A MINI PROJECT REPORT
ON

FLIGHT RESERVATION SYSTEM

Advanced java (CAN604)

Submitted in partial fulfillment of the requirements for the award Degree of Master of computer application

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DIT UNIVERSITY

INSTITUTE OF SCHOOL OF COMPUTING

(DEEMEDTOBEUNIVERSITY)
Accredited withGrade“A”byNAAC

APRIL-2025-26

DEPARTMENT OF SCHOOL OF COMPUTING

BONAFIDECERTIFICATE

This is to certify that this Project Report is the bonafide work of **SHASHANK BHARDWAJ (SAPID:-1000024713)**who carried out the project entitled**" FLIGHT RESERVATION SYSTEM"** under my supervision

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Submitted for Vivavoce Examination heldon

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DECLARATION

I**, Shashank Bhardwaj (SAP ID.1000024713)**here by declarethattheProjectReportentitled **“FLIGHT RESERVATION SYSTEM”** done by me under the guidance of

MR .Ravi Shankar jha (assistant professor of school of computing) is submitted in partial fulfillment of the requirements for the award of master of computer application / Technology degree in Computer Science.

DATE:

PLACE: **SIGNATUREOFTHECANDIDATE**

ACKNOWLEDGEMENT

I am pleased to acknowledge my sincere thanks to **Board of Management** of **DIT UNIVERSITY** for their kind encouragement in doing this project and for completing it successfully. I am grateful to them.

I convey my thanks to **mrs. Bharti mam.,** HOD(Head of department),School of Computing .

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ABSTRACT

Thepurposeof this section is tostate theGoalandObjectives of theSoftware Project. TheprojectpresentedhereistheAirlineReservationSystem.

Airlinereservationssystemisanintegratedpassengerprocessingsystem,includinginventory, fares, ticket-less operations and credit card transactions. All communications are via TCP/IP network protocol enabling the using of both intranet and internet communications worldwide.

The solution includes several standard items, which are combined to provide an integrated solutionwithinterfacestootherbusinesssystems.Thesystemisbasedonopenarchitecture, using industry standard equipment and software. The open natureof VRSallows the addition of new systems and features, ensuring that the VRS system can be adapted to keep up with the changing requirements of the airline business.

TheVRSsuiteofsoftwareincludesthefunctionsof

- Reservations
- Flightinventory
- Fares

All user/agents are allocated a SINE code, which is used during sine-on and then appended to all transactions carried out by the agent for security purpose. Different security levels may be assigned so that different agents can access different areas of the system and also different records in the case where a travel agent is only allowed to review PNR's that have been created by that agency.

The flights may be specified within a particular date range and may be used to display different classes of service and different fares within a specific seating class. Sell from availabilitywhenithasbeendisplayedandasimpleentryisusedtosellseats.Adirectsale may be made using a long hand entry if the flight details are fully known.

CONTENT

LISTOF FIGURES

LISTOFTABLES

LISTOF ABBREVATIONS

TCP	TRANSMISSIONCONTROLPROTOCOL
IP	INTERNET PROTOCOL
OMT	ONBOARDMAINTENANCETERMINAL
DFD	DATAFLOW DIAGRAM
LRS	LOGICALRECORDSTRUCTURES
LAN	LOCALAREANETWORK
VRS	VIDEOCOMRESERVATIONSYSTEM

INTRODUCTION

Flight reservation systemisanintegratedpassengerprocessingsystem.This system includes:

- Fares
- Inventory
- Enquiry
- Reservations

InthissystemallthecommunicationsareviaTCP/IPprotocolusingboththe Intranet and Internet communications worldwide.

TheAirlineReservationsystemhasthefollowingModules:

Userregistrationmodule:
Thismoduleishelpfulfortheregistrationofthenewcustomer.

Login module:
Thismoduleperformstheloginoftheregisteredcustomer.InthismoduleCustomer-id and password is verified.

Reservationmodule:
Thismoduleperformsthereservationofthetickettotheregisteredmodule.

Cancellationmodule:
Thismoduleperformsthecancellationofthereservedticket.

LITERATURESURVEY

1. Web Service-based Automata Testing: A Case Study on Online Airline Reservation

Authors: Temitope Betty Williams ; Amir Rizaan Abdul Rahiman ; Izuka Joseph, 2020 International Conference on Computer Science and Its Application in Agriculture (ICOSICA)

Thefocusofthisstudyistoshowandevaluatehowthewebservicescanefficiently be utilized for online airline reservation system by utilizing the finite automata state machine. A finite automaton is a straightforward machine that has a finite numeral state which could be either an accepting state or rejecting state. It is being used to recognize thepatternseitheracceptorrejectbytakingstringsofsymbolsasinputandchangingits stateaccordingtorulesofthemachine(e.g.,statefunction)untiltheanticipatedsymbols are created

2. The role of ICT Reservation Systems for operational management of air transportation companies

Authors: Okulski ; Radoslaw Robert , 2009 Fourth International Conference on Computer Sciences and Convergence Information Technology

Airlines have been applying on-line technologies for booking and ticketing for decades. Starting from the early 1980s, the computer reservation system (CRS) has played a very important role in the provision of airline services. Zheng-Yi, Fang-Yuan, & Yu-Hern (2003) Consequently, the technologies data communication network had been organized. Moreover, CRS was sold to various markets around the world. Finally, after 1990, there was the Computer Reservation System, which was compatibly connected with a revenue management system. With some other added functions, car rental and hotel booking systems were introduced.

