



DEPARTMENT OF COMPUTER ENGINEERING
ACADEMIC YEAR 2022-23

**MINI PROJECT REPORT ON
“AIRLINE RESERVATION SYSTEM”**

SUBMITTED BY

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**SUBMITTED TO THE DEPARTMENT OF COMPUTER ENGINEERING
ALL INDIA SHRI HIVAJI MEMORIAL SOCIETY'S INSTITUTE OF
INFORMATION TECHNOLOGY, PUNE**



DEPARTMENT OF COMPUTER ENGINEERING

CERTIFICATE

This is to certify that the project report on
“Airline Reservation System”

Submitted by

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is a bonafide student of this institute and the work has been carried out by him/her under the supervision of **Ms. Pradnya Bormane** and is approved for the partial fulfilment of the Department of Computer Engineering, AISSMS IOIT.

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Guide
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Head of Department
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Place: Pune
Date: 01/11/2022

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ABSTRACT

The system enables the customer to do things such as search for airline flights between two cities on a specified date, choose a flight based on the details, and make a reservation for a flight. The system allows the airline passenger to search for flights that are available between the two travel cities, namely the "Departure City" and "Arrival City" for a particular departure and arrival date. After searching, the system displays a list of available flights and allows the customer to choose a particular flight. The purpose of the Airlines Reservation System is to automate the existing manual system with the help of computerised equipment and full-fledged computer software, fulfilling their requirements so that their valuable data and information can be stored for a longer period with easy access and manipulation. The aim is to automate its existing manual system, thereby fulfilling user requirements so that their valuable data and information can be stored for a longer period with easy access and manipulation.

ACKNOWLEDGEMENT

We had a great time working on this project and learned new skills as a result of it. However, it would not have been possible without the tremendous support and cooperation of many individuals. Apart from the efforts of the project members, the success of every project is heavily reliant on the support and guidance of many others. We would like to appreciate each and every one of them from the bottom of our hearts. Our guide, Ms. Pradnya Bormane, deserves our heartfelt gratitude. We can't thank her enough for all of her help and support. Her assistance and continual guidance were really beneficial in resolving our issues. We would also like to thank Dr. Sarika Zaware for her amazing assistance during the mini-project. We would like to take this opportunity to thank everyone who assisted and guided us during the project, whether directly or indirectly.

INTRODUCTION

Users access an airline's inventory through an availability display. It contains all the offered flights for a particular city-pair in the different booking classes. This display contains flights which are operated by the airline itself as well as code-share flights which are operated in co-operation with another airline. If the city pair is not one in which the airline offers service, it may display a connection using its own flights or display the flights of other airlines. Reservations for individual passengers or groups are stored in a so-called Passenger Name Record (PNR). Among other data, the PNR contains personal information such as names and contact information.

The "Airline Reservation Approach" was created to address the shortcomings of the manual system. This software is supported in order to avoid or, in certain situations, reduce the difficulties encountered by the current system. Furthermore, this system is created for the organisation's specific needs to perform tasks such as filtering out available flights in accordance with the source, destination, and trip date; cashless payment system; and making bookings in a seamless and effective manner. This system requires no formal knowledge from the user. This makes the software more user-friendly.

The MySQL software delivers a very fast, multithreaded, multi-user, and robust SQL (Structured Query Language) database server. MySQL Server is intended for mission-critical, heavy-load production systems as well as for embedding into mass-deployed software. Oracle is a registered trademark of Oracle Corporation and/or its affiliates. MySQL is a trademark of Oracle Corporation and/or its affiliates, and shall not be used by Customer without Oracle's express written authorization. Other names may be trademarks of their respective owners.

With the Java Platform, Enterprise Edition (Java EE), development of Java enterprise applications has never been easier or faster. The aim of the Java EE platform is to provide developers with a powerful set of APIs while shortening development time, reducing application complexity, and improving application performance.

The Java EE platform uses a simplified programming model. XML deployment descriptors are optional. Instead, a developer can simply enter the information as an annotation directly into a Java source file, and the Java EE server will configure the component at deployment and runtime. These annotations are generally used to embed in a program data that would otherwise be furnished in a deployment descriptor. With annotations, you put the specification information in your code next to the program element affected.

PROBLEM STATEMENT

Implement an airline reservation system to book tickets online, get the details of the flight arrival, select the class they want to choose, and reserve seats for national or international flights.

PROPOSED SYSTEM

The project's purpose is to create an airline reservation system that allows users to search for flights based on origin, destination, and travel date, reserve flights, track flights, use a cashless payment method, and download a softcopy of the boarding pass.

The project is designed to display available flights within a given source and destination for the specified date, mentioning the airline name, prices, arrival time, and departure time, allowing the user to choose the desired flight from the available possibilities, and reserve a ticket via cashless payment methods. There is also an option to download a softcopy of the boarding pass. In addition to the reservation system, the flight allows users to track flights using their PNR number and name. Flight details such as arrival and departure times, source and destination are displayed in the flight tracking section.

SYSTEM WORKFLOW

1. Search & Book Flights

- i. Enter source, destination, date, and class.
- ii. Select a flight from the available options.
- iii. Enter traveller information
- iv. Confirm details and complete the payment process.
- v. Download your boarding pass.

2. Track Flights

- i. Enter source, destination, date, and class.
- ii. Get flight details.

WORKFLOW DIAGRAM

1. Search and Book Flights

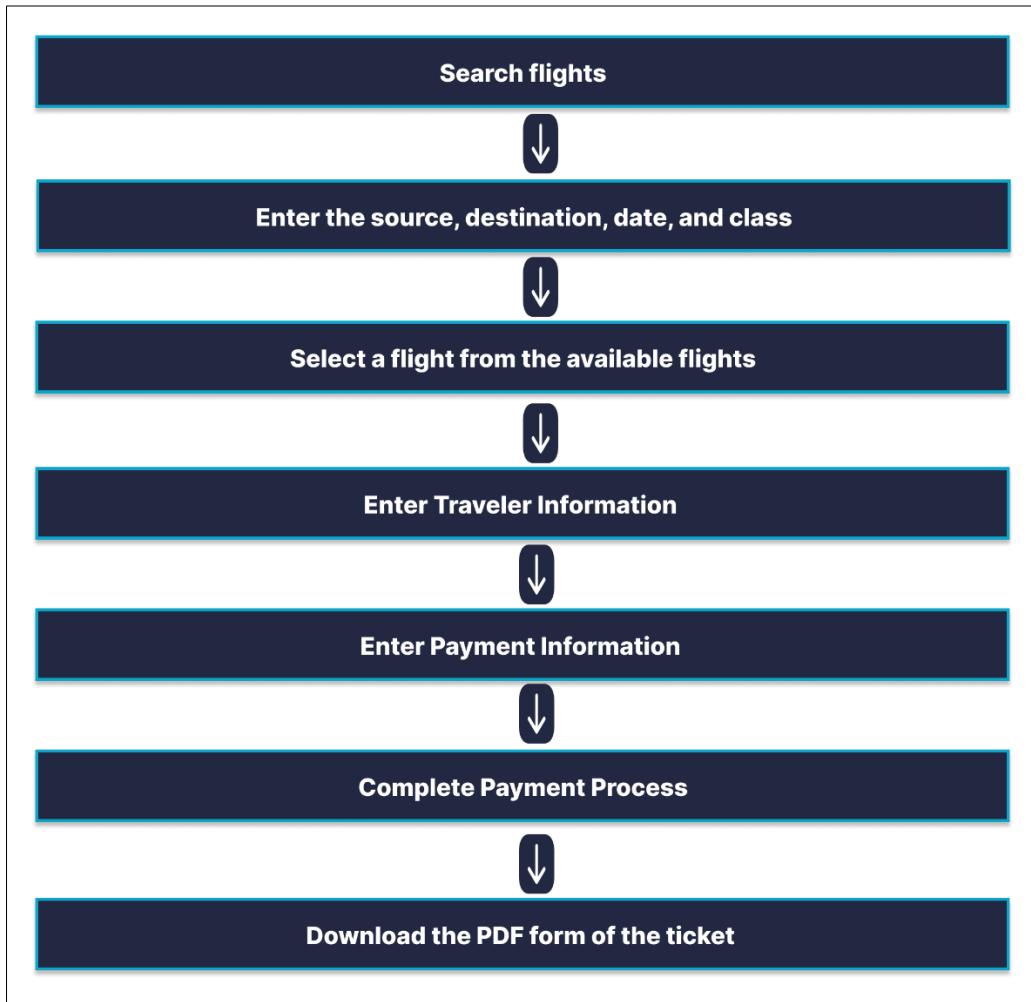


Figure 1(A)

2. Track Flights

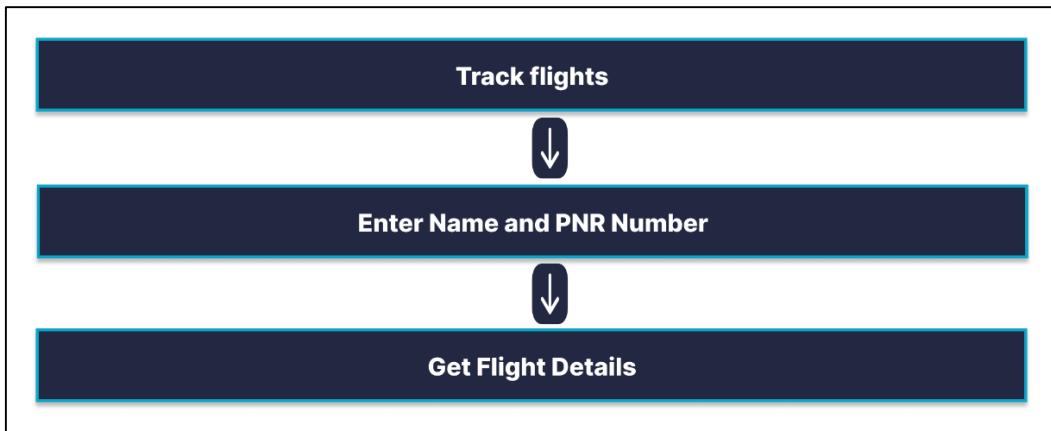


Figure 1(B)

SYSTEM REQUIREMENTS

1. Software Requirements

- Operating System: Windows 98, Windows XP, Windows7, Linux
- Language: J2EE (Java), JavaScript
- Technologies used: Java Server Pages, SQL
- Database: MySQL Server
- Browser: Any of Mozilla, Chrome, MS Edge, etc.
- Web Server: Apache Tomcat 10
- Software Development Kit: Java Development Kit (JDK) 1.7 or Above
- Database Drivers: MySQL Connector/J

2. Hardware Requirements

- Processor: Pentium III 630MHz
- RAM: 128 MB
- Hard disk: 20 GB
- Monitor: 15" colour monitor
- Keyboard: 122 keys

