun [SE]

Meyli Colmenero [CE]  
Fernando Portillo [CE]  
Hunter Matthews [CS]





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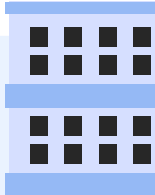
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1

# ***Project overview***

What is Snoopy Airlines?

# ***Project Overview***



This project can be used in a real-world airline system, aiding the backend structure for easily managing flights, aircraft, customers, reservations, passengers, and payments.

## **Our goals & Inspirations**

- Increasing reliance by minimize manual effort and errors.
- Enhance customer experience with seamless time tracking and booking information.
- Real-world challenges in managing large-scale data.
- Connect people worldwide.

## **How it helps the aviation industry:**

- Maintains data consistency across all updates, inserts and data operations on the database
- Supports customers by making the process easier.



# Timeline

## ***Planning***

Selecting  
group tasks

Diagrams  
creation

## ***Database Creation***

## ***Testing and Validation***

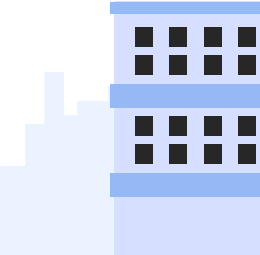
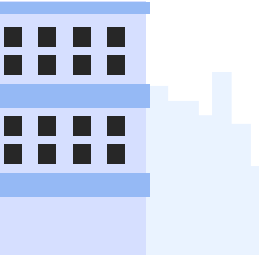
Testing  
database  
creation and  
actions

Normalize  
database and  
re-doing  
database  
creation

## ***Database normalization***

## ***Front-end creation***

Visualization  
of database  
use



Three stylized blue clouds are positioned at the top of the slide: one on the left, one in the center, and one on the right.

