



**UNIVERSITI
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**TFB1033/TEB1043
Object Oriented Programming
May 2024**

PREPARED BY :

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LINK YOUTUBE :
<https://youtu.be/M-MGjKr2mTQ>

PREPARED FOR :
DR NORDIN ZAKARIA
DATE OF SUBMISSION:
26 JULY 2024

PROJECT DESCRIPTION

An airline reservation system is a complicated software answer that streamlines the entire method of flight reservations, price ticket income, and agenda control for airways. It allows customers to search for flights, compare costs, and e-book tickets through various digital channels. The machine manages seat stock, optimises pricing, and integrates with price gateways for secure transactions. Moreover, it supports consumer relationship management via storing passenger profiles and options, providing real-time updates on flight schedules and plane availability, and integrating frequent flyer packages to reward and maintain clients.

The device manages seat reservations and availability in real-time, handles booking modifications, cancellations, and rebooking efficiently, and supports ticket sales via airline websites, journey agencies, and cellular apps. It tracks flight schedules, delays, and cancellations, manages plane allocation and turnaround times to ensure efficient fleet utilisation, and uses call for forecasting and dynamic pricing techniques to optimise seat stock and maximise revenue. The machine carries fee gateways like PayPal, Stripe, and credit card processors to handle transactions securely, helps more than one currency and charge techniques for global accessibility, and connects with airport control structures for actual-time updates on gate assignments and baggage dealing with. Moreover, it integrates with motel booking, automobile rentals, and other ancillary offerings to offer complete travel answers.

This vital device enhances operational performance, purchaser pride, and universal airline profitability, facilitating the clean operation of airline offerings and improving the travel enjoyment for clients by presenting comfort, protection, and more than a few options to fulfil their desires.

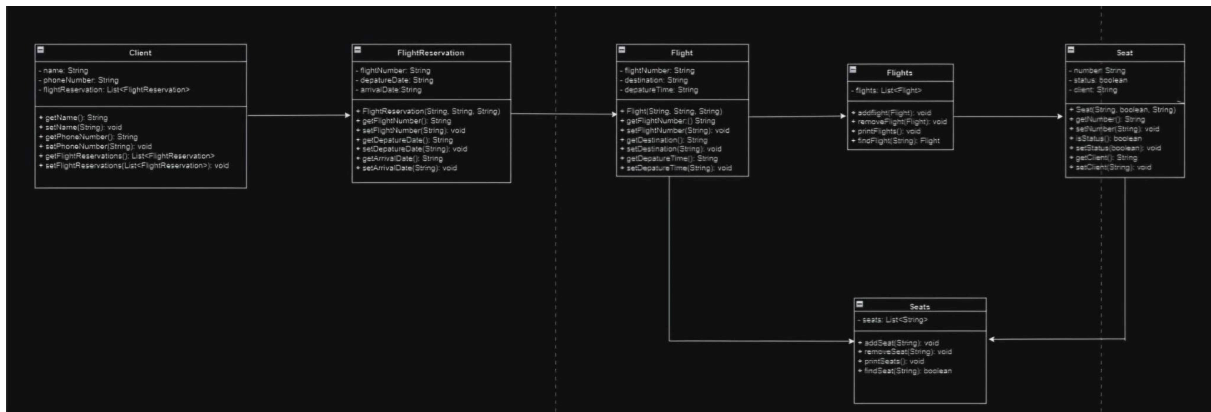
OBJECTIVE

The objective of this report is to provide a comprehensive overview of the development and functionality of an airline reservation system. This system aims to streamline the entire process of flight reservations, ticket sales, and schedule management for airlines. It is designed to enhance operational efficiency, improve customer satisfaction, and increase overall airline profitability by providing a seamless and secure experience for users.

Key objectives:

1. **Streamline Flight Reservations:** Enable users to search for flights, compare prices, and book tickets through various digital channels.
2. **Optimise Pricing and Inventory Management:** Manage seat inventory in real-time, optimise pricing using dynamic techniques, and maximise revenue.
3. **Integrate Secure Payment Gateways:** Incorporate multiple payment gateways for secure transactions and support various currencies and payment methods.
4. **Support Customer Relationship Management (CRM):** Store passenger profiles and preferences, offer real-time updates on flight schedules and availability, and integrate frequent flyer programs.
5. **Enhance Operational Efficiency:** Track flight schedules, manage delays and cancellations, and ensure efficient fleet utilisation.
6. **Provide Comprehensive Travel Solutions:** Integrate with hotel booking, car rentals, and other ancillary services.

UML DIAGRAM



PHPMYADMIN

phpMyAdmin 5.2.1

Database: abs

Showing rows 0 - 2 (3 total, Query took 0.0003 seconds)

SELECT * FROM "absdb"

Query results operations

Print Copy to clipboard Export Display chart Create view

Bookmark this SQL query

Label: ☐ Let every user access this bookmark

Bookmark this SQL query

	Flight_Num	Flight_Name	Flight_Date	Departure	Destination	Departure_Time	Arrival_Time	Seat_Num	Class_Type	Is_Avail	Price_Amount	Price_Currency	Client_Name	Client_Phone_Num	Client_Passport_Num	Client_Contact_Details
<input type="checkbox"/>	8720	AIR ASIA	2024-12-12	KUALA LUMPUR	DUBAI	09:00:00.000000	15:00:00.000000	78	ECONOMY	1	1234	RM	AMRUDDIN RAZIF BIN ARMAN	19326550	66020	amiracod@gmail.com
<input type="checkbox"/>	124155	SINGAPORE AIRLINE	2024-08-05	SINGAPORE	VIETNAM	12:00:00.000000	15:00:00.000000	342	FIRST CLASS	0	23241	DOLLAR SINGAPORE	ZAMER	1739455	2313	zamer@gmail.com
<input type="checkbox"/>	849674	MAS AIRLINE	2024-09-01	CHINA	NEW YORK	17:00:00.000000	22:00:00.000000	456	BUSINESS	1	1809	DOLLAR	SHIKA	172489573	83525	shika12@gmail.com