UML DIAGRAMS

WIREFRAMES

1. Home Page

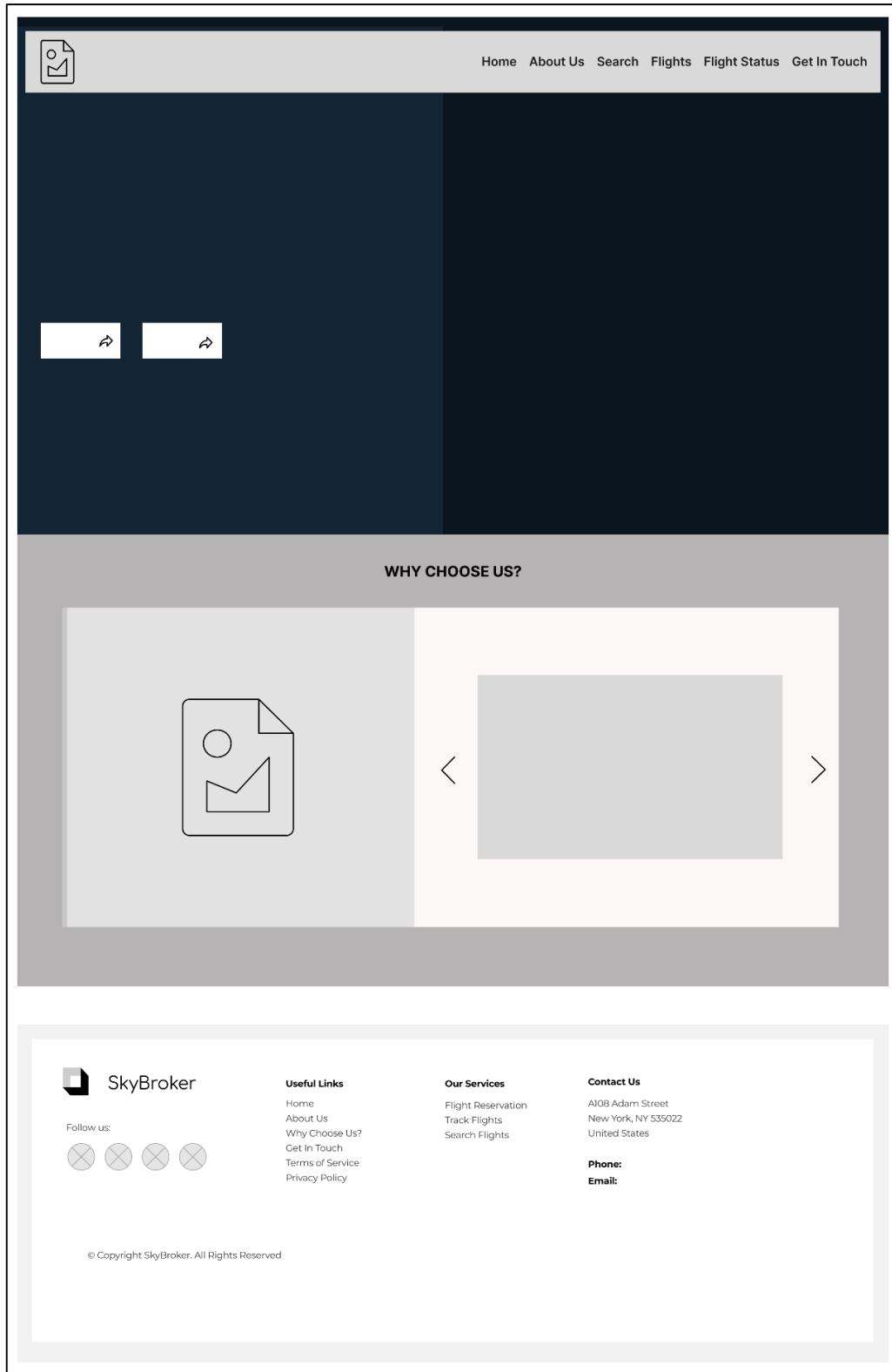


Figure 2(A)

2. Search Flights Page

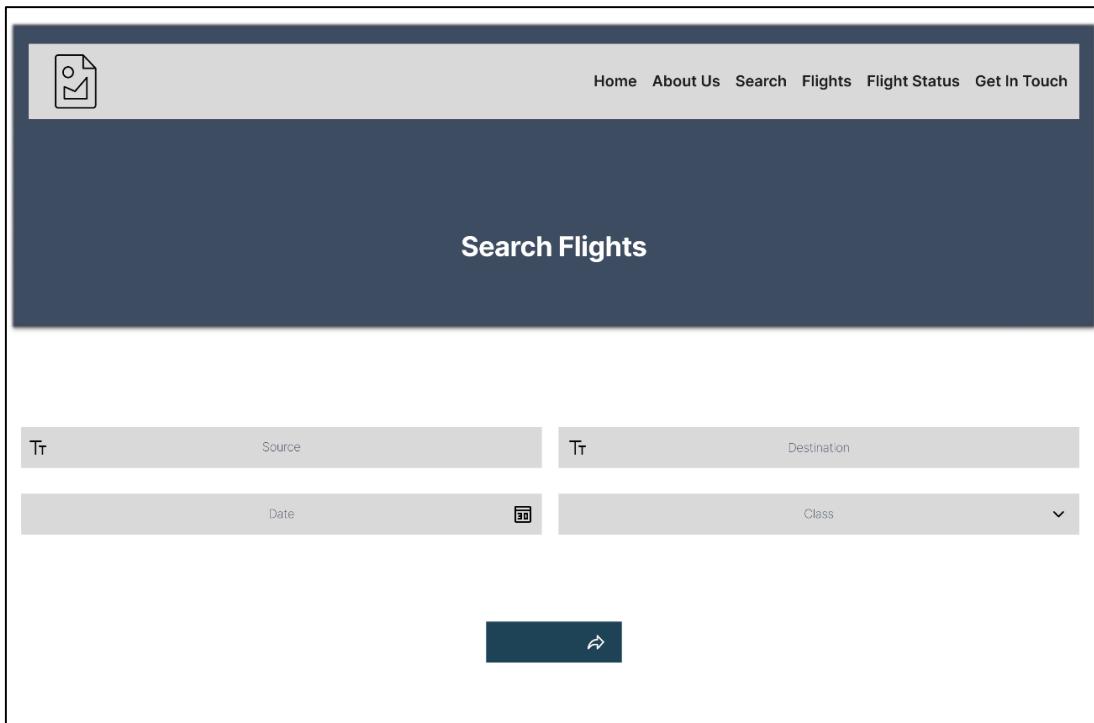


Figure 2(B)

3. Ticket / Boarding Pass Page

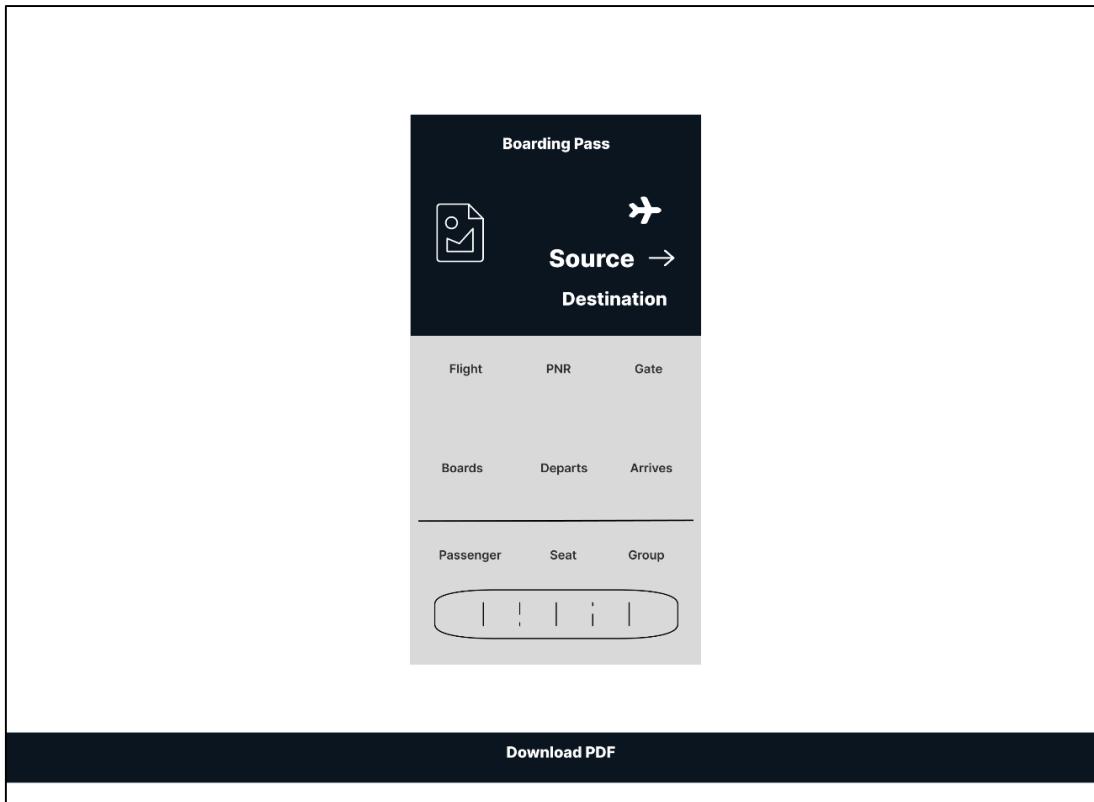


Figure 2(C)

4. Track Flights

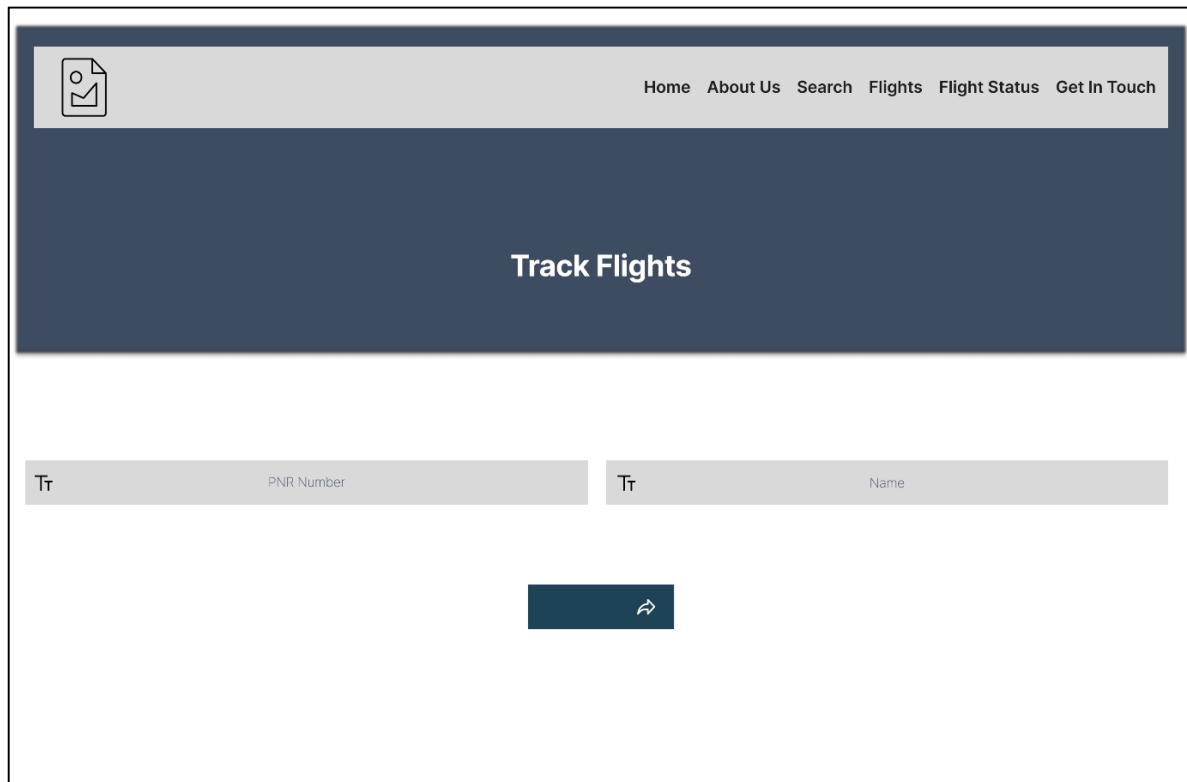


Figure 2(D)