3. WhatAirlineReservationSystemsTellUsabouttheFutureof EHRs

Authors:SheilaSherlock;WilliamG.Chismar ,Proceedingsofthe39thHawaii International Conference on System Sciences – 2006

In theairline industry, the justification for adoption of computerizedreservation systems(CRSs),shiftedfromoperationalefficiency,tomarketingstrategiestorecoup investment, to competitive advantages of essential business tools. This progress contributed to fundamental changes in the structure of the industry. In large part, networkexternalitiescreatedbythesesystemsandthediscrepancybetweenwhopaid for the systems, and who reaped the financial benefits drove these changes.

4. TheoryofDialogueStructurestoHelpManageHuman-ComputerInteraction

Authors: David L. Sanford, Associate Member ;John w. Roach, Member, IEEE

IEEETRANSACTIONSONSYSTEMS,MAN,ANDCYBERNETICS,VOL.18,NO. 4, JULY/AUGUST 1988

The principles of human communication underlie all modes of interaction and therefore are fundamental to designing effective interfaces. In particular, we present an extension to human communication theory that allows us to create a natural languageinterfaceusinghumancommunicationprinciples.Whenpeopleinteract,they use “metacommunication” to help manage the shared communication context. Using metacommunication partially accounts for the enormous range of expressiveness in natural languages.

5. AirlinesReservations.Systems

Authors:JohnR.Knight, Procedizgs ofthe IEEE,VOL. 60, KO. 11, NOVEMBER 1972

The structure of the system is described-agent terminal area, communications facilities, and central site. Lessons learned in the design, development, testing, implementation, and tuning of two generations of systems are discussed. These discussions include initial system design, simulations and systems measurement tools, systemsstabilityandreliability,serialprocessing,parallel-ormultiprocessors,splitfront- end back-end processing, storage hierarchy, standard and special communications disciplines, and flexibility versus performance.

AIM

The main objective is to reduce the mistakes which creep up in manual systems. It provides good level of security so it takes care of the user’s safety concerns as well. Passengers can access the whole list of all the flights available on different routes with theirtimingsandfarebothforeconomyandbusinessclasses.Onecancomparethebest deals for them and book a flight accordingly. When the passengers enter all the details thesoftwarehelpsthemtofindallavailableflightsandalsoinformationifthereareseats available on that particular flight. The manual work is thus reduced and the chances of errors are reduced to minimum.

SCOPE

- Thissoftwarehelpspassengerstolookupflightsbetweentwopointswhichcan be domestic or international.
- The passengers can find and book tickets for flights through this software. Developedinjava,itisfairlyeasytousesoftwarehavingauser-friendlyinterface
- Themainobjectiveistoreducethemistakeswhichcreepupinmanualsystems. Itprovidesgoodlevelofsecuritysoit takescareoftheuser’ssafetyconcernsas well.
- One can compare the best deals for them and book a flight accordingly. When thepassengersenterallthedetailsthesoftwarehelpsthemtofindallavailable flights and also information if there are seats available on that particular flight.
- Themanualworkisthusreducedandthechancesoferrorsarereducedto minimum.

METHODOLOGY

OMTconsistsofbuildingamodelofanapplicationdomainandthenadding implementation details to it during the design of a system.

TheMethodologyhasthefollowingstages:

1. Analysis: The analysis model is a concise, precise abstraction of what the desired system must do, not how it will be done.

2. System Design: The system designer makes high-level decisions about the overall architecture,duringsystemdesign;thetargetsystemisorganizedintosubsystemsbased on both the analysis structure and the proposed architecture.

3. Object Design: The object designer builds a design model based on the analysis model but containing implementation details. The designer adds details to the design model in accordance with the strategy established during system design.

4. Implementation: Theobjectclassesandrelationshipsdevelopedduringobjectdesign are finally translated into a particular programming language, database, or hardware implementation.

TheOMTmethodologyusesthreekindsofmodelstodescribea system.

1. **ObjectModel**:Theobjectmodeldescribesthestaticstructureoftheobjectsina system and their relationships. The object model contains object diagrams.

2. **Dynamic Model:** The dynamic model describes the aspects of a system that change over time.The dynamic model contains state diagram

3. **FunctionalModel:** The functional model describes the datavalue transformations within a system. The functional model contains data flow diagrams.

SYSTEMANALYSIS

EXISTINGSYSTEM

Airline Reservation System is a System including Inventory, Fares, Enquiries, Reservations etc. All user/agents are allocateda SINE code which is used during sine-on and then appended to all transactions carriedout by the agent for security purpose.