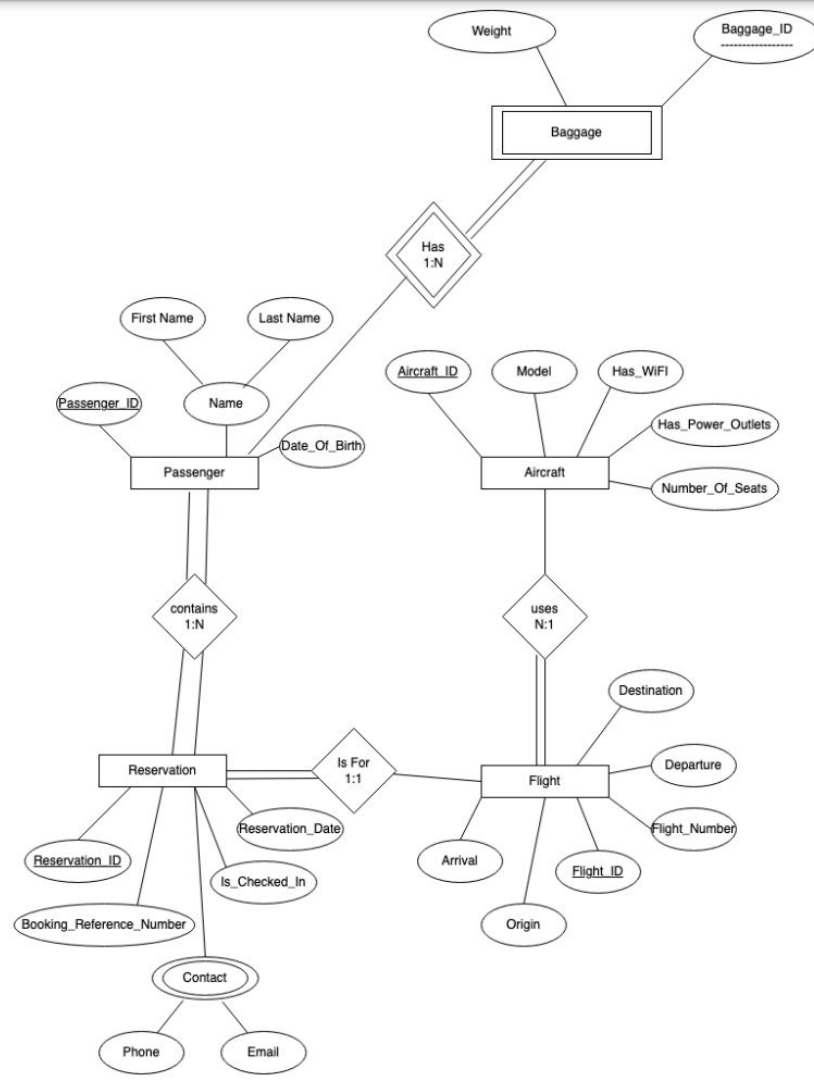
2

A stylized white airplane with blue accents is flying towards the right in the upper left quadrant.

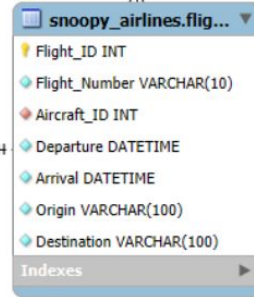
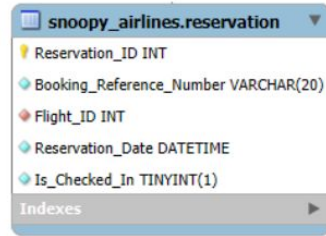
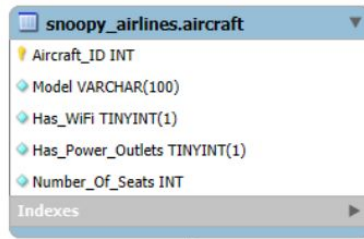
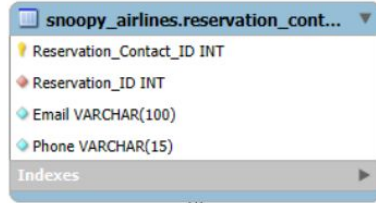
# ***EER Diagram***

Two stylized blue airplane control towers are located at the bottom left and bottom right. Between them is a light blue silhouette of a city skyline.