USE CASE DIAGRAM

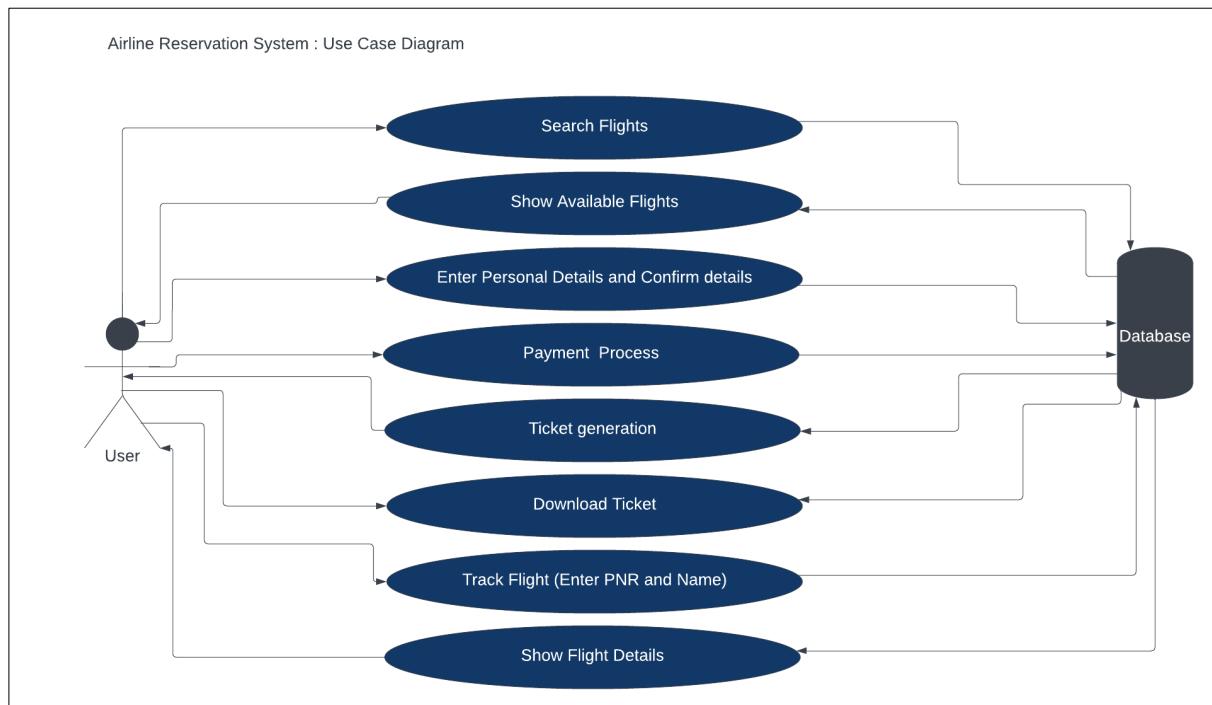


Figure 3

SEQUENCE DIAGRAM

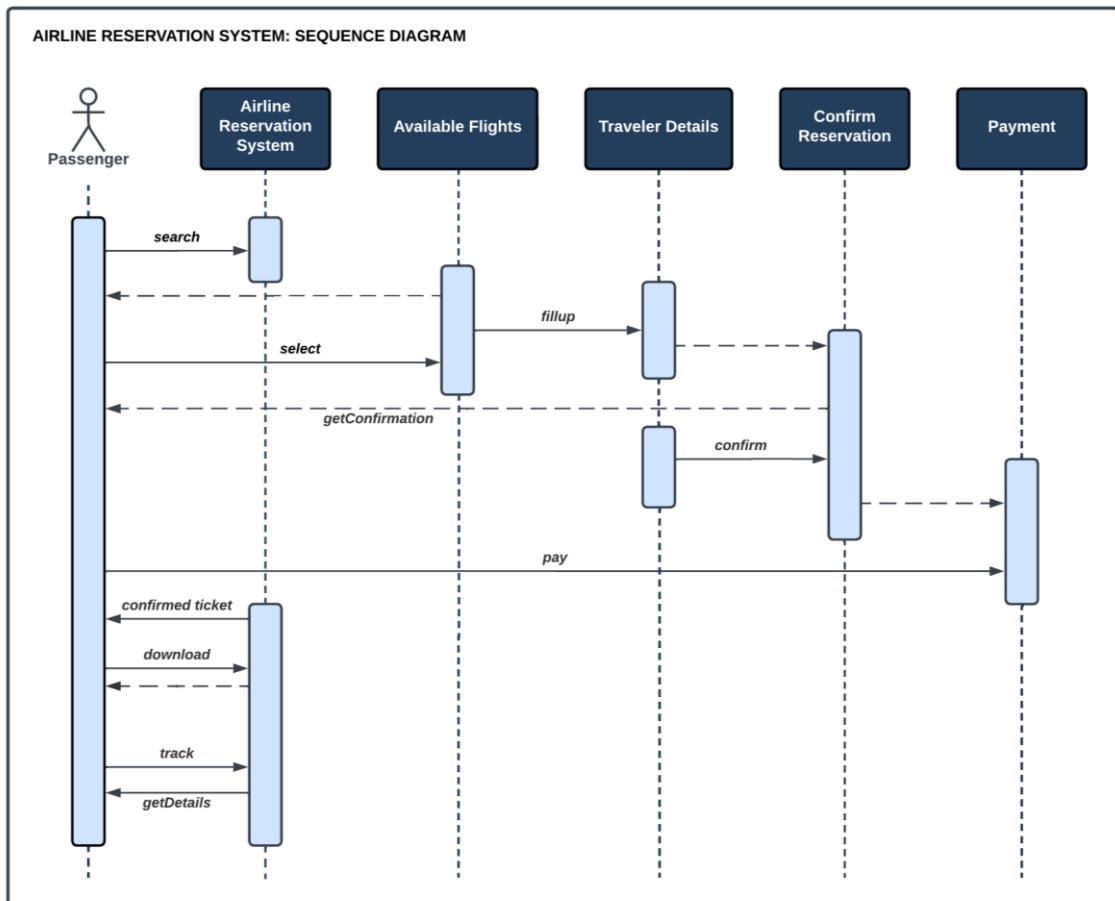


Figure 4

ENTITY RELATIONSHIP DIAGRAM

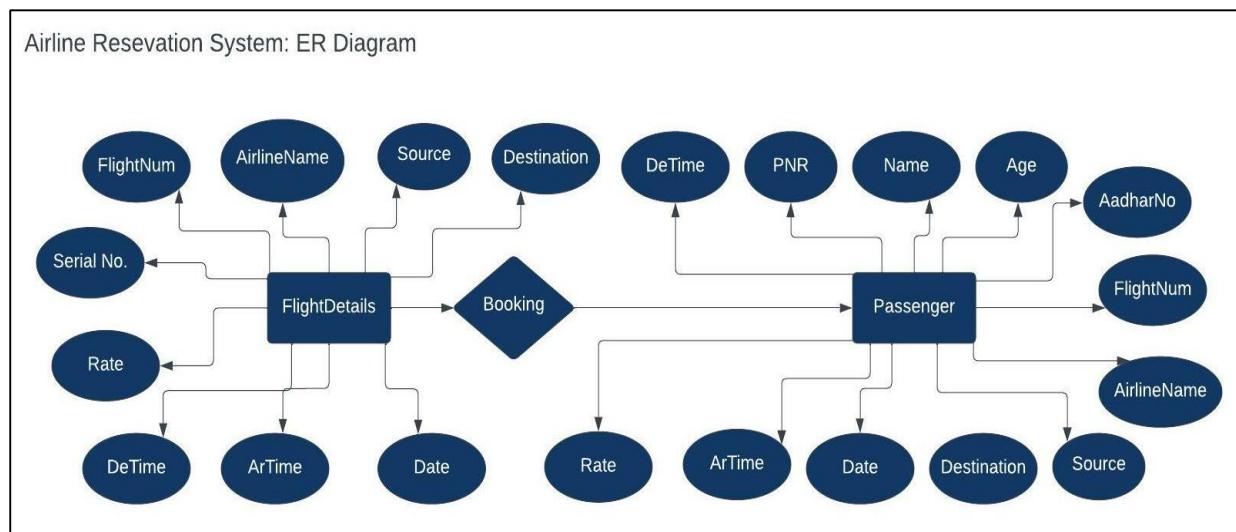


Figure 5

ACTIVITY DIAGRAM

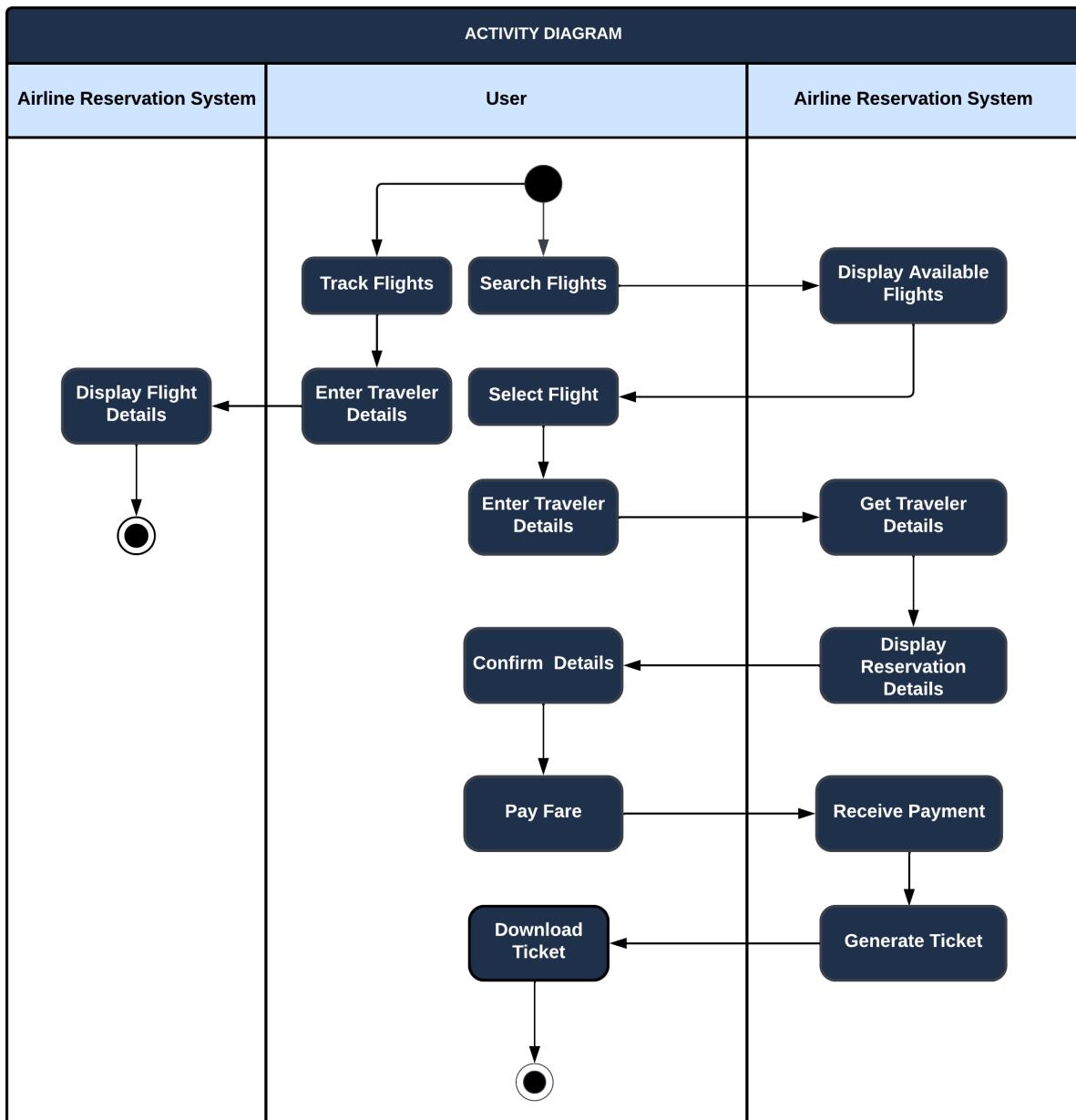


Figure 6

IMPLEMENTATION

SOURCE CODE

Database Connectivity

```
<%
String driver = "org.mariadb.jdbc.Driver";
String connectionUrl = "jdbc:mysql://localhost:3306/";
String database = "airline";
String userid = "root";
String password = "mysql";
try {
Class.forName(driver);
} catch (ClassNotFoundException e) {
e.printStackTrace();
}
Connection connection = null;
Statement statement = null;
ResultSet resultSet = null;
String source = request.getParameter("source");
String desti = request.getParameter("dest");
String date =request.getParameter("date");
String typ = request.getParameter("classOption");
System.out.println(request.getParameter("source"));

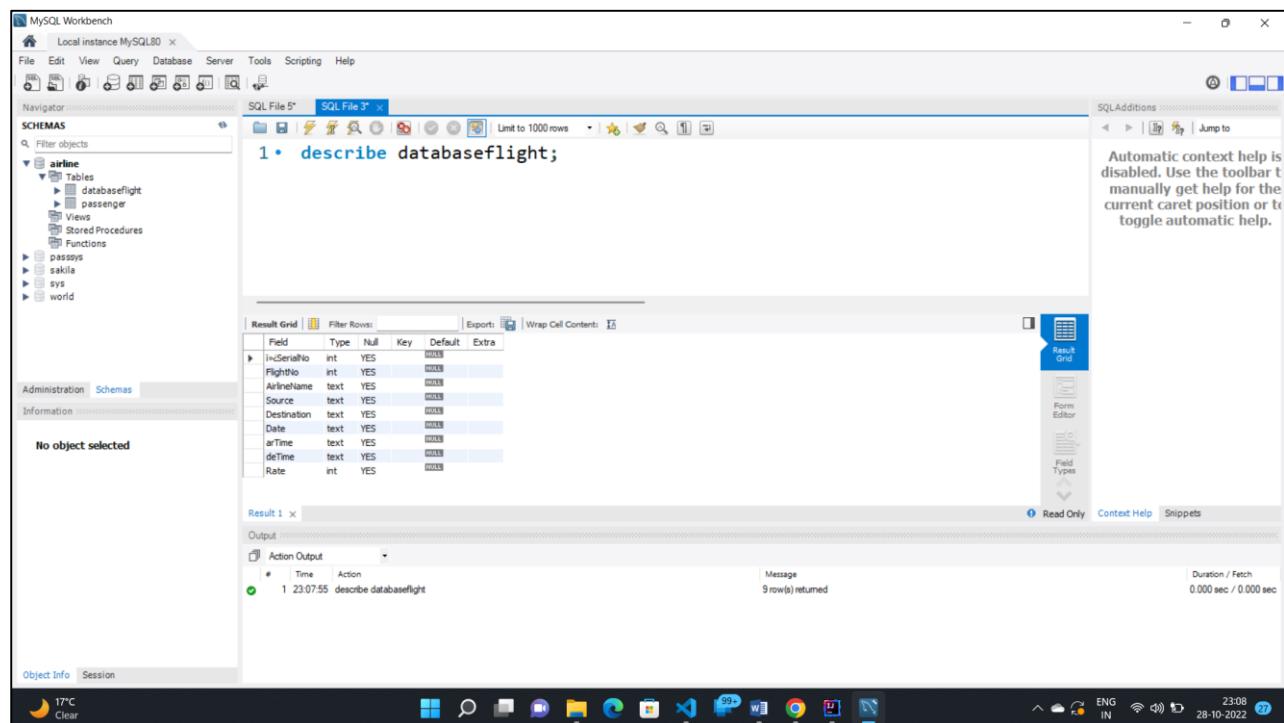
System.out.println("availbleflight: " + typ);
%>
<input type="hidden" name="source"
value="<%=request.getParameter("source") %>" /><br>
<input type="hidden" name="classOption"
value="<%=request.getParameter("classOption") %>" /><br>
<%
try{

connection = DriverManager.getConnection(connectionUrl+database,
userid, password);
statement=connection.createStatement();
//String sql="select * from databaseflight";
String sql ="select * from databaseflight where Source='"
+ request.getParameter("source")+"'and Destination='"
+ request.getParameter("dest")+"'and Date='"
+ request.getParameter("date")+"'";
resultSet = statement.executeQuery(sql);
while(resultSet.next()) {
%>
<tr>
    <td><strong></strong></td>
    <td><%=resultSet.getString("FlightNo") %></td>
    <td><%=resultSet.getString("AirlineName") %></td>
```

```

<td><%=resultSet.getString("source") %></td>
<td><%=resultSet.getString("destination") %></td>
<td><%=resultSet.getString("date") %></td>
<td><%=resultSet.getString("arTime") %></td>
<td><%=resultSet.getString("deTime") %></td>
<td><%=resultSet.getInt("rate") %></td>
</tr><br>
<%
}
connection.close();
} catch (Exception e) {
e.printStackTrace();
}
%>

```



The screenshot shows the MySQL Workbench interface with the following details:

- File Bar:** File, Edit, View, Query, Database, Server, Tools, Scripting, Help.
- Toolbar:** Standard MySQL icons for connection, queries, and data manipulation.
- Navigator:** Shows the schema structure under the 'airline' database, including tables like 'databaseflight', 'passenger', and 'sakila'.
- SQL Editor:** Contains the query: `1 • describe databaseflight;`
- Result Grid:** Displays the structure of the 'databaseflight' table with the following columns:

Field	Type	Null	Key	Default	Extra
iSerialNo	int	YES		NULL	
FlightNo	int	YES		NULL	
AirlineName	text	YES		NULL	
Source	text	YES		NULL	
Destination	text	YES		NULL	
Date	text	YES		NULL	
arTime	text	YES		NULL	
deTime	text	YES		NULL	
Rate	int	YES		NULL	
