JAVA PROGRAMMING(CSE310)

Project Report
on
Airline Reservation System

Group members

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Abstract

Airline reservation System is a computerized system used to store and retrieve information and conduct transactions related to air travel. The project is aimed at exposing the relevance and importance of Airline Reservation Systems. It is projected toward enhancing the relationship between customers and airline agencies using ARSs, and thereby making it convenient for the customers to book the flights as when they require such that they can utilize this software to make reservations.

This software has two parts. First is user part and the administrator part. User part is used as a front end and administrator is the back end. Administrator is used by airline authority. It will allow the customers to access database and allow new customers to sign up for online access.

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. The system displays all the flight's details such as flight no, name, price, etc...

INDTRODUCTION

Airline Reservation System (ARS) in this project we had did the customer can Book the ticket of the flight and the and they can see the status of the data of which flight they have booked and the place where they are going and coming from and all the data will store on the text file the customer can see they can select the business class or economy of the ticket these are the some inputs the give for the customer.
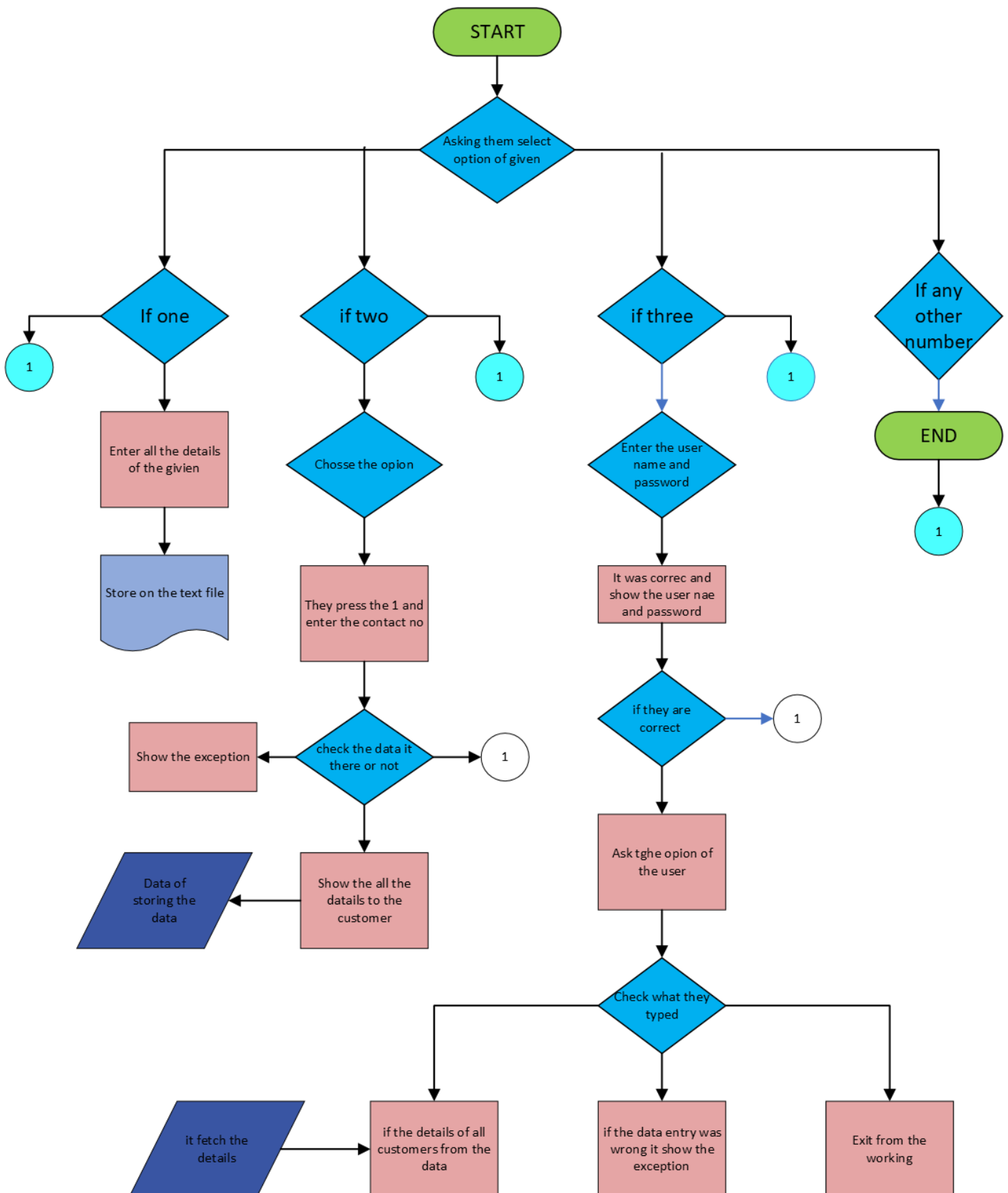
The user we can be able to get the data of the customers and the and can tell customer where they were going and coming all kind of details. But for user login we want tell the Should give the username and password.