***IthasthefollowingDis-advantages**:*

- Reservationsdoesnotsupportupto1year.
- Accessingandupdatingthesystemisslow.
- Itisa filebased processing.

PROPOSEDSYSTEM

Usingthedistributedtechnologywecanhandletheseproblemseasily.Ingeneral adistributedprocessmeansthataprograminexecutionmakesuseofresourcesinother machine.ThetwotechnologiesfordistributedprocessingavailableareJ2EEand.NET. In the “Airline reservation system” J2EE is used for managing distributed systems. So thatevenifthеAirlinesystemhaslotofbranchesandtheyarelocatedatdifferentplaces ,wecanhandlethemanagementofserviceandguarantee.

Theproposedsystemfortheproblemis“Airlinereservationsystem”,awebbased system that allows online reservations. The system is divided into three layers namely presentation layer , business layer and data layer. The presentation layer is at the client side.Atserverside,businesslayeranddatalayerreside.Thesystemrequiresaserver side technology for its implementation. J2EE platform is chosen for implementing the system. At server sideServlet plays the role for business layer and JDBC for the data layer.

Ithasthefollowingadvantages.

- Reservationsaresupportedupto1year.
- AccessingandUpdatingthesystemisFast.
- ItisImplementedusingtheconceptsofRDBMS.

4.1.3.PROBLEMSTATEMENT

The objective of the project is to design and implement the software which helps the Airline Systememployeesto issuereservation tickets forvariousAirflightsandmaintain the records of various passengers and provide quick services to the passengers. It provides the following services:

- ReservationandCancellationoftheAirlinetickets.

Maintains the passengers’ records.

- Reportsaboutthedaily transactionsoftheAirlineSystem.

- QuickResponsetothepassengers.
- AutomationandintegrationofAirlinesystemfunctions.
- Higherproductivityandeffectivemanagement
- Securityandprotectionofconfidentialdata.
- Transactionmanagementandrouting.

OBJECTMODELLING

Theobjectmodeldescribesthestructureofobjectsinasystem.Theiridentity,their relationships to other objects, Their attributes, and their operations. The object model provides the essential framework into which the dynamic and functional models can be placed.

Ourgoalinconstructinganobjectmodelistocapturethoseconceptsfromthereal world that are important to an application. The object model is represented graphically with object diagrams containing object classes. Classes are arranged into hierarchies sharingcommonstructureandbehaviourandareassociatedwithotherclasses.Classes definetheattributevaluescarriedbyeachobjectinstanceandtheoperationswhicheach object performs or undergoes.

IDENTIFICATIONOFOBJECT CLASSES

The first step in constructing an object modelis to identify relevantobject classes from the application domain. Objects include physical entities, such as houses, employees, and machines, as well as concepts, such as trajectories, seating assignments, and payment schedules. All classes must make sense in the application domain;avoidcomputerimplementationconstructs,suchaslinkedlistsandsubroutines. Not all classes are explicit in the problem statement; some are implicit in the application domain or general knowledge.

AirlineReservation System	Reservationmodule	Flight operation
Flight cancellation	Userregistration	New customer
Customer	Bankserver	Registration_info
Login_info	Reservation_Info	Flight_info
Price_info	Transaction_info	Airport_info

IDENTIFICATIONOF ATTRIBUTES

Attributesarepropertiesofindividualobjects.Attributesshouldnotbeobjects.Use an association to show any relationship between two objects. Attributes usually correspond tonounsto followbypossessivephases. Adjectivesoften represent specific enumerated attribute values. Attributes are less likely to be fully described in the statement of problem. The knowledge must be drawn from the application domain and the real world to find out the attributes. This figure 3.2.2 shows the identification of attributes.

Class	**Attributes**
Registration_info	FirstName,LastName,Address, ContactNo,City,State,Country, Gender,Email_Id, Customer_id,password
Login_info	Customer_id,password
Reservation_info	Customer_id, flight_num, Flight_name,derarture_time, Arrival_time, origin, Destination, Num_of_seats
Flight_info	Flight_num, flight_name, Departure_time, Arrival_time, Origin,destination,num_of_seats, Country_name
Price_info	Class,customer_name, seat_num,price
Transactio_info	Credit_num,Credit_type, Pin_num
Airport_info	Country_name,Airport_name
Flight_cancellation	Customer_id,Flight_id,origin, Destination,Flight_name,departure, Arrival,seat_num

DYNAMICMODELLING

Thedynamicmodeldescribestheaspectsofasystemthatchangeovertime.The dynamic model is used to specify and implement the control aspects of a system. The dynamic model contains state diagrams. A state diagram is a graph whose nodes are states and whose arcs are transitions between states caused by events.

The dynamic model is insignificant for a purely static data repository. Such as a database. The dynamic model is important for interactive systems. For most problems, logical correctness depends on the sequences of interactions, not the exact times of interactions.

Dynamicmodellingisadescriptionofaspectsofasystemconcernedwithcontrol, including time, sequencing of operations, and interaction of objects.

Followingstepsareperformedinconstructingadynamicmodel.