# Original EER Diagram







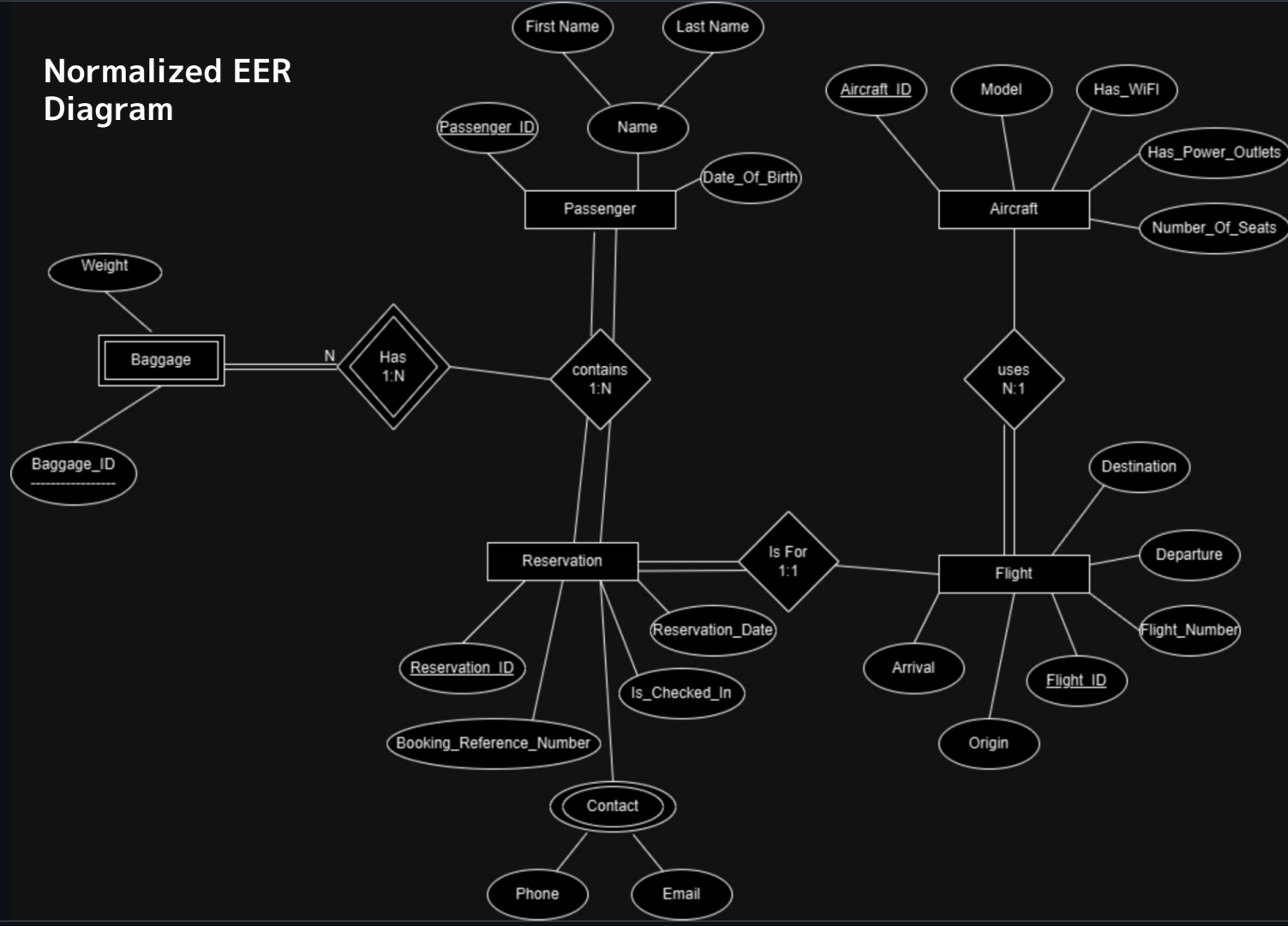
Original Relational  
Data model design



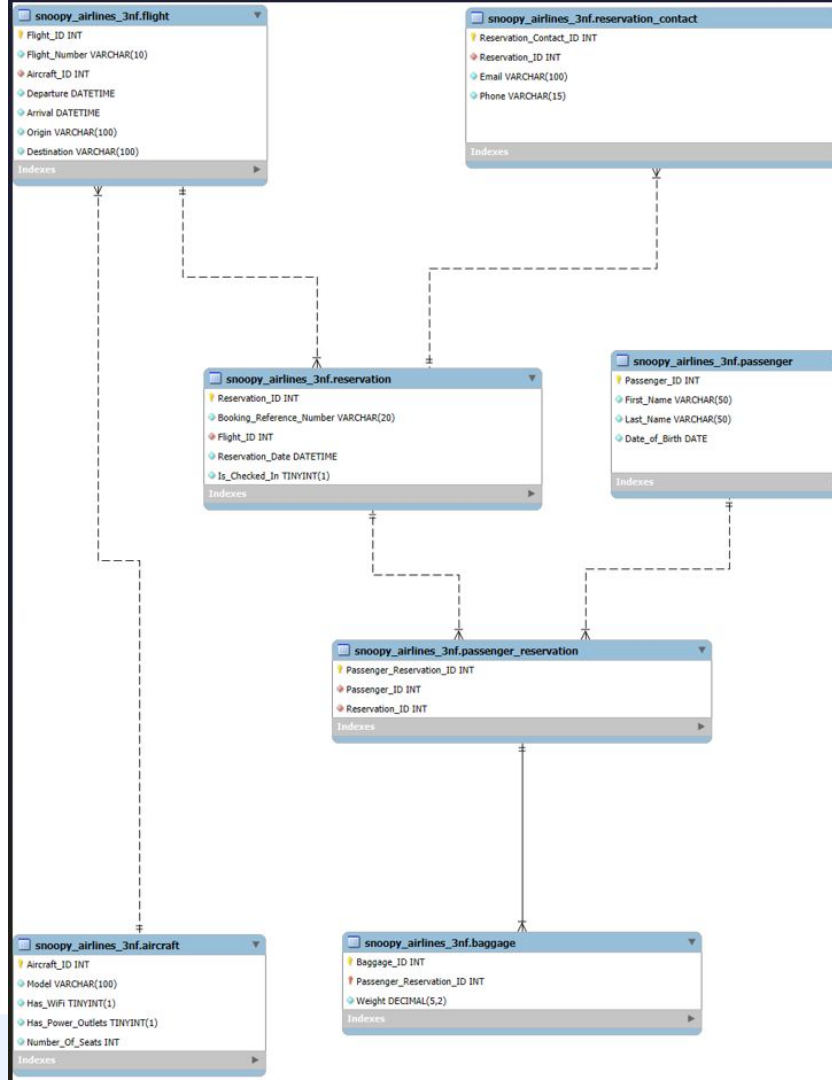
3

# ***Normalized Database***

# Normalized EER Diagram



# Normalized Relational Data model design



# Example of Insert and views

**3.5.1 View Table:** Identifies passengers who have checked baggage heavier than the average weight across all passengers.

	First_Name	Last_Name	Baggage_Weight
▶	John	Doe	23.50
	Wei Yuan	Liew	25.40
	Tanvi	Nair	24.10
	Mandy	Hardono	23.75
	Fernando	Portillo	26.10
	Shreyaa	Arun	24.30
	Hunter	Matthews	25.00
	Ebru	Cankaya	23.40
	Patricia	Anderson	24.50
	Jessica	Walker	25.60
	Henry	King	23.90

**INSERT:** Insert new aircraft called Embraer E173

```
3 • INSERT INTO Aircraft (Model, Has_WiFi, Has_Power_Outlets, Number_Of_Seats) VALUES
4   ('Embraer E173', FALSE, TRUE, 76);
5 • SELECT * FROM Aircraft WHERE Model = "Embraer E173";
```

Aircraft_ID	Model	Has_WiFi	Has_Power_Outlets	Number_Of_Seats
26	Embraer E173	0	1	76
	HULL	HULL	HULL	HULL

**3.5.2 View Table:** Creates a view of all Boeing flights, listing flight numbers, aircraft models, flight origins with destinations