They can be exit typing any number it will exit. So this this are the features we given on this project and for storing values we are file handling methods.

Advantages:

- ➢ The airline reservation system offers several benefits for both airlines and passengers.

- ➢ For airlines, it provides a centralized platform to manage their operations, reduce administrative costs, and increase revenue through improved customer service and targeted marketing.

- ➢ For passengers, the system provides a convenient and efficient way to book flights, choose seats, and pay for tickets. It also enables passengers to manage their reservations, check flight status, and receive

Airline Reservation System Flow Chart

START

Asking them select option of given

If one

if two

if three

If any other number

1

1

1

END

1

Enter all the details of the givien

Chosse the opion

Enter the user name and password

Store on the text file

They press the 1 and enter the contact no

It was correc and show the user nae and password

Show the exception

check the data it there or not

1

if they are correct

1

Ask tghe opion of the user

Data of storing the data

Show the all the datails to the customer

Check what they typed

it fetch the details

if the details of all customers from the data

if the data entry was wrong it show the exception

Exit from the working

OUTPUT SCREEN SHOTS

```
C:\Users\kalla\Desktop\java programs>java Charan
***************WELCOME*******************
*******PLEASE CHOOSE A OPTION******
Enter 1 if you want to for booking
Enter 2 if you want to checking ticket details
Enter 3 for the user login
Enter any other number for the exit
1
Enter your name: charan
Enter your contact number: 1234567891
Enter your email address: charan@gmail.com
Enter your VisaNO: qefr
Enter your Airlines name you want to booked: Indigo
**These are the some of the places you can go and come
 India
 United States
 Australia
 London
 Japan
Enter the Place you want to start: India
Enter the Place you want to go: United states
Enter the price You want to go from the

Price from economy 50,000
Price for the  business class 200,000
Enter the price:50000
Booked successfully.
```

```
C:\Users\kalla\Desktop\java programs>java Charan
***************WELCOME*******************
*******PLEASE CHOOSE A OPTION******
Enter 1 if you want to for booking
Enter 2 if you want to checking ticket details
Enter 3 for the user login
Enter any other number for the exit
2
You have choose option1
Enter 1 Checking ticket of the flight
Enter Any exit
1
Enter the contact no: 1234567891
here are some information about the customer...


Name: charan
Contact Number: 1234567891
Email Address: charan@gmail.com
VisaNO: qefr
Airlines: Indigo
Placestart: India
PlaceEnd: United states
price: 50000
```

```
C:\Users\kalla\Desktop\java programs>java Charan
*************WELCOME******************
*******PLEASE CHOOSE A OPTION******
Enter 1 if you want to for booking
Enter 2 if you want to checking ticket details
Enter 3 for the user login
Enter any other number for the exit
3
Please enter the user name
3456
Please enter the password
1234
Enter 1 for Check the place checking the details of customers booked the fligth
Enter 2 for Going back to main page
Enter a number
1
Enter airlines name for getting customers details  Indigo
Try to get the all details

Name: charan
Contact Number: 1234567891
Email Address: charan@gmail.com
VisaNO: qefr
Airlines: Indigo
Placestart: India
PlaceEnd: United states
price: 50000
```