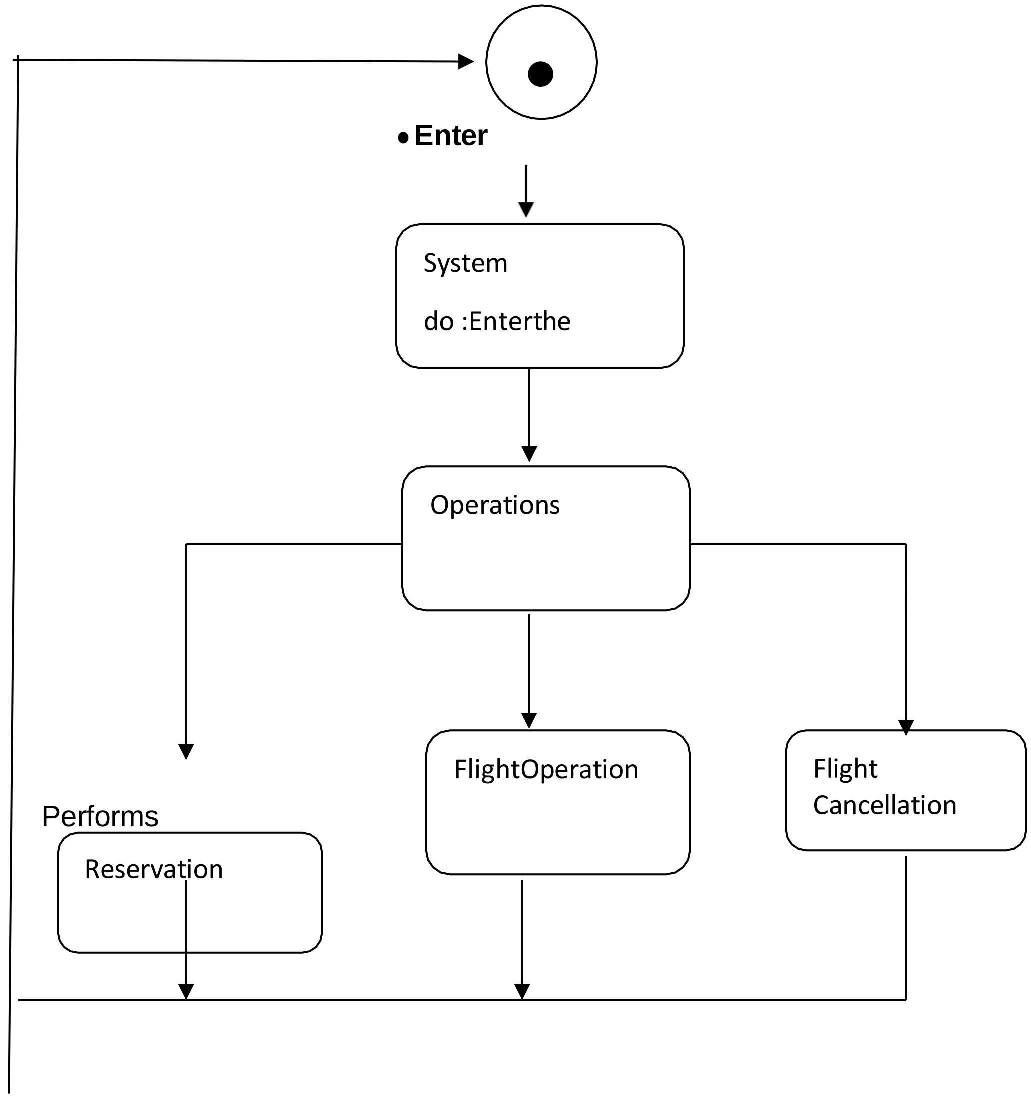
- Preparescenariosoftypicalinteractionsequences.
- Identifyeventsbetweenobjects.
- Prepareaneventtraceforeach scenario
- Builtastate diagram
- Matcheventsbetweenobjectstoverify consistency.

PREPARINGASCENARIO

- Newcustomerentersthesystemandmakestheregistrationandgetsa customer_id.
- Customerswhoarealreadyregisteredentersthe system.
- Customermakesthereservationoperationandgetsthe response.
- Customermakesthequeryfor flightoperations&getsbackthe response.
- Customermakestheflightcancellationoperationandgetstheappropriate response.

STATEDIAGRAM

A state diagram relates events and states. When an event is received, the next statedepends on the current stateas well asthe event: A changeofstate causedby an eventiscalledatransition.Astatediagramisagraphwhosenodesarestatesandwhose directedarcsaretransitionslabelledbyeventnames.Astateisdrawnasaroundedbox containinganoptionalname.Atransitionisdrawnasanarrowfromthereceivingstateto the target state: The label on the arrow is the name of the event causing the transition. Figure below shows a state diagram describing the behaviour of Airline Reservation System.



FUNCTIONALMODELLING

The functional model shows how values are computed, without regard for sequencing, decisions or object structure. The functional model shows which values depends on which other values and the functions that relate them. The DFD are useful for showing functional dependencies. The functions are expressed in various ways, including natural language, mathematical equations and pseudo code.

