Data Admin Concepts and Database Management

IST 659

Project Report

FLYNFO: - Flight Booking Website

Submitted By

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FLYNFO!
FLY WITH
INFORMATION

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Introduction: -

FLYNFO is a comprehensive solution aimed at efficiently managing and optimizing various aspects of the aviation industry. This system encompasses a wide range of functionalities, including airplane management, route planning, flight scheduling, fare management, passenger data, employee information, financial transactions, country data, and airport information.

The primary objectives of the FLYNFO Airplane Management System are as follows:

1. **Operational Efficiency**: Streamline and automate aviation management processes, such as route and flight planning, fare management, and resource allocation.

2. Enhanced Customer Experiences: Improve the passenger experience through easy booking, personalized services, and real-time flight information.

3. Resource Optimization: Optimize the utilization of airplanes and employees to achieve cost savings and operational efficiency.

4. Data Security: Ensure robust data security measures to safeguard sensitive passenger and employee information.

Problem Statement: -

Travel planning especially through airways are complex processes and very time-consuming, Passengers often face challenges such as:

- Difficulty in modifying or cancelling bookings.
- Requirement of unnecessary information while flight ticket booking.
- Lack of information provided on the details regarding fare prices and hidden charges like tax, insurance, etc.
- Glitches or chances of failed transactions during the booking of a flight.