- Result 1:** Shows the output of the DESCRIBE command, indicating 9 rows returned and a duration of 0.000 sec / 0.000 sec.
- Bottom Bar:** Object Info, Session, and system status indicators (17°C, Clear, ENG IN, 28-10-2022, 23:08).

MySQL Workbench

Local instance MySQL80 ×

File Edit View Query Database Server Tools Scripting Help

Navigator

SCHEMAS

- airline
 - Tables
 - databseflight
 - passenger
 - Views
 - Stored Procedures
 - Functions
- passsys
- sakila
- sys
- world

No object selected

SQL File 5* SQL File 3* ×

1 • **describe passenger;**

Result Grid | Filter Rows: | Exports: | Wrap Cell Content: |

Field	Type	Null	Key	Default	Extra
PNR	int	YES			
name	text	YES			
age	int	YES			
adhar	bignt	YES			
fino	int	YES			
alname	text	YES			
src	text	YES			
dest	text	YES			
date	text	YES			
aTime	text	YES			
dTime	text	YES			
rate	int	YES			

Result 3 ×

Action Output

#	Time	Action	Message	Duration / Fetch
1	23:09:24	describe passenger	12 row(s) returned	0.000 sec / 0.000 sec

Object Info Session

17°C Clear

23:09 ENG IN 28-10-2022

MySQL Workbench

Local instance MySQL80 ×

File Edit View Query Database Server Tools Scripting Help

Navigator

SCHEMAS

- airline
 - Tables
 - databseflight
 - passenger
 - Views
 - Stored Procedures
 - Functions
- passsys
- sakila
- sys
- world

No object selected

SQL File 5* SQL File 3* ×

1 select * from databaseflight;

Result Grid | Filter Rows: | Exports: | Wrap Cell Content: |

InSerialNo	FlightNo	AirlineName	Source	Destination	Date	arTime	deTime	Rate
1	425	AIR INDIA	Delhi	Hyderabad	28-10-2022	05:45	07:00	7600
2	426	AIR INDIA EXPRESS	Delhi	Hyderabad	28-10-2022	07:30	09:50	3719
3	427	INDIGO	Delhi	Hyderabad	03-11-2022	07:30	10:17	6676
4	428	JET AIRWAYS	Delhi	Hyderabad	02-02-2022	07:30	11:50	3318
5	429	SPICEJET	Delhi	Hyderabad	29-10-2022	07:30	09:45	14087
6	430	AIR INDIA	Delhi	Hyderabad	01-02-2022	07:30	10:45	7635
7	431	AIR INDIA EXPRESS	Delhi	Hyderabad	02-12-2022	07:30	11:45	7900
8	432	INDIGO	Delhi	Hyderabad	28-10-2022	20:55	12:00	6251
9	433	JET AIRWAYS	Ludhiana	Hyderabad	28-10-2022	15:45	17:45	9540
10	434	SPICEJET	Kochi	Hyderabad	28-10-2022	04:45	06:15	13272
11	435	AIR INDIA	Kochi	Hyderabad	28-10-2022	17:20	19:20	5307
12	436	AIR INDIA EXPRESS	Kochi	Hyderabad	28-10-2022	17:50	19:20	4279
13	437	INDIGO	Ahmed...	Hyderabad	29-10-2022	11:05	12:45	7175
14	438	JET AIRWAYS	Ahmed...	Hyderabad	28-10-2022	20:35	22:20	3673
15	439	SPICEJET	Ahmed...	Hyderabad	01-04-2022	11:00	12:45	8863
16	440	AIR INDIA	Ahmed...	Hyderabad	31-03-2022	20:40	22:20	9700
17	441	AIR INDIA EXPRESS	Japan	Hyderabad	28-10-2022	08:55	10:55	6077
18	442	INDIGO	Japan	Hyderabad	28-10-2022	12:45	15:05	5049
19	443	JET AIRWAYS	Japan	Hyderabad	28-10-2022	17:55	20:15	9521
20	444	SPICEJET	Bengaluru	Hyderabad	28-10-2022	11:30	12:40	4700
21	445	AIR INDIA	Bengaluru	Hyderabad	28-10-2022	18:55	22:45	8664

databaseflight1 ×

Action Output

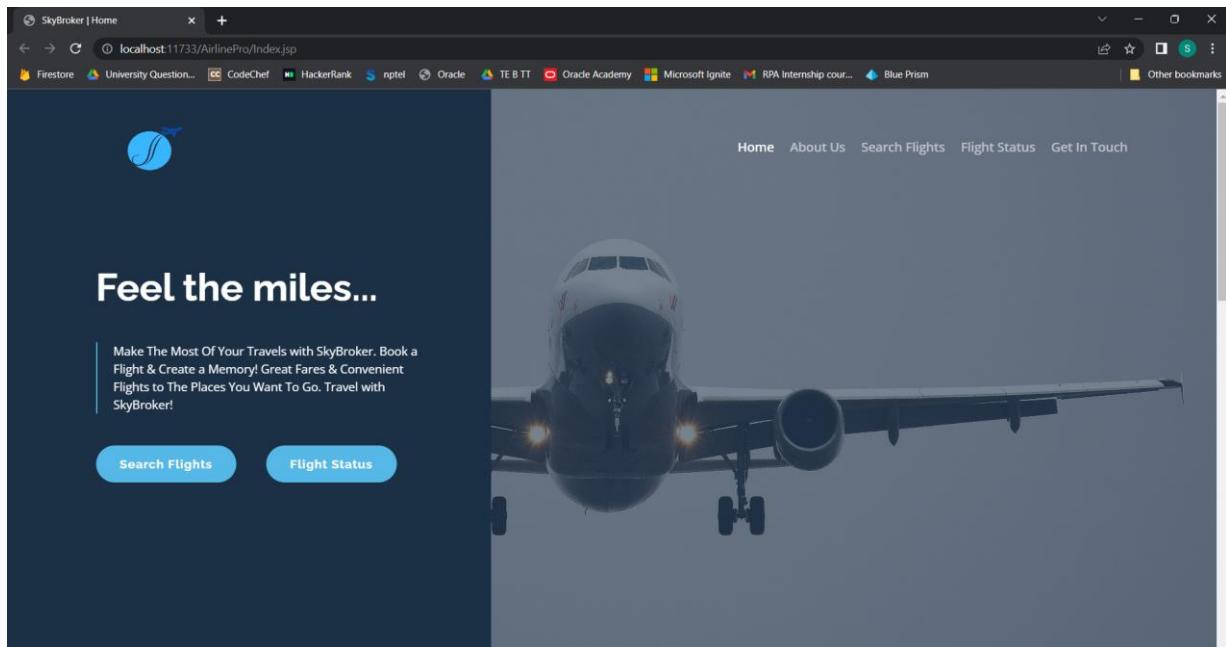
#	Time	Action	Message	Duration / Fetch
1	23:16:14	select * from databaseflight LIMIT 0, 1000	58 row(s) returned	0.000 sec / 0.000 sec