CODE

```java
import java.io.File;
import java.io.FileWriter;
import java.io.IOException;
import java.util.Scanner;
import java.util.regex.Matcher;
import java.util.regex.Pattern;

class Charan {
    public static void main(String[] args) {
        try (Scanner in = new Scanner(System.in)) {
            int l;
            System.out.println("*************WELCOME****************");
                System.out.println("*******PLEASE CHOOSE A
OPTION******");
            System.out.println("Enter 1 if you want to for booking");
            System.out.println("Enter 2 if you want to checking ticket details");
                System.out.println("Enter 3 for the user login");
                System.out.println("Enter any other number for the exit");
            l=in.nextInt();
            Scanner scanner = new Scanner(System.in);
                if(l==1){
                        String name = "";
                String contactNumber = "";
                String emailAddress = "";
                        String VisaNO = "";
                String GENDER = "";
                        String Airlines ="";
                String Placestart  = "";
                String PlaceEnd  = "";
                        String price="";


            try {

                System.out.print("Enter your name: ");
                name = scanner.nextLine();

                System.out.print("Enter your contact number: ");
                contactNumber = scanner.nextLine();
                validateContactNumber(contactNumber);

                System.out.print("Enter your email address: ");
                emailAddress = scanner.nextLine();
                validateEmail(emailAddress);
```

```java
                System.out.print("Enter your VisaNO: ");
        VisaNO = scanner.nextLine();

                System.out.print("Enter your Airlines name you want to
booked: ");
        Airlines = scanner.nextLine();

                System.out.print("**These are the some of the places you
can go and come ");
                System.out.print("\n India ");
                System.out.print("\n United States ");
                System.out.print("\n Australia ");
                System.out.print("\n London");
                System.out.print("\n Japan");

        System.out.print("\nEnter the Place you want to start: ");
        Placestart = scanner.nextLine();

        System.out.print("Enter the Place you want to go: ");
        PlaceEnd = scanner.nextLine();

                System.out.print("Enter the price You want to go from
the\n");
                System.out.print("\nPrice from economy 50,000");
                System.out.print("\nPrice for the  business class
200,000");
                System.out.print("\nEnter the price:");
                price =scanner.nextLine();
                validateprice(price);

    } catch (Exception e) {
       System.out.println("Invalid input: " + e.getMessage());
       scanner.close();
       return;
    }


    try {
       File outputFile = new File("Reportdetails.txt");
       FileWriter writer = new FileWriter(outputFile, true);
       writer.write(name + "," + contactNumber + "," + emailAddress + "," +
VisaNO + ","+ Airlines +","+ Placestart + "," + PlaceEnd + ","+price);
       writer.close();

       System.out.println("Booked successfully.");
```

```java
        } catch (IOException e) {
            System.out.println("Failed booking");
        }

    scanner.close();
        }


        else if(l==2)
        {
            int k;
                    System.out.println("You have choose option1 ");
            System.out.println("Enter 1 Checking ticket of the flight ");
                    System.out.println("Enter Any exit ");

            k=in.nextInt();
            if(k==1)
            {

                System.out.print("Enter the contact no: ");
                String searchcontactNumber = scanner.nextLine();

                try {
                System.out.println("here are some information about the
customer...");
                System.out.println();
                File inputFile = new File("Reportdetails.txt");
                Scanner fileScanner = new Scanner(inputFile);

                boolean found = false;

                while (fileScanner.hasNextLine()) {
                    String line = fileScanner.nextLine();
                    String[] tokens = line.split(",");

                    if (tokens[1].equals(searchcontactNumber)) {
                        System.out.println();
                        System.out.println("Name: " + tokens[0]);
                        System.out.println("Contact Number: " + tokens[1]);
                        System.out.println("Email Address: " + tokens[2]);
                        System.out.println("VisaNO: " + tokens[3]);
                                        System.out.println("Airlines: " +
tokens[4]);

                                        System.out.println("Placestart: " +
tokens[5]);
                        System.out.println("PlaceEnd: " + tokens[6]);
```

```java
                    System.out.println("price: " + tokens[7]);



 System.out.println();
                    found = true;
                }
            }



            fileScanner.close();

            if (!found) {
                System.out.println("No customer like that.");
            }

            }
            catch (IOException e) {
                System.out.println("Failed to search for customer no");
            }

            scanner.close();
        }


        else{
            System.out.println("Failed to load the information!... ,please
enter correct number");
        }

    }
            else if(l==3)
        {
                int us;
                System.out.println("Please enter the user name ");
                us=in.nextInt();
                if(us==3456)
        {
                int pass;