Functional Model is a description of aspects of a system that transform values using functions, mappings, constraints and functional dependencies.

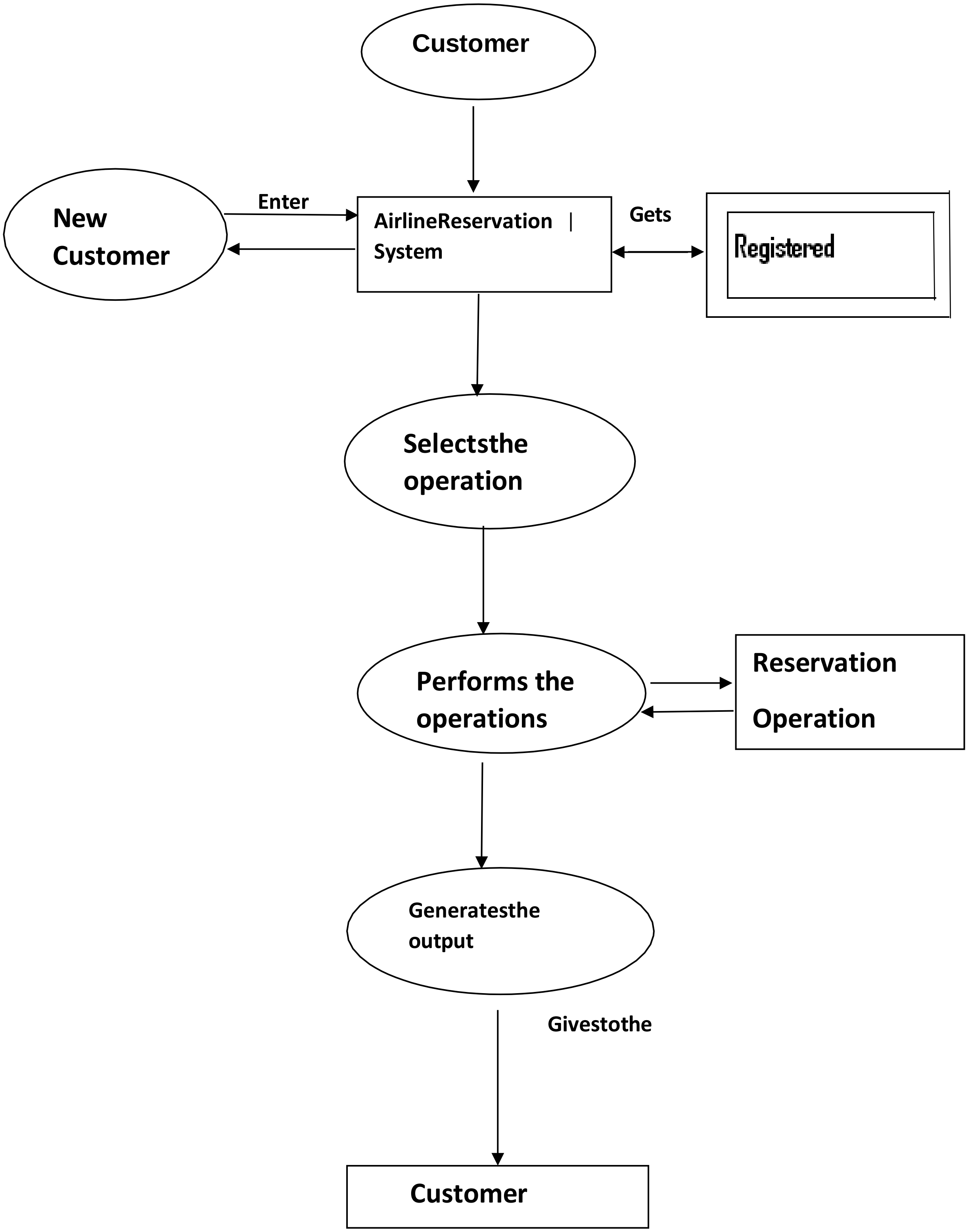
Thefollowingstepsareperformedinconstructingafunctional model.

- Identifyinputandoutput values.
- Builddataflowdiagramshowingfunctionaldependencies.
- Describefunctions.
- Identifyconstraints.
- Specifyoptimizationcriteria.

DATAFLOW DIAGRAM

Data flow diagrams (DFD) depict information flow and the transforms that are applied as data move from input to output. It is the starting point of design phase that functionallydecomposestherequirementspecificationsdowntothelowestleveldetails. Thus a DFD describes what data flows (Logically) rather than how they are processed. So, it does not depend on hardware, software or data structures. It is one of the most importanttoolsusedduring systemanalysis.It isused tomodelthesystemcomponents such as the system process, data used by the process any external that interact if the system and information flows in the system.

DFD-AirlineReservationSystem:



SYSTEMDESIGN

The problem analysis is the most important phase in any project. Only after knowing precisely what the problem is could we successfully eliminate it. The identificationoftherootproblemisnecessary.Wewereabletodiscusswiththepersonnel of various departments and gather information and we got a clear picture of what the existing problem were and what our jobs was to eliminate them by redesigning a new design.