Object Info Session

17°C Clear

23:17 ENG IN 28-10-2022

RESULTS / OUTPUT



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SkyBroker

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Useful Links

- Home
- About us
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Our Services

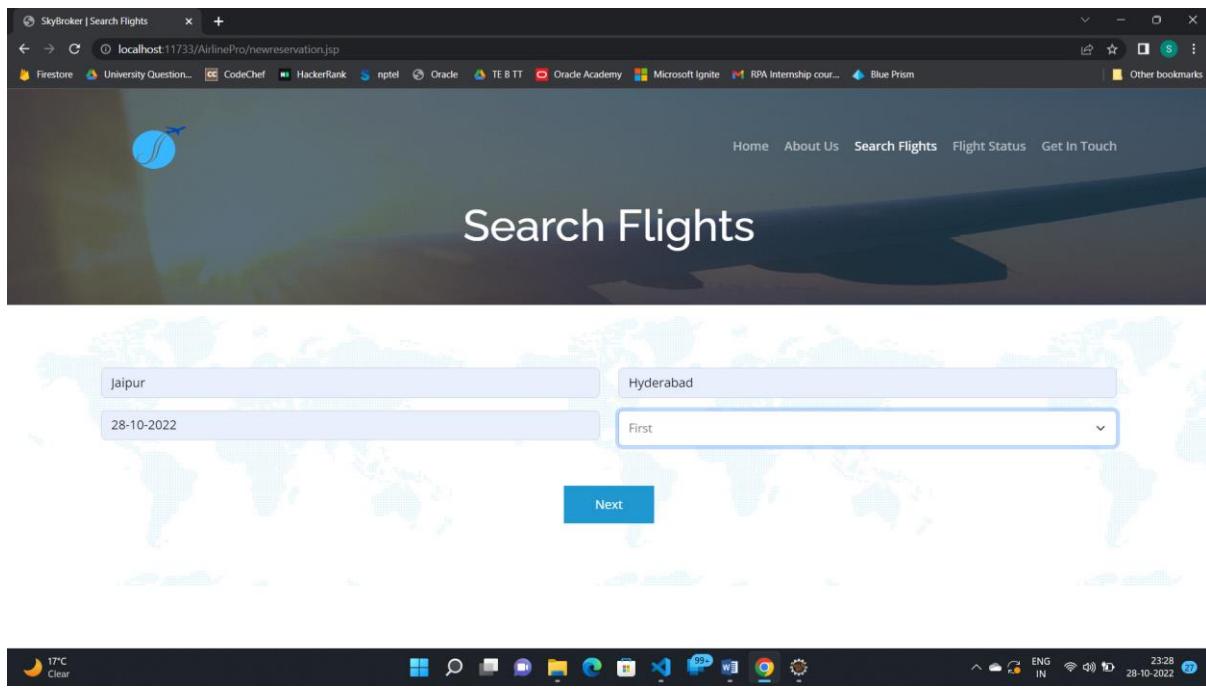
- Flight Reservation
- Search Flights
- Flight Status

Contact Us

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United States
Phone: +1 5589 55488 55
Email: info@example.com

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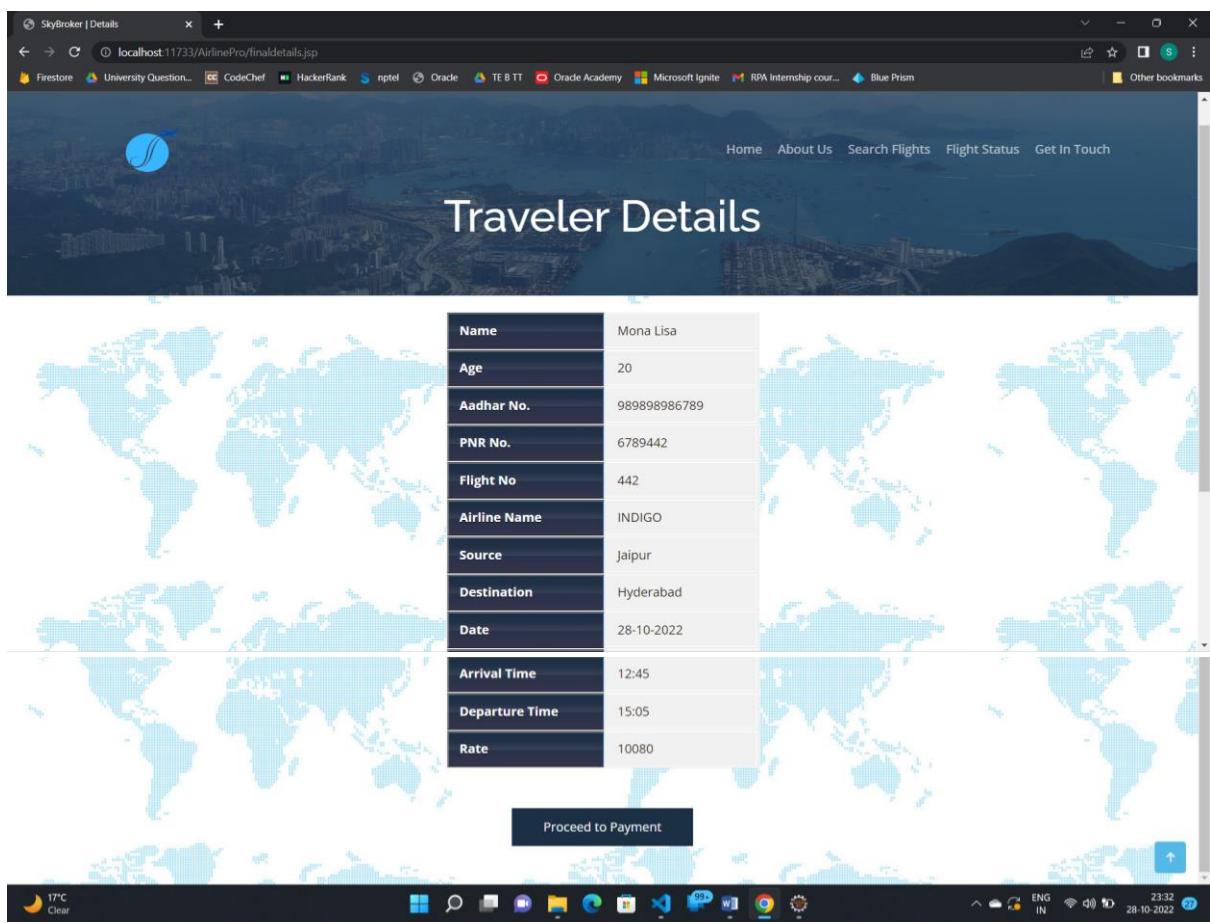
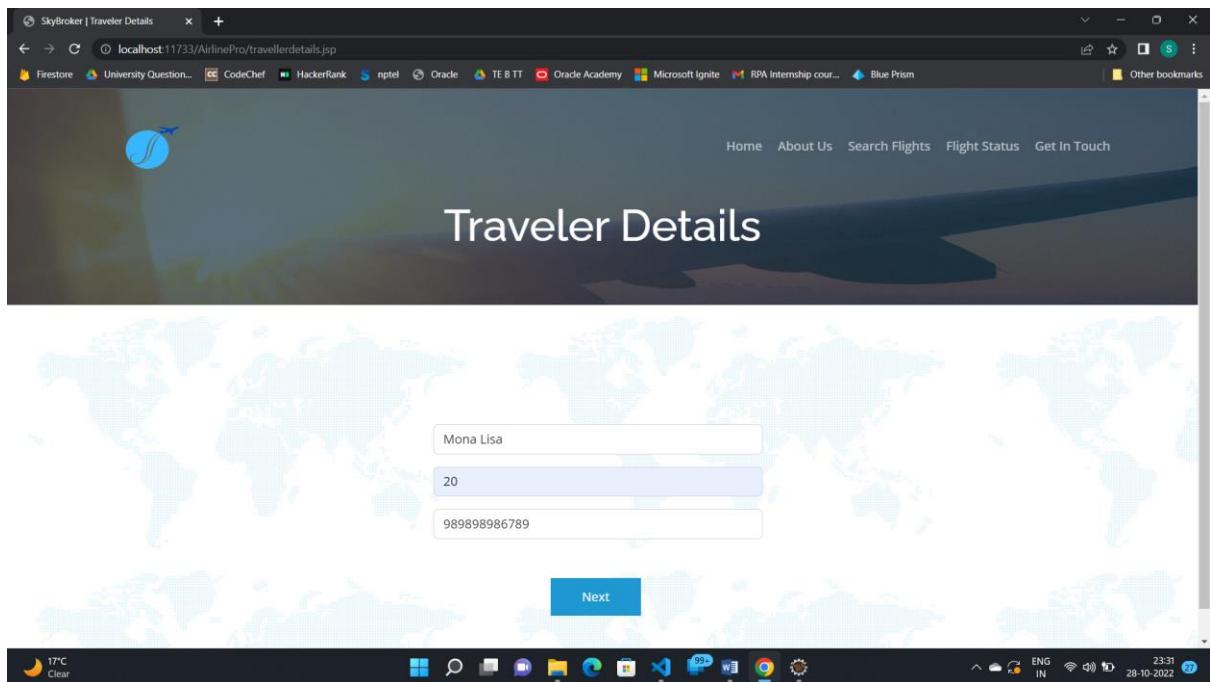
17°C Clear ENG IN 23:26 28-10-2022 27