                System.out.println("Please enter the password ");
                pass=in.nextInt();
```

```java
                    if(pass==1234)
                {
            int k;
            System.out.println("Enter 1 for Check the place checking the
details of customers booked the fligth  ");


System.out.println("Enter 2 for Going back to main page ");
            System.out.println("Enter a number ");
            k=in.nextInt();


            if(k==1)
            {

            System.out.print("Enter airlines name for getting customers
details  ");
            String searchAirlines = scanner.nextLine();

            try {
            System.out.println("Try to get the all details");
            File inputFile = new File("Reportdetails.txt");
            Scanner fileScanner = new Scanner(inputFile);

            boolean found = false;

            while (fileScanner.hasNextLine()) {
            String line = fileScanner.nextLine();
            String[] tokens = line.split(",");

            if (tokens[4].equals(searchAirlines)) {
               System.out.println();
               System.out.println("Name: " + tokens[0]);
                  System.out.println("Contact Number: " + tokens[1]);
                  System.out.println("Email Address: " + tokens[2]);
                  System.out.println("VisaNO: " + tokens[3]);
                                    System.out.println("Airlines: " +
tokens[4]);

                                    System.out.println("Placestart: " +
tokens[5]);
                  System.out.println("PlaceEnd: " + tokens[6]);
                  System.out.println("price: " + tokens[7]);
               System.out.println();
               found = true;

            }
```

```java
                }

                fileScanner.close();

                if (!found) {
                    System.out.println("No Airlines has been on that names");
                }


}

                }
            catch (IOException e) {
                System.out.println("Failed to search for Airlines");
            }

            scanner.close();
        }

        else if(k==2)
        {

            System.out.print("Enter rentalPrice the visa no for checking ");
            String searchVisaNO = scanner.nextLine();

            try {
            System.out.println("Here");
            File inputFile = new File("Reportdetails.txt");
            Scanner fileScanner = new Scanner(inputFile);

            boolean found = false;

            while (fileScanner.hasNextLine()) {
            String line = fileScanner.nextLine();
            String[] tokens = line.split(",");

            if (tokens[4].equals(searchVisaNO)) {
                System.out.println();
                    System.out.println("Name: " + tokens[0]);
                    System.out.println("Contact Number: " + tokens[1]);
                    System.out.println("Email Address: " + tokens[2]);
                    System.out.println("VisaNO: " + tokens[3]);
                                    System.out.println("Airlines: " +
tokens[4]);

                                    System.out.println("Placestart: " +
tokens[5]);
```

```java
                    System.out.println("PlaceEnd: " + tokens[6]);
                    System.out.println("price: " + tokens[7]);
                    System.out.println();
                found = true;

                }
                }

            fileScanner.close();

            if (!found) {
                System.out.println("No Visa no is found like that");
            }

            }
            catch (IOException e) {
                System.out.println("Failed on finding customer information");
            }

            scanner.close();
        }

        else{
            System.out.println("Failed to load the information!... ,please
enter correct number");
        }
                }
            }
            else{
                    System.out.println("Incoerrect user name");
            }

        }
            else{
                    System.out.println("Failed to load the information!...
,please enter correct number");
            }

    }
    }

    private static void validateContactNumber(String contactNumber) throws
Exception {
        Pattern pattern = Pattern.compile("^\\d{10}$");
        Matcher matcher = pattern.matcher(contactNumber);
        if (!matcher.matches()) {
```

```java
            throw new Exception("Please enter the correct number");
        }
    }


    private static void validateEmail(String email) throws Exception {
        Pattern pattern = Pattern.compile("^[a-zA-Z0-9._%+-]+@[a-zA-Z0-9.-]+\\.[a-zA-Z]{2,}$");
        Matcher matcher = pattern.matcher(email);
        if (!matcher.matches()) {
            throw new Exception("Invalid email address and please enter the correct forrmat");
        }
    }

    private static void validateprice(String price) throws Exception {
        Pattern pattern = Pattern.compile("[50000]+[20000]");
        Matcher matcher = pattern.matcher(price);
        if (!matcher.matches()) {
            throw new Exception("Invalid price");
        }
    }

}
```

Conclusion:

The airline reservation system is a critical tool for airlines to manage their operations, increase revenue, and improve customer service. Itprovides a centralized platform for passengers to book flights, manage their reservations, and receive real-time updates on their itinerary.However, the system also faces several challenges, including integration complexity, data security, and competition from intermediaries. Airlines need to invest in technology, infrastructure, and personnel to overcome these challenges and stay competitive inthe market.

Roles and Responsibilities :

Shaik Sameer	Project Planning, Logic Creation
Kallam Charan Reddy	Project Implementation and Execution.
Katam Venkat Sukumar	Documentation and Testing

THANK YOU