Design is a multi step process that focuses on data structure, software architecture,Proceduraldetails(algorithmsetc)andinterfacebetweenthemodules.The design processalso translates the requirements into the representationsof the software that can be assessed for quality before coding begins.

Computer software design changes continually as new methods, better analysis and border understanding evolve. Software design is at a relatively early flexibility and quantitative nature that is normally associated with more classical engineering design disciplines. However, techniques for software design to exist criteria for design qualities are available and design notation can be applied.

Once the software requirements have been analyzed and specified, software design is the first of three technical activities- Design code and test that are required to build and verify the software. Each activity transforms information in a manner that ultimately results in validation of the computer software.

The importance of the software design can be started with a single word quality. Design is the place where quality fostered in software development. Design provides us with representations of the software that can be accessed for quality.

Designistheonlywaythatwecanaccuratelytranslateacustomer’srequirements into a finished software product or system. Without design, risk of building an unstable system exists one that will fail when small changes are made. One that may be difficult to test.

Thusthesystemdesignincludesfollowingthreetypesof design:

- **Data Design:** The data design transforms the information domain model created during analysis into the data structures that will be required to implement the software.
- **Architectural Design:** The architectural design defines the relationship among the major structural components of the program.
- **ProceduralDesign:**Theproceduraldesigntransformsstructuralcomponentsinto a procedural description of the software. Source code is generated and testing is conducted to integrate and validate the software.

Thus,systemdesignisasolution,a“howto”approachtothecreationofthenewsystem.

TABLES

DatabaseDesign

The database design converts the data model developed in logical design to a databasedefinitionthatissupportedbydatabasesoftware. Thefirststepisindependent of the kind of DBMS used. This step converts the conceptual entity relationships model toasetofrecordtypeisknownasthelogicalrecordstructures.(LRS).Thenextdatabase design step converts the LRS to a database definition.

These steps use techniques that depend on the DBMS. DBMS dependent techniques are needed here because different DBMS support different kind of links between the records. Such links are used to retrieve records by following the link from one record to another. Database design depends on the structure supported by DBMS and uses techniques appropriate to these structures.

DBMS dependent design proceeds in two stages. The first step is logical design. LogicaldesigndefinestheDBMSrecordtypesandthelinksbetweenthem.Thenextstep is physical design. This step choosesa physical organization that supports the methods uses to accesses the databases.

TableDescription

Tablename:Registration_info

FieldDescription	**Name**	**Type**	**Width**
FirstName	FirstName	Varchar	12
LastName	LastName	Varchar	12
Customer’sAddress	Adress	Varchar	16
Customer’sContactNum	ContactNo	Number	12
Customer’sCity	City	Varchar	12
Customer’sState	State	Varchar	12
Customer’sCountry	Country	Varchar	12
Customer’sGender	Gender	Varchar	2
Customer’sEmail-Id	Email_Id	Varchar	12
Customer’sId	Customer_id	Varchar	8
Customer’sPassword	Password	Varchar	8

Tablename:Login_info

FieldDescription	**Name**	**Type**	**Width**
Customer’sId	Customer_id	Varchar	8
Customer’sPassword	Password	Varchar	8

Tablename:Reservation_info

FieldDescription	**Name**	**Type**	**Width**
Customer’s Id	Customer_id	Varchar	8
Flight’sNumber	Flight_num	Varchar	12
Flight’sName	Flight_name	Varchar	12
DepartureTime	Departure_time	Time	
ArrivalTime	Arrival_time	Time	
OriginPlace	Origin	Varchar	16
Destinationplace	Destination	Varchar	16
NumberofSeats	Num_of_seats	Number	4

TableName:Flight_info

FieldDescription	**Name**	**Type**	**Width**
Flight’sNumber	Flight_num	Varchar	12
Flight’sName	Flight_name	Varchar	12
DepartureTime	Departure_time	Time	
ArrivalTime	Arrival_time	Time	
OriginPlace	Origin	Varchar	16
Destinationplace	Destination	Varchar	16
NumberofSeats	Num_of_seats	Number	4
CountryName	Country_name	Varchar	12

TableName:Price_info

FieldDescription	**Name**	**Type**	**Width**
ClassName	Class	Varchar	12
Customer’s Name	Customer_name	varchar	14
Seat Number	Seat_num	Number	4
PriceOf ticket	Price	Number	4,2

Tablename: Transaction_info

FieldDescription	**Name**	**Type**	**Width**
Creditcardnumber	Credit_num	Varchar	8
Credircardtype	Credit_type	Varchar	8
Pin Number	Pin_num	Number	6

Tablename:Airport_info

FieldDescription	**Name**	**Type**	**Width**
CountryName	Country_name	Varchar	14
AirportName	Airport_name	Varchar	14

Tablename:Flight_cancellation

FieldDescription	**Name**	**Type**	**Width**
Customer’s Id	Customer_id	Varchar	8
Flight’sNumber	Flight_num	Varchar	12
OriginPlace	Origin	Varchar	16
Destinationplace	Destination	Varchar	16
Flight’sName	Flight_name	Varchar	12
DepartureTime	Departure_time	Time	
ArrivalTime	Arrival_time	Time	
SeatNumber	Seat_num	Number	4

IMPLEMENTATION

SOFTWAREREQUIREMENTS

Server

Weblogicserverisusedforrecordingdatathrough Oracle8i.