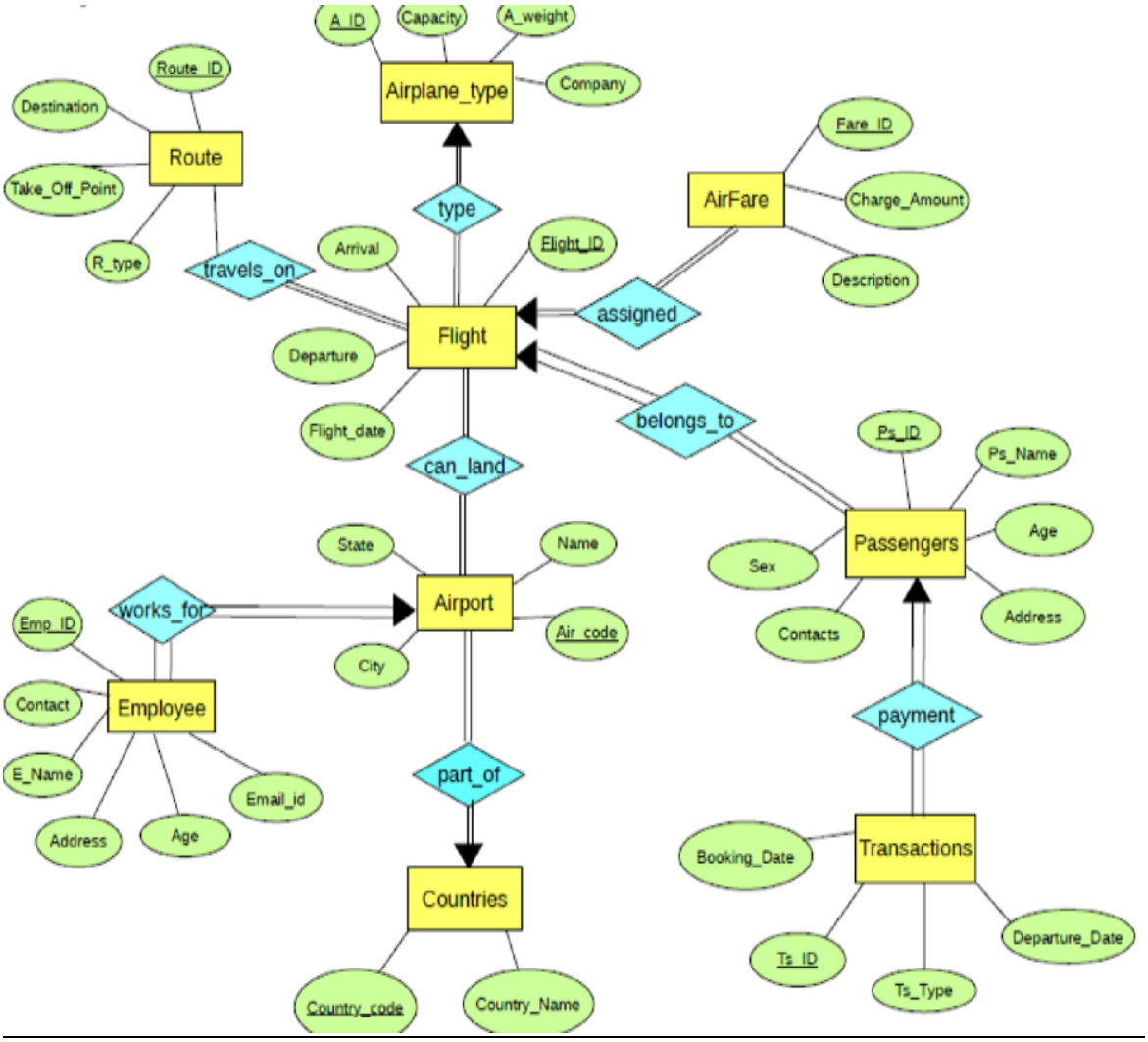
Proposed Solution: -

We have produced a solution which is a website called "FLYNFO: FLY WITH INFO". This will provide a centralized platform for managing all the airport and flight information. This website aims to simplify the flight booking process and it also provides passengers with a convenient and easy to understand platform for searching, booking, and managing their flight tickets. Travelers can easily search for flights based on their departure airport and arrival airport and can book flights directly through the website. A transparent fare prizing system has been developed which displays all the hidden charges, providing utmost clarity to the user.

The Flight Booking Website will serve the following user groups:

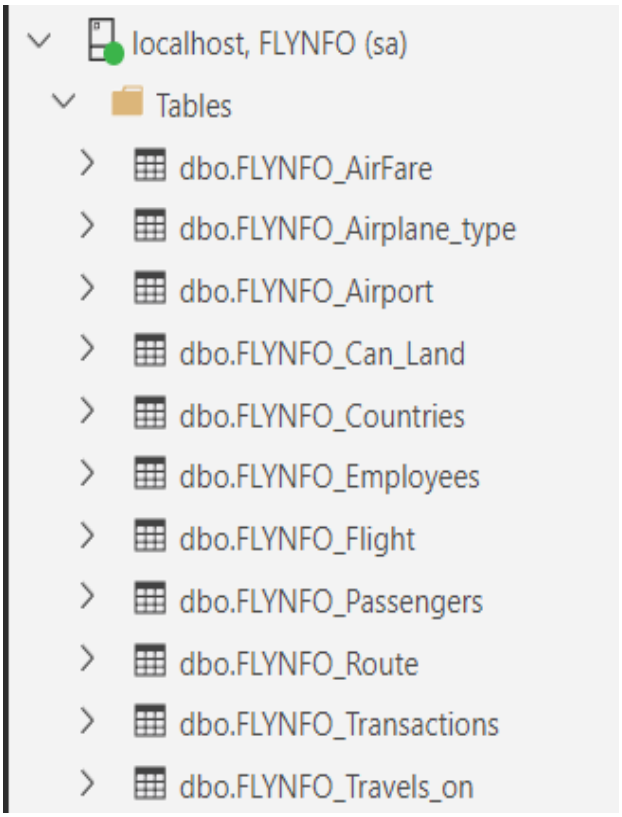
- Travelers: Individuals, families, and business travelers looking to book flights for their trips.
- Travel Agencies: Partnerships with travel agencies to offer flight booking services through the platform.
- Airlines: Collaboration with airlines to list their flights on the platform

Entity Relationship Diagram: -



Code and Data: -

Databases



FLYNFO_AIRPLANE_TYPE :

```
CREATE TABLE Airplane_type
(A_ID INT,
Capacity INT,
A_weight INT,
Company VARCHAR(15),PRIMARY KEY(A_ID));
```

```
4    --FLYNFO_Airplane_type
```

Results Messages

	A_ID	Capacity	A_weight	Company
1	738	853	394	Indigo
2	745	770	405	GoAir
3	750	790	364	AirIndia
4	768	867	387	AirAsia
5	777	800	380	Vistara
6	785	835	410	Alliance Air
7	790	850	390	SpiceJet
8	821	790	355	TruJet

FLYNFO_PASSENGERS:

CREATE TABLE Passengers

(Ps_ID INT, Ps_Name VARCHAR(20), Address VARCHAR(50), Age INT, Sex VARCHAR(1),

Contacts VARCHAR(10), Flight_ID VARCHAR(15), PRIMARY KEY(Ps_ID),

FOREIGN KEY (Flight_ID) REFERENCES Flight(Flight_ID));

```
4
5    --FLYNFO_Passengers
6
7
```