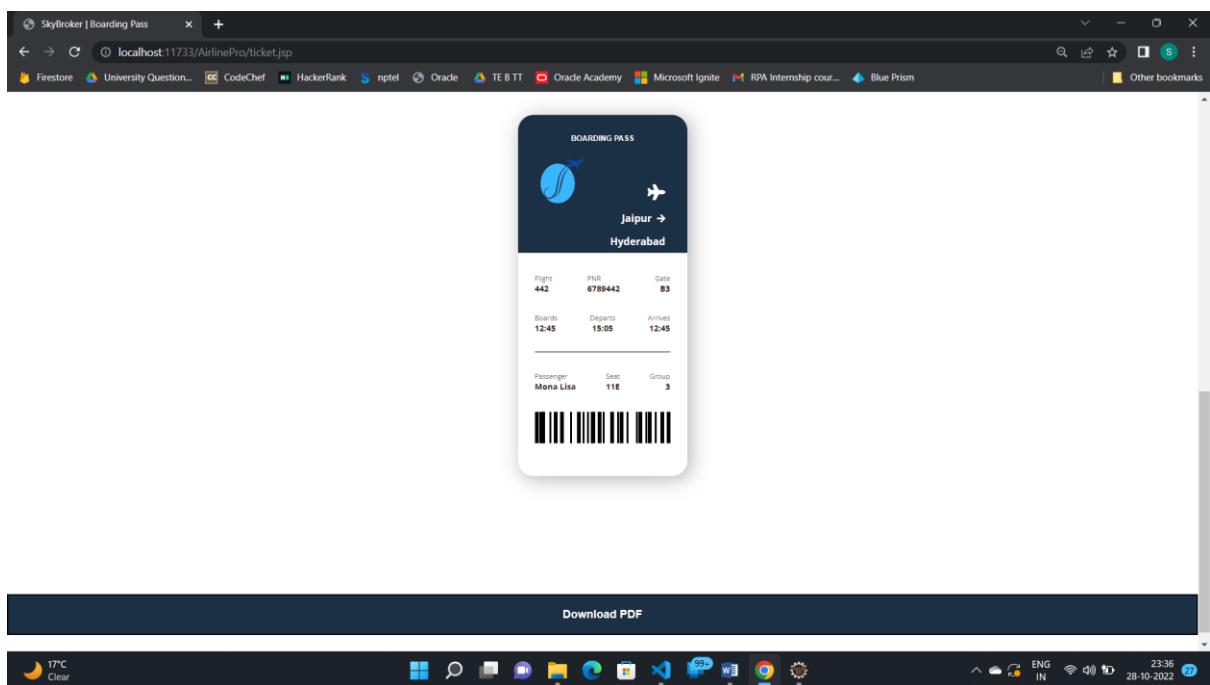
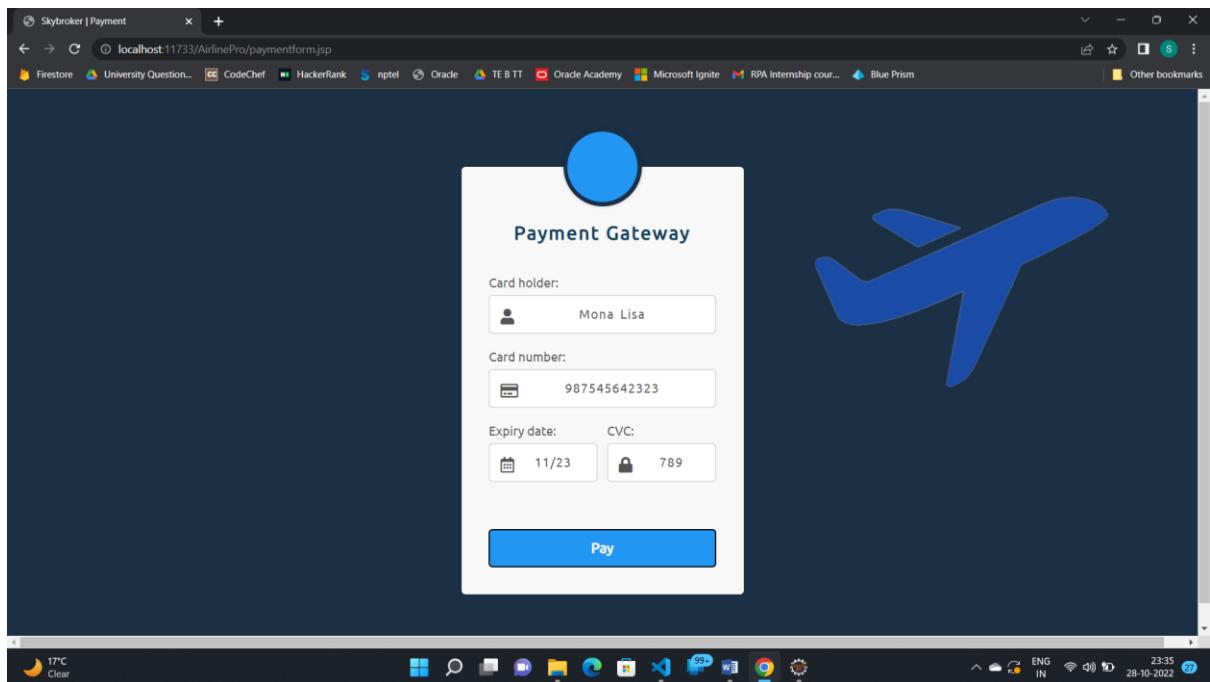


The screenshot shows the 'Available Flights' page of the SkyBroker application. The layout is similar to the search page, with a world map background. The main title 'Available Flights' is centered above a table displaying flight information. The table has columns for Flight No, Airline Name, Source, Destination, Date, Arrival Time, Departure Time, and Rate. Three flights are listed:

	Flight No	Airline Name	Source	Destination	Date	Arrival Time	Departure Time	Rate
	441	AIR INDIA EXPRESS	Jaipur	Hyderabad	28-10-2022	08:55	10:55	6077
	442	INDIGO	Jaipur	Hyderabad	28-10-2022	12:45	15:05	5040
	443	JET AIRWAYS	Jaipur	Hyderabad	28-10-2022	17:55	20:15	9521

Below the table, there is a search bar labeled 'Flight No' and another blue 'Next' button. The Windows taskbar at the bottom shows various open applications and the date/time as 28-10-2022.





TESTING

Sr. No	Type of Test	Description	Hardware/Software Components
1	Requirement Testing	This testing is required because we need to verify whether our requirements are able to solve the current problem or not	Complete Project including Hardware & Software
2	Unit testing	This testing allows us to test individual modules before integrating them together to form a complete module	Individual modules/functions
3	Integration	This test is important to check whether the modules are giving the same results after integration as before	All adjacent modules
4	Performance	This test is important to calculate the efficiency of the Hardware/Software also helps us to find any performance issue related to the system	All the Software components individually
5	System Testing	This test is performed in order to check whether the entire system is working as desired or not	Software Application
6	GUI Testing	This test is performed to check the application's user interface whether the application performs as expected with respect to user interface behavior.	Software Application

Table 1: Test Plan

ADVANTAGES AND DISADVANTAGES

- **Advantages**

- Online payment gateway that is secure
- Users can make online reservations that are seamless, quick, and error-free.
- User-friendly interface
- It saves time and money.
- Tickets can be downloaded and accessed from any location at any time.
- It provides every detail about the flight.
- 24/7 booking is available for customers.
- Available for both domestic and international airlines

- **Disadvantages**

- Excel export has not been developed for airline tickets or flights due to some criticality.
- The transactions are executed in off-line mode, hence on-line data for bookings, customer capture, and modification is not possible.
- Off-line reports of airline tickets, booking counters, and bookings cannot be generated due to batch mode execution.

FUTURE SCOPE

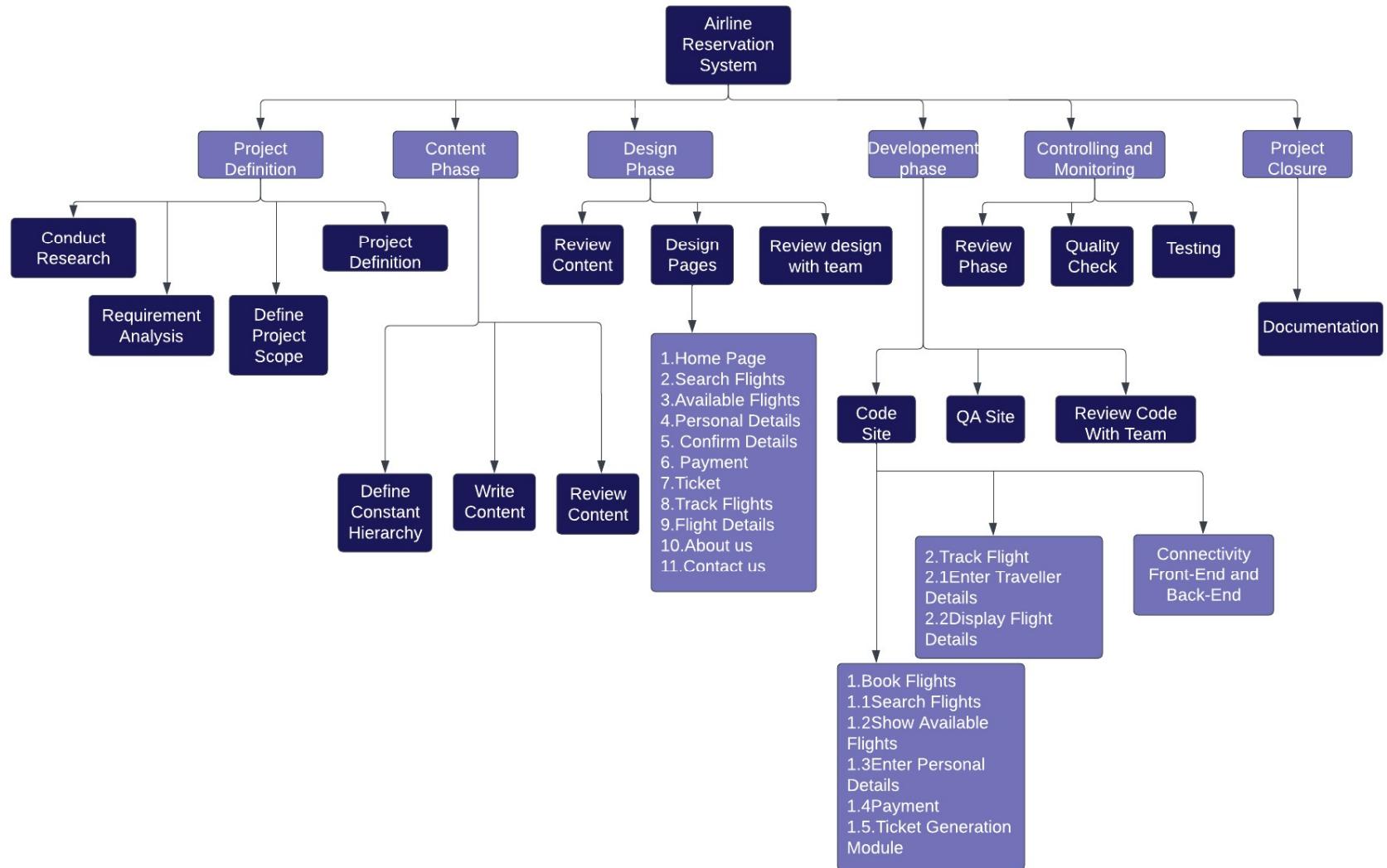
In a nutshell, it can be said that the future scope of the project revolves around maintaining information regarding the availability of seats, round-trip reservations, preferred seat choices, and so on. We can provide more advanced software for the airline reservation system, including more facilities. We will host the platform on online servers to make it accessible worldwide. Integrate numerous load balancers to disperse the system's load. Create a master and slave database structure to avoid database query overload. Implement the backup system to take frequent backups of the codebase and database on multiple servers. The above-mentioned improvements can be made to boost the applicability and usability of this project. Enhancements may be made to keep all airline tickets, flights, bookings, customers, and the booking counter in good working order. We have left all alternatives open so that if the user has any further future requirements in the system for system enhancement, they may be implemented.