Compatibleoperatingsystem

- MicrosoftWindows98(SE)
- MicrosoftWindowsNTWorkstationversion4.0(withservicepack6orlater)
- MicrosoftWindows2000Professional
- MicrosoftWindowsXPProfessional

HARDWAREREQUIREMENTS

- IntelPentium2(orcompatible)300MHz(orhigher)processor
- Minimumof256MBRAM

- Oracle 8i and Server installation require up to 200MB of hard disk space and for planningpurposes,werecommendthatusersallocate100MBpersystemfordata base.

Client

Compatibleoperating systems:

- MicrosoftWindows98(SE)
- MicrosoftWindows2000Professional
- MicrosoftWindowsXPProfessional

NetworkRequirements

User can run the HRMS on a single computer, or across a local area network (runningataminspeedof100MHz).ForaccesstotheserverviaaLAN, TCP/IP protocol is recommended.

RemoteAccess

It’s recommended that Microsoft Windows Terminal Services (or a similar technology) is used. Only the highest specification Wide Area Networks will provide sufficient power to connect users directly to the server (i.e.without using Terminal Services).

TESTING

Testingisanimprovementphase.Thisphaseinvolvestestingofdevelopedsystem using different form of data.

TestingtheSoftware:

Theobjectivesofthetestingare:

1. Recruitingtheprogramwithanintentionoffindingan error
2. Thetestissaidtobe successfulifanerroris discovered

TypesofTesting:

1. UnitTesting:

Unit testing focuses on verifying the effort on the smallest unit of the software design. The complexity of the test is limited by constrained scopes.

2. IntegrationTesting:

The objectives of the Integration Testing is to take all forms and build a project structure that has been dictated by design.

3. ValidationTesting:

Afterintegrationtestingsystemiscompletelyassembledasapackage,interfacing errors have been uncovered and the final series of the software test, the validation test begins validation succeeds.

4. PerformanceTesting:

Itisdesignedtotesttheruntimeperformanceofthesoftwarewithinthecontextof the integrated system. Performance testing occurs throughout the steps in the testing process.

5. OutputTesting:

Afterperformanceandvalidationtestingthenexttestistheinputoutput testingof the proposed system. Since no system would be termed useful until it does produce the requested output in the specified format.

RESULTSANDDISCUSSION

This project allows users to view flight details and to reserve, view and cancel ticketsbylogginginorregisteringwithanewaccountandreportinganyissueifrequired. Admin is provided with rights to see flight details, reservations, user contacts and some functions like adding flights and collecting reports given by users.

CONCLUSIONANDFUTUREWORK

The software package “Flight Reservation System” provides convenient online uploading the report from executive and viewing that report by the managing director in an online fashion. To input the data in a highly validated manner and generating the different reports, this involves complex process that was being done on based manner.

This package is designed and developed in acompact manner, which is ready to meettheuser’sspecificationandtoservetheminaneffectiveaswellasinanenhanced manner. The actual problem has been observed with keen interest and it has been defined and analyzed in such a way that it never causes choice to the user.More ever the limitation that has been prevailing in the existing system had been overcome to suit the need of the user.

High precision and care has been taken to design the data base, input forms an output reports since they should be given due importance which could otherwise to seriousconsequencesthusaffectingthewholesystem.Thesystemthusdevelopedhas been implemented successfully which has been performed to scrutinized the validation of each data and errors were spotted out and then finally cleared in a sophisticated manner.

Theaddedfeatureofthissystemisthatithasbeenprovidedwithmanyprovisions for future enhancement in order to maintain the system in such a way that the future requirement of the user could also be satisfied and upgrated.