Results Messages

	Ps_ID	Ps_Name	Address	Age	Sex	Contacts	Flight_ID
1	1	Biswadip	2230 Northside,Apt 11,London	30	M	8080367290	AI2014
2	2	Kunal	3456 Vikas Apts,Apt102,New Jersey	26	M	8080367280	QR2305
3	3	Vaibhav Gaikwad	7820 Mccallum courts,Apt 234,Washington	30	M	8082267280	LH9876
4	4	Sejal Mandore	345 Chatam courts,Apt 678,Chennai	29	F	9080369290	EY1234
5	6	Kulveen Kaur	1110 Fir hills,Apt 90,Daman	30	F	7666190505	AA4367
6	7	Sukhad Joshi	B-402,Aditya Apt,Hyderabad	34	M	9819414036	EY1234
7	8	Akshata Atpadkar	7720 Mccallum Blvd,Apt 77,Beijing	45	F	8124579635	CT7812

FLYNFO_Flight:

```
(
 Flight_ID VARCHAR(15), Departure VARCHAR(30),
Arrival VARCHAR(30), Flight_date DATE, A_ID INT,
PRIMARY KEY(Flight_ID),
FOREIGN KEY (A_ID) REFERENCES Airplane_type(A_ID)
);
```

```
3
4   ---FLYNFO_FLIGHT
5
6
```

Results Messages

	Flight_ID	Departure	Arrival	Flight_date	A_ID
1	AA4367	09-03-2022 12:05am	09-03-2022 02:15am	2022-09-03	768
2	AI2014	12-01-2022 08:45am	12-01-2022 10:25pm	2022-12-01	738
3	BA1689	01-03-2022 2:15am	01-03-2022 10:00pm	2022-01-03	745
4	CT7812	04-04-2022 2:15pm	04-04-2022 8:00pm	2022-04-04	821
5	EY1234	10-02-2022 05:00am	10-02-2022 10;30pm	2022-10-02	750
6	LH9876	02-02-2022 10:15am	02-02-2022 11:00pm	2022-02-02	790
7	PF4521	11-12-2022 5:00pm	11-12-2022 10:30pm	2022-11-12	785
8	QR2305	06-12-2022 12:05pm	06-12-2022 12:25pm	2022-06-12	777

FLYNFO_TRANSACTIONS:

```
CREATE TABLE Transactions
(
  TS_ID INT,
  Booking_Date DATE,
  Departure_Date DATE,
  TS_Type VARCHAR(20),
```

```
    Emp_ID INT,
    Ps_ID INT,
    Flight_ID VARCHAR(15),
    Charge_Amount INT,
    PRIMARY KEY(TS_ID),
    FOREIGN KEY (Emp_ID) REFERENCES Employees(Emp_ID) ,
    FOREIGN KEY (Ps_ID) REFERENCES Passengers(Ps_ID),
    FOREIGN KEY (Flight_ID) REFERENCES Flight(Flight_ID),
    FOREIGN KEY (Charge_Amount) REFERENCES AirFare(Fare_ID));
```

```
3   --FLYNFO_Transactions
```

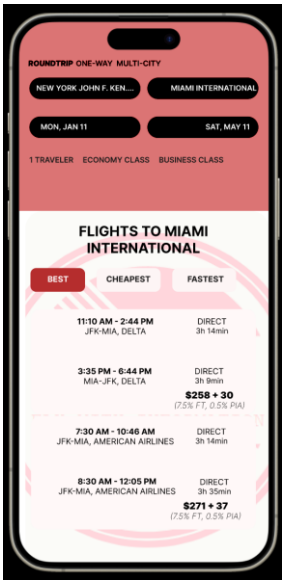
Results | Messages

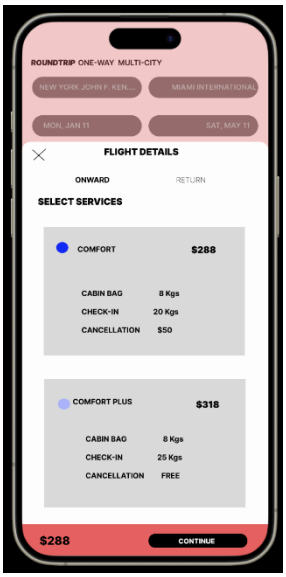
	TS_ID	Booking_Date	Departure_Date	TS_Type	Emp_ID	Ps_ID	Flight_ID	Charge_Amount
1	12345678	2021-02-21	2021-02-22	Google Pay	1234	1	AI2014	27341
2	17892455	2021-02-05	2021-02-08	Credit Card	5123	6	AA4367	8777
3	24517852	2021-03-06	2021-03-08	ApplePay	2458	8	CT7812	9578
4	32548525	2021-01-20	2021-01-25	Credit Card	4521	7	EY1234	4459
5	45321879	2021-03-15	2021-03-16	ApplePay	8512	3	LH9876	27373
6	45612789	2021-01-12	2021-01-14	Credit Card	3246	2	QR2305	34837
7	56987123	2020-12-05	2020-12-02	ApplePay	9321	4	EY1234	42176