phpMyAdmin 5.2.1

Database: abs

Table structure

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
<input type="checkbox"/>	1 Flight_Num	int(50)			No	None			Change Drop More
<input type="checkbox"/>	2 Flight_Name	varchar(50)	utf8mb4_general_ci		No	None			Change Drop More
<input type="checkbox"/>	3 Flight_Date	date			No	None			Change Drop More
<input type="checkbox"/>	4 Departure	varchar(50)	utf8mb4_general_ci		No	None			Change Drop More
<input type="checkbox"/>	5 Destination	varchar(50)	utf8mb4_general_ci		No	None			Change Drop More
<input type="checkbox"/>	6 Departure_Time	time(8)			No	None			Change Drop More
<input type="checkbox"/>	7 Arrival_Time	time(8)			No	None			Change Drop More
<input type="checkbox"/>	8 Seat_Num	int(50)			No	None			Change Drop More
<input type="checkbox"/>	9 Class_Type	varchar(50)	utf8mb4_general_ci		No	None			Change Drop More
<input type="checkbox"/>	10 Is_Avail	tinyint(1)			No	None			Change Drop More
<input type="checkbox"/>	11 Price_Amount	int(50)			No	None			Change Drop More
<input type="checkbox"/>	12 Price_Currency	varchar(50)	utf8mb4_general_ci		No	None			Change Drop More
<input type="checkbox"/>	13 Client_Name	varchar(50)	utf8mb4_general_ci		No	None			Change Drop More
<input type="checkbox"/>	14 Client_Phone_Num	int(50)			No	None			Change Drop More
<input type="checkbox"/>	15 Client_Passport_Num	int(50)			No	None			Change Drop More
<input type="checkbox"/>	16 Client_Contact_Details	varchar(50)	utf8mb4_general_ci		No	None			Change Drop More

Query results operations

Print Propose table structure Track table Move columns Normalize

Add 1 column(s) after Client_Contact_Details Go

Indexes

Action	Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
PRIMARY	PRIMARY	BTREE	Yes	No	Flight_Num	3	A	No	
					Client_Phone_Num	3	A	No	

PLUTO AIRLINE BOOKING SYSTEM DESIGN

Booking System

Menu

Flight Information

Flight Number:

08720

Flight Name:

AIR ASIA

Flight Date:

2024/12/12

Departure:

KUALA LUMPUR

Destination:

DUBAI

Departure Time:

09:00

Arrival Time:

15:00

Seat Information

Seat Number:

78

Class Type:

ECONOMY

Is Available:

☒

Price Information

Price Amount:

1234

Price Currency:

RM

Client Information

Client Name:

AMINUDDIN RAZIF BIN ARMAN

Client Phone Number:

0193260580

Client Passport Number:

66020

Client Contact Details:

aminrazid@gmail.com

Reserve

Cancel

CONCLUSION

Airline reservation system is a complex kind of software application that serves to automate the various aspects of flight bookings, ticket selling ,and flight scheduling for the airlines. It offers the customers a convenient way to make the search and selection of the flight, compare the prices, and purchase the tickets online. This system deals with the management of seat availability, proper pricing techniques and incorporation of safe payment methods for the transactions. Also, it assists in customer relationships through the ability to sort and store records of passengers and their transactions in detail, offering updated flight status data, and linking up frequent flyer programs to encourage customer loyalty.

Furthermore, the system has a unique capability in seat control, booking alteration, cancellation as well as the rebooking options and issues tickets through online sales on airline websites, travel agents and through mobile applications. It also includes schedule information – the flights, their schedules, timings, delay and cancellation data, aircraft distribution, and the efficient usage of available airplanes. The existing operational features include the utilisation of demand forecasts and pricing strategies in order to optimise the revenue and the seats. They integrate various payment gateways, they accept multiple currencies and payment forms; this integrates with airport management systems to have the real-time gate assignments as well as baggage handling information. Also, it links with the hotel accommodations, car rentals, and other supplementary services to offer a one-stop-shop travel experience.

All in all, this advanced system improves the operations in many ways, the level of customer satisfaction, and the profitability of the airlines in general. In that way, it enhances customer satisfaction as well as airline service organisation for customers and allows for convenience, security, and a variety of choices.




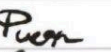

TEAM CONTRIBUTION STATEMENT

Team Contribution Statement

Team Name: **PLUTO AIRLINE BOOKING SYSTEM**

github:

<https://github.com/Kashika22006368/QOP-PLUTO-AIRLINE-BOOKING-SYSTEM.git>

Name	ID	Task / Classes / Methods	Signature
KASHIKA PILLAI KALAI SELVAM	22006368	Airline booking system, flight data	
AMINUDDIN RAZIF BIN ARMAN	22007578	Flight reservations	
IZZAMER BIN BAHARUDDIN	22005742	Client data	
PUVANDRAAN WILSON	22002099	Seat	
JEEVANATHAN A/L ARUMUGAM	22005408	Seats	

I, KASHIKA PILLAI KALAI SELVAM (22006368), the leader/rep for PLUTO AIRLINE BOOKING SYSTEM
group rep/leader name id group name
hereby declare that the information provided is true and correct. I also understand that any willful dishonesty or cover up may
render the group submission invalid.

Signature:  Date: 25 july 2024