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APPENDIX

SAMPLECODE

FOR RESERVATION

```
publicclassBook_Ticketextendsjavax.swing.JFrame
 {
publicBook_Ticket(){
initComponents();
}
PrivatevoidinitComponents()
 {
jLabel5=newjavax.swing.JLabel(); fid
= new javax.swing.JTextField();
setDefaultCloseOperation(javax.swing.WindowConstants.EXIT_ON_CLOSE);
jLabel5.setFont(new java.awt.Font("Tahoma", 1, 14));
jLabel5.setText("Flight Id:");
      javax.swing.GroupLayoutlayout=newjavax.swing.GroupLayout(getContentPane());
getContentPane().setLayout(layout);
layout.setHorizontalGroup(
layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
.addGap(0,729,Short.MAX_VALUE)
.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
.addGroup(layout.createSequentialGroup()
.addGap(21,21,21)
.addComponent(jLabel5,javax.swing.GroupLayout.PREFERRED_SIZE,109,
javax.swing.GroupLayout.PREFERRED_SIZE)
.addGap(49,49,49)
.addComponent(fid,javax.swing.GroupLayout.PREFERRED_SIZE,200,
javax.swing.GroupLayout.PREFERRED_SIZE)

.addContainerGap(350,Short.MAX_VALUE)))

);

layout.setVerticalGroup(

layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

.addGap(0,359,Short.MAX_VALUE)

.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

.addGroup(layout.createSequentialGroup()

.addGap(133,133,133)

.addComponent(jLabel5,javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)

.addComponent(fid,javax.swing.GroupLayout.PREFERRED_SIZE,34,
javax.swing.GroupLayout.PREFERRED_SIZE))

.addContainerGap(192,Short.MAX_VALUE)))

);

pack();

}

publicstaticvoidmain(Stringargs[]){ try

{

for (javax.swing.UIManager.LookAndFeelInfo
info:javax.swing.UIManager.getInstalledLookAndFeels()){

if ("Nimbus".equals(info.getName()))

{

javax.swing.UIManager.setLookAndFeel(info.getClassName());

 break;

  }

  }

        }
```

```
catch (ClassNotFoundException ex) {
java.util.logging.Logger.getLogger(Book_Ticket.class.getName()).log(java.util.logging.L
evel.SEVERE, null, ex);
        } catch (InstantiationException ex){
java.util.logging.Logger.getLogger(Book_Ticket.class.getName()).log(java.util.logging.L
evel.SEVERE, null, ex);
        }catch(IllegalAccessExceptionex){
java.util.logging.Logger.getLogger(Book_Ticket.class.getName()).log(java.util.logging.L
evel.SEVERE, null, ex);
        }catch(javax.swing.UnsupportedLookAndFeelExceptionex) {
java.util.logging.Logger.getLogger(Book_Ticket.class.getName()).log(java.util.logging.L
evel.SEVERE, null, ex);
        }java.awt.EventQueue.invokeLater(newRunnable(){ public
            void run() {
                new Book_Ticket().setVisible(true);
            }
        });
    }
    private javax.swing.JTextField fid;
    privatejavax.swing.JLabeljLabel5;
}
```

FOR PAYMENT

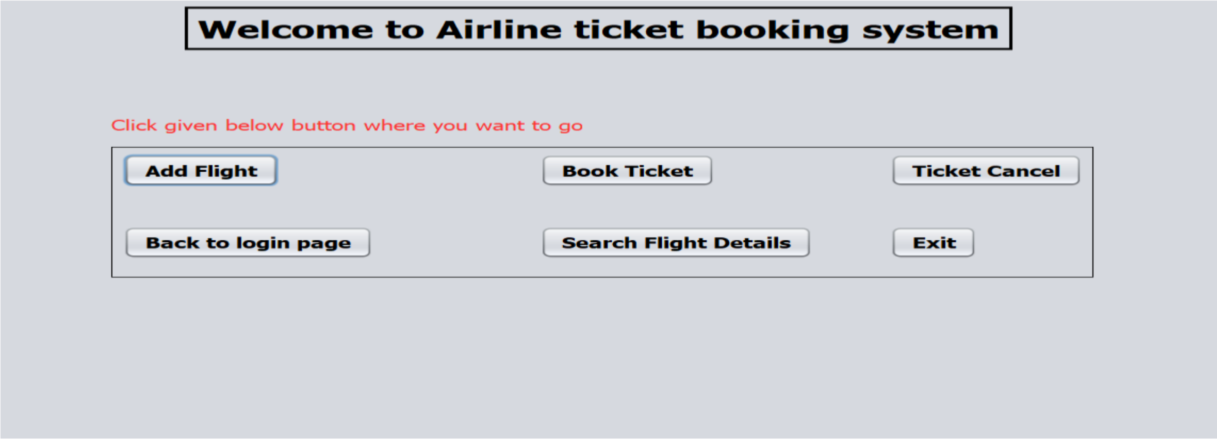
```
publicclassPayment_Optionextendsjavax.swing.JFrame{ public
    Payment_Option() {
        initComponents();
    }
    private void initComponents()
        {jPanel1=newjavax.swing.JPanel();
        jLabel1 = new javax.swing.JLabel();
        Credit_Card=newjavax.swing.JButton();
        Debit_Card = new javax.swing.JButton();
        setDefaultCloseOperation(javax.swing.WindowConstants.EXIT_ON_CLOSE);
        jPanel1.setBorder(javax.swing.BorderFactory.createLineBorder(new
java.awt.Color(0, 0, 0), 3));
        jLabel1.setFont(newjava.awt.Font("Tahoma",1,18));
        jLabel1.setText("Payment Option");
        javax.swing.GroupLayoutjPanel1Layout=newjavax.swing.GroupLayout(jPanel1);
        jPanel1.setLayout(jPanel1Layout);
        jPanel1Layout.setHorizontalGroup(
    jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
        .addGroup(jPanel1Layout.createSequentialGroup()
          .addGap(19,19,19)
          .addComponent(jLabel1,javax.swing.GroupLayout.PREFERRED_SIZE,160,
javax.swing.GroupLayout.PREFERRED_SIZE)
          .