Outputs: -

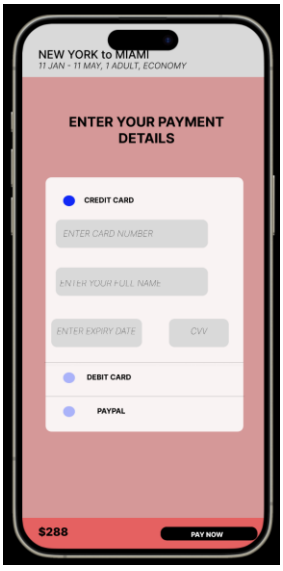

FLYNFO
FLY WITH INFORMATION
BOOK A FLIGHT
VIEW YOUR FLIGHT


ROUNDTRIP ONE-WAY MULTI-CITY
FROM
TO
MON, JAN 11
SAT, MAY 11
1 TRAVELER ECONOMY CLASS BUSINESS CLASS
SEARCH
FLYNFO
FLY WITH INFORMATION


ROUNDTRIP ONE-WAY MULTI-CITY
NEW YORK JOHN F. KEN...
MIAMI INTERNATIONAL
MON, JAN 11
SAT, MAY 11
1 TRAVELER ECONOMY CLASS BUSINESS CLASS
FLIGHTS TO MIAMI INTERNATIONAL
BEST
CHEAPEST
FASTEST
11:10 AM - 2:44 PM
JFK-MIA, DELTA
DIRECT
3h 14min
3:35 PM - 6:44 PM
MIA-JFK, DELTA
DIRECT
3h 9min
$258 + 30
(7.5% FT, 0.5% PIA)
7:30 AM - 10:46 AM
JFK-MIA, AMERICAN AIRLINES
DIRECT
3h 14min
8:30 AM - 12:05 PM
JFK-MIA, AMERICAN AIRLINES
DIRECT
3h 35min
$271 + 37
(7.5% FT, 0.5% PIA)


ROUNDTRIP ONE-WAY MULTI-CITY
NEW YORK JOHN F. KEN...
MIAMI INTERNATIONAL
MON, JAN 11
SAT, MAY 11
FLIGHT DETAILS
ONWARD
RETURN
SELECT SERVICES
COMFORT
$288
CABIN BAG 8 Kgs
CHECK-IN 20 Kgs
CANCELLATION $50
COMFORT PLUS
$318
CABIN BAG 8 Kgs
CHECK-IN 25 Kgs
CANCELLATION FREE
$288
CONTINUE


NEW YORK to MIAMI
11 JAN - 11 MAY, 1 ADULT, ECONOMY
ENTER YOUR DETAILS
ENTER YOUR FULL NAME
ENTER YOUR PASSPORT NO.
ENTER YOUR MOBILE NUMBER
AGE
GENDER
ADDRESS
$288
CONTINUE


NEW YORK to MIAMI
11 JAN - 11 MAY, 1 ADULT, ECONOMY
ENTER YOUR PAYMENT DETAILS
CREDIT CARD
ENTER CARD NUMBER
ENTER YOUR FULL NAME
ENTER EXPIRY DATE
CVV
DEBIT CARD
PAYPAL
$288
PAY NOW

Work Log : -

- Mihir- Database creation, Business Proposal
- Sukhad- Database modelling, Report
- Vaibhav- Frontend Coding, Query Management
- Biswadip- Entity Relationship Diagram, Presentation.

Conclusion: -

In conclusion, the FLYNFO project represents a significant stride towards enhancing efficiency and user experience in the aviation industry. With a comprehensive database design and meticulous coding, we have developed a flight booking website that addresses common challenges faced by passengers, travel agencies, and airlines alike. The collaborative efforts of the team members, each contributing to various aspects of the project, reflect our commitment to creating a robust and user-friendly platform. Moving forward, we believe that FLYNFO has the potential to revolutionize how travel planning is approached, making it more accessible, transparent, and efficient for all stakeholders involved.