PROJECT PLAN

PROJECT NAME	Airline Reservation System			PROJECT MANAGER	NA	
PROJECT DELIVERABLE	Web Application for Online Airline Reservation					
START DATE	05/10/2022	END DATE	20/10/2022	OVERALL PROGRESS	100%	

SR.NO	TASK NAME	ASSIGNED TO	START DATE	END DATE	DURATION in days	STATUS
1	Conduct Research	Anish, Swayamsiddha, Shreya, Sadhana	05-10-2022	05-10-2022	0.5d	Complete
2	Requirements Analysis	Anish, Swayamsiddha, Shreya, Sadhana	05-10-2022	05-10-2022	0.5d	Complete
3	Define Project Scope	Anish, Swayamsiddha, Shreya, Sadhana	06-10-2022	06-10-2022	0.5d	Complete
4	Team Kickoff Meetings	Anish, Swayamsiddha, Shreya, Sadhana	06-10-2022	06-10-2022	0.5d	Complete
5	Define Content Hierarchy	Anish, Shreya, Sadhana	07-10-2022	07-10-2022	0.5d	Complete
6	Write Content	Anish, Shreya, Sadhana	08-10-2022	08-10-2022	1d	Complete
8	Build Wireframes	Anish, Swayamsiddha, Shreya, Sadhana	09-10-2022	09-10-2022	1d	Complete
9	Design Pages	Swayamsiddha, Shreya	10-10-2022	11-10-2022	1.5d	Complete
10	Review Design with Team	Anish, Swayamsiddha, Shreya, Sadhana	11-10-2022	11-10-2022	0.5d	Complete
11	Code site	Anish, Sadhana	11-10-2022	13-10-2022	3d	Complete
12	QA site	Anish, Swayamsiddha, Shreya, Sadhana	14-10-2022	14-10-2022	0.5d	Complete
13	Review Phase	Anish, Swayamsiddha, Shreya, Sadhana	15-10-2022	15-10-2022	1d	Complete
14	Quality Check	Anish, Swayamsiddha, Shreya, Sadhana	16-10-2022	16-10-2022	1d	Complete
15	Testing	Anish, Swayamsiddha, Shreya, Sadhana	17-10-2022	17-10-2022	1d	Complete
16	Documentation	Anish, Swayamsiddha, Shreya, Sadhana	18-10-2022	19-10-2022	2d	Complete

Airline Reservation System: Work Breakdown Structure



AIRLINE RESERVATION SYSTEM

smartsheet

October 2022

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
October 2	3	4	5 AIRLINE RESERVATION Project Definition Conduct Research Requirements Analysis	6 Define Project Scope Team Kickoff Meetings	7 Content Phase Define Content Hierarchy	8 Write Content
9 Review Content Design Phase Build Wireframes	10 Design Pages	11 Development Phase Code Site	12	13	14 QA Site Review code with team	15 Controlling and Review Phase
16 Quality Check	17 Testing	18 Project Closure Documentation	19	20	21	22
23	24	25	26	27	28	29

Airline Reservation System

smartsheet

Task Name	Duration	Start	Finish	Predecessors	Assigned To	% Complete	Status	October 2					October 9					October 16							
								Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Monday	Tuesday	Wednesday
1 Project Definition	1.5d	10/6/22	10/6/22		Anish, Swayamsiddha, Shreya, Sadhana	100%	Complete																		
2 Conduct Research	0.5d	10/6/22	10/6/22		Anish, Swayamsiddha, Shreya, Sadhana	100%	Complete																		
3 Requirements Analysis	0.5d	10/6/22	10/6/22		Anish, Swayamsiddha, Shreya, Sadhana	100%	Complete																		
4 Define Project Scope	0.5d	10/6/22	10/6/22		Anish, Swayamsiddha, Shreya, Sadhana	100%	Complete																		
5 Team Kickoff Meetings	0.5d	10/6/22	10/6/22		Anish, Swayamsiddha, Shreya, Sadhana	100%	Complete																		
6 Context Phase	1d	10/6/22	10/6/22	Project Definition	Anish, Swayamsiddha, Shreya, Sadhana	100%	Complete																		
7 Define Content Hierarchy	0.5d	10/6/22	10/6/22	Project Definition	Anish, Shreya, Sadhana	100%	Complete																		
8 Write Content	1d	10/6/22	10/6/22		Anish, Shreya, Sadhana	100%	Complete																		
9 Review Content	0.5d	10/6/22	10/6/22	Write Content	Anish, Swayamsiddha, Shreya, Sadhana	100%	Complete																		
10 Design Phase	2.5d	10/6/22	10/11/22	Content Phase	Anish, Swayamsiddha, Shreya, Sadhana	100%	Complete																		
11 Build Wireframes	1d	10/6/22	10/6/22		Shreya	100%	Complete																		
12 Design Pages	1.5d	10/6/22	10/11/22		Swayamsiddha, Shreya	100%	Complete																		
13 Home page	0.5d	10/10/22	10/10/22	Write Content	Shreya	100%	Complete																		
14 Search Flights	0.5d	10/10/22	10/10/22	Write Content	Shreya	100%	Complete																		
15 Available Flights	0.5d	10/10/22	10/10/22	Write Content	Swayamsiddha	100%	Complete																		
16 Personal Details	0.5d	10/10/22	10/10/22	Write Content	Shreya	100%	Complete																		
17 Confirm Details	0.5d	10/10/22	10/10/22	Write Content	Swayamsiddha	100%	Complete																		
18 Payment	0.5d	10/10/22	10/10/22	Write Content	Shreya	100%	Complete																		
19 Tickets	0.5d	10/11/22	10/11/22	Write Content	Swayamsiddha	100%	Complete																		
20 Track Flight	0.5d	10/11/22	10/11/22	Write Content	Shreya	100%	Complete																		
21 Flight Details	0.5d	10/11/22	10/11/22	Write Content	Swayamsiddha	100%	Complete																		
22 About Us	0.5d	10/11/22	10/11/22	Write Content	Shreya	100%	Complete																		
23 Contact Us	0.5d	10/11/22	10/11/22	Write Content	Shreya	100%	Complete																		
24 Review Design with Team	0.5d	10/11/22	10/11/22	Design Pages	Anish, Swayamsiddha, Shreya, Sadhana	100%	Complete																		
25 Development Phase	5.5d	10/11/22	10/14/22		Anish, Swayamsiddha, Shreya, Sadhana	100%	Complete																		
26 Code Review	3d	10/11/22	10/13/22		Anish, Sadhana	100%	Complete																		
27 Book Flights	1.5d	10/11/22	10/12/22		Sadhana	100%	Complete																		
28 Search Flight	0.5d	10/11/22	10/11/22	Search Flights	Sadhana	100%	Complete																		
29 Show Available Flights	0.5d	10/11/22	10/11/22	Available Flights	Sadhana	100%	Complete																		
30 Enter Personal Details	0.5d	10/11/22	10/11/22	Personal Details	Sadhana	100%	Complete																		
31 Confirm Your Details	0.5d	10/11/22	10/11/22	Confirm Details	Sadhana	100%	Complete																		
32 Payment Module	0.5d	10/11/22	10/11/22	Payment	Sadhana	100%	Complete																		
33 Ticket Generation Module	0.5d	10/12/22	10/12/22	Ticket	Sadhana	100%	Complete																		
34 Track Flight	0.5d	10/12/22	10/12/22		Anish	100%	Complete																		
35 Enter Traveller Details	0.5d	10/12/22	10/12/22	Track Flight	Anish	100%	Complete																		
36 Display Flight Details	0.5d	10/12/22	10/12/22	Flight Details	Anish	100%	Complete																		
37 Connectivity Front-End and Back-End	1d	10/13/22	10/13/22	Design Pages, Code site	Sadhana	100%	Complete																		
38 QA site	0.5d	10/14/22	10/14/22	Code site	Anish, Swayamsiddha, Shreya, Sadhana	100%	Complete																		
39 Review code with team	0.5d	10/14/22	10/14/22		Anish, Swayamsiddha, Shreya, Sadhana	100%	Complete																		
40 Controlling and Monitoring	2d	10/15/22	10/17/22	Development Phase	Anish, Swayamsiddha, Shreya, Sadhana	100%	Complete																		
41 Review Phase	1d	10/15/22	10/15/22		Anish, Swayamsiddha, Shreya, Sadhana	100%	Complete																		
42 Quality Check	1d	10/16/22	10/16/22		Anish, Swayamsiddha, Shreya, Sadhana	100%	Complete																		
43 Testing	1d	10/17/22	10/17/22		Anish, Swayamsiddha, Shreya, Sadhana	100%	Complete																		
44 Project Closure	2d	10/18/22	10/19/22	Controlling and Monitoring	Anish, Swayamsiddha, Shreya, Sadhana	100%	Complete																		
45 Documentation	2d	10/18/22	10/19/22		Anish, Swayamsiddha, Shreya, Sadhana	100%	Complete																		

CRITICAL PATH TRACKING: AIRLINE RESERVATION SYSTEM

Complete non-shaded fields, only.