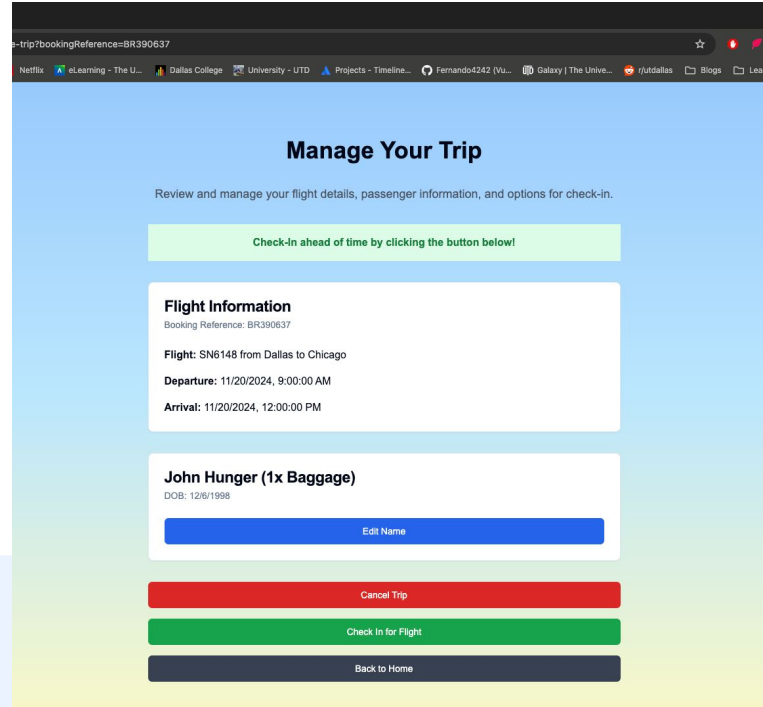
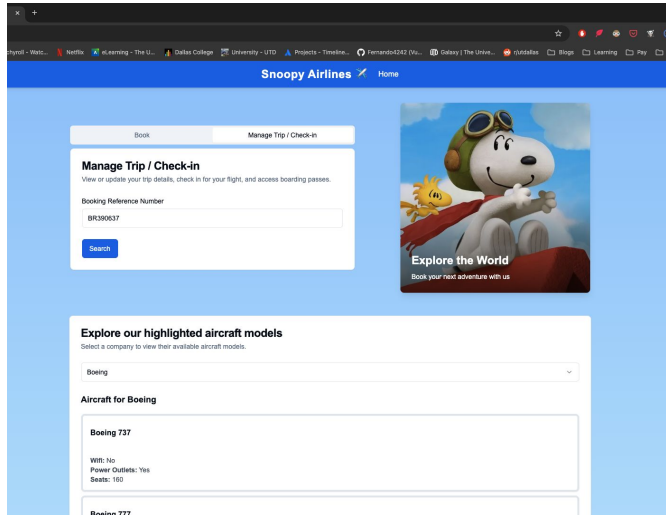
	Flight_Number	Model	Origin	Destination
▶	SN123	Boeing 737	New York	Los Angeles
	SN789	Boeing 777	Dallas	Denver
	SN104	Boeing 787	Atlanta	Washington DC
	SN107	Boeing 747	Austin	Nashville
	SN108	Boeing 767	Detroit	Philadelphia
	SN111	Boeing 757	San Francisco	Chicago
	SN112	Boeing 717	Orlando	Atlanta
	SN115	Boeing 727	Los Angeles	San Francisco
	SN119	Boeing 720	Seattle	Atlanta
	SN120	Boeing 707	Miami	Atlanta



4

# ***Database & Website***

# Website





5

# ***Conclusion and Future work***



# Conclusion

## Key Design Decisions:

- Balancing simplicity with functionality.
- Deciding what to include vs. exclude (e.g., no crew or terminal data).
- Focusing on core entities to avoid overwhelming complexity.

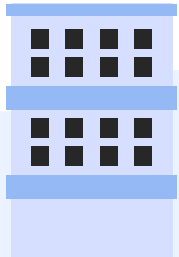


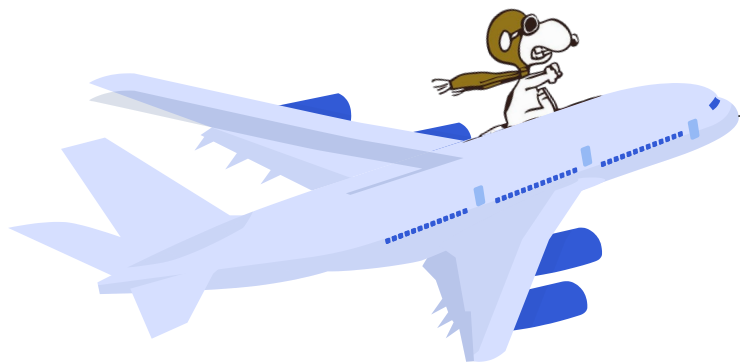
## Key takeaways:

- Simplifying the database design enables a focus on user experience.
- Customer-centric databases can still achieve efficiency and scalability.
- Balancing complexity is crucial to a good database design.

## Future work:

- Making a bigger database with more information, entities and attributes to ensure a smooth transition/work for the database.
- Implementing database security of data and access.





# ***Thanks!***

Questions?

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