START DATE

10-05

FINISH DATE

excluding wknds & holidays

10-20

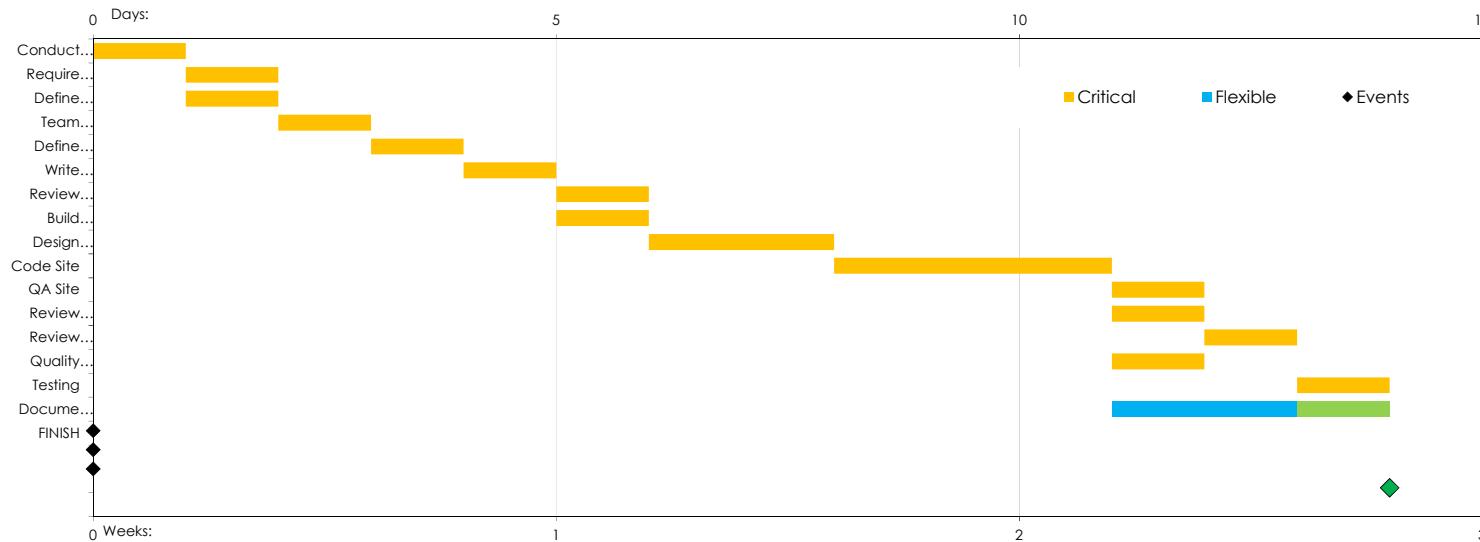
DURATION

in days

15.00

 - CRITICAL ACTIVITIES

ID	ACTIVITY DESCRIPTION	PREDECESSOR ACTIVITIES				OPTIMISTIC	MOST LIKELY	PESSIMISTIC	EXPECTED	DURATION	ES	EF	EARLY START	EARLY FINISH	LATE START	LATE FINISH	SLACK
		PA – enter separately in columns															
1	Conduct Research					1	1	1	1.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
2	Requirements Analysis	1				1	1	1	1.00	1.00	1.00	2.00	0.00	0.00	0.00	0.00	0.00
3	Define Project Scope	1				1	1	1	1.00	1.00	1.00	2.00	0.00	0.00	0.00	0.00	0.00
4	Team Kickoff Meetings	1	2			1	1	1	1.00	2.00	3.00	0.00	0.00	0.00	0.00	0.00	0.00
5	Define Content Hierarchy	1	2	3	4	1	1	1	1.00	3.00	4.00	0.00	0.00	0.00	0.00	0.00	0.00
6	Write Content	3	5			1	1	1	1.00	4.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00
7	Review Content	6				1	1	1	1.00	5.00	6.00	0.00	0.00	0.00	0.00	0.00	0.00
8	Build Wireframes	6				1	1	1	1.00	5.00	6.00	0.00	0.00	0.00	0.00	0.00	0.00
9	Design Pages	6	8			2	2	2	2.00	6.00	8.00	0.00	0.00	0.00	0.00	0.00	0.00
10	Code Site	6	9			3	3	3	3.00	8.00	11.00	0.00	0.00	0.00	0.00	0.00	0.00
11	QA Site	9	10			1	1	1	1.00	11.00	12.00	0.00	0.00	0.00	0.00	0.00	0.00
12	Review code with team	9	10			1	1	1	1.00	11.00	12.00	11.00	12.00	0.00	0.00	0.00	0.00
13	Review Phase	12				1	1	1	1.00	12.00	13.00	12.00	13.00	0.00	0.00	0.00	0.00
14	Quality Check	9	10			1	1	1	1.00	11.00	12.00	0.00	0.00	0.00	0.00	0.00	0.00
15	Testing	6	9	10	13	1	1	1	1.00	13.00	14.00	13.00	14.00	0.00	0.00	0.00	0.00
16	Documentation	6	8	9	10	2	2	2	2.00	11.00	13.00	12.00	14.00	1.00	0.00	0.00	0.00
20	FINISH	15	16						0.00	14.00	14.00	14.00	14.00	0.00	0.00	0.00	0.00



PROJECT TRACKING PLAN

				PROJECTS				
AT RISK	STATUS	PRIORITY	DEADLINE	TASK	% DONE	ESTIMATED HOURS	ACTUAL HOURS	
<input type="checkbox"/>				Airline Reservation System				
<input checked="" type="checkbox"/>	Complete	High	05-10-2022	Conduct Research	100%	3 hrs	3.5 hrs	
<input checked="" type="checkbox"/>	Complete	High	05-10-2022	Requirements Analysis	100%	2 hrs	2 hrs	
<input checked="" type="checkbox"/>	Complete	High	06-10-2022	Define Project Scope	100%	2 hrs	1.5 hrs	
<input type="checkbox"/>	Complete	Medium	06-10-2022	Team Kickoff Meetings	100%	1.5 hrs	2 hrs	
<input type="checkbox"/>	Complete	Medium	07-10-2022	Define Content Hierarchy	100%	3 hrs	3 hrs	
<input type="checkbox"/>	Complete	Medium	08-10-2022	Write Content	100%	3 hrs	2 hrs	
<input checked="" type="checkbox"/>	Complete	Medium	09-10-2022	Build Wireframes	100%	5 hrs	6 hrs	
<input type="checkbox"/>	Complete	High	11-10-2022	Design Pages	100%	4 hrs	4.5 hrs	
<input type="checkbox"/>	Complete	Low	11-10-2022	Review Design with Team	100%	5 hrs	4 hrs	
<input checked="" type="checkbox"/>	Complete	High	13-10-2022	Code site	100%	7 hrs	8 hrs	
<input type="checkbox"/>	Complete	Low	14-10-2022	QA site	100%	2 hrs	2 hrs	
<input type="checkbox"/>	Complete	Medium	15-10-2022	Review Phase	100%	3 hrs	3 hrs	
<input checked="" type="checkbox"/>	Complete	High	16-10-2022	Quality Check	100%	3 hrs	4 hrs	
<input checked="" type="checkbox"/>	Complete	High	17-10-2022	Testing	100%	5 hrs	6 hrs	
<input checked="" type="checkbox"/>	Complete	High	19-10-2022	Documentation	100%	5 hrs	6 hrs	

STATUS KEY
Not Started
In Progress
Complete
On Hold
Overdue

PRIORITY KEY
High
Medium
Low

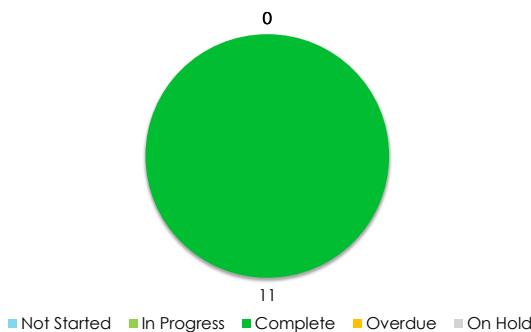
PROJECT MANAGEMENT DASHBOARD

AIRLINE RESERVATION SYSTEM

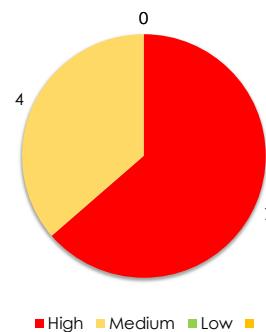
START DATE END DATE PROJECT STATUS % COMPLETE

	05-10-22	10/19/2022	ON TRACK	100%
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TASK STATUS %



TASK PRIORITY %



DASHBOARD DATA

TASK TABLE

Task Name	Assigned To	Start Date	End Date	Duration in days	Status	Priority
Project Definition	Anish, Shreya, Sadhana, Swayamsiddha	10-05	10-06	1	Complete	High
Content Phase	Anish, Shreya, Sadhana	10-07	10-09	2	Complete	Medium
Design Phase (Front-end)	Shreya, Swayamsiddha	10-09	10-11	2	Complete	High
Development Phase	Anish, Shreya, Sadhana, Swayamsiddha	10-11	10-14	3	Complete	Medium
Code Sites (Back-end)	Anish, Sadhana	10-11	10-13	2	Complete	High
Connectivity Front-end and Back-end	Sadhana	10-13	10-14	1	Complete	High
Review Phase	Anish, Shreya, Sadhana, Swayamsiddha	10-14	10-15	1	Complete	Medium
Quality Check	Anish, Shreya, Sadhana, Swayamsiddha	10-15	10-16	1	Complete	Medium
Testing	Anish, Shreya, Sadhana, Swayamsiddha	10-16	10-17	1	Complete	High
Project Closure	Anish, Shreya, Sadhana, Swayamsiddha	10-18	10-19	1	Complete	High
Documentation	Anish, Shreya, Sadhana, Swayamsiddha	10-18	10-19	1	Complete	High

STATUS
Not Started
In Progress
Complete
Overdue
Overdue
On Hold

PRIORITY
High
Medium
Low

TASK STATUS %

STATUS	COUNT	%
Not Started	0	0%
In Progress	0	0%
Complete	11	100%
Overdue	0	0%
On Hold	0	0%
TOTAL	11	100%

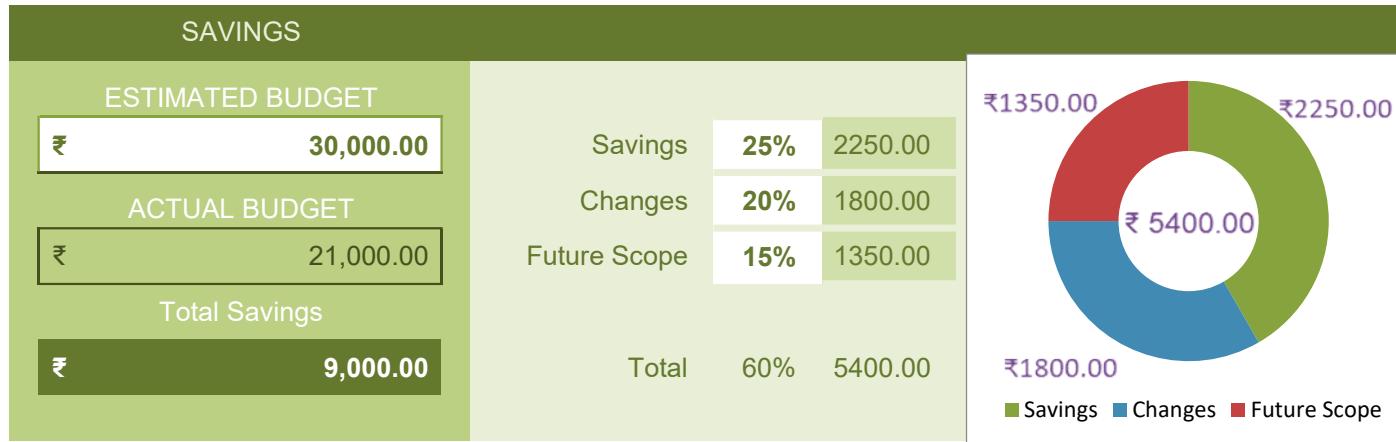
Project Budget

Estimated Budget	30000
Actual Budget	21000

TASK PRIORITY %

PRIORITY	COUNT	%
High	7	64%
Medium	4	36%
Low	0	0%
TOTAL	11	100%

AIRLINE RESERVATION SYSTEM - COST REPORT



TASK TABLE

TASK NAME	AMOUNT
Project Definition	
Content Phase	₹ 2,000.00
Design Phase (Front-end)	₹ 5,000.00
Code Phase (Back-end)	₹ 7,000.00
Connectivity Front-end and Back-end	₹ 1,000.00
Review Phase	₹ 1,000.00
Quality Check	₹ 1,000.00
Testing	₹ 3,000.00
Project Closure	
Documentation	₹ 1,000.00
Total Expenses ₹ 21,000.00	

CONCLUSION

The primary goal of this project was to provide a user-friendly environment for all users. The purpose of this project is to build an airline reservation system that allows users to search for flights based on origin, destination, and travel date; reserve flights; track flights; use a cashless payment mechanism; and download a softcopy of the boarding pass. As a conclusion, we were able to successfully build a Java (J2EE) mini project using the MySQL and MongoDB databases for the backend.

Our project is only a humble venture to satisfy the needs of project managers. Several user-friendly codes have also been adopted. The objective of software planning is to provide a framework that enables the manager to make reasonable estimates within a limited time frame at the beginning of the software project. This framework should be updated regularly as the project progresses. In the end, it is concluded that we have made an effort on the following points:

- A description of the background and context of the project and its relation to work already done in the area.
- A statement of the aims and objectives of the project.
- The description of the purpose, scope, and applicability.
- In the project, we define the problem on which we are working.
- We describe the system's requirements specifications and the actions that can be taken in response to them.
- We understand the problem domain and produce a model of the system, which describes operations that can be performed on the system.
- We included features and operations in detail, including screen layouts.
- We designed the user interface and security issues related to the system.
- Finally, the system is implemented and tested according to test cases.

REFERENCES

- <https://javaee.github.io/glassfish/documentation>
- <https://dev.mysql.com/doc/refman/8.0/en/>
- <https://www.smartsheet.com/>
- [Excel \(office.com\)](https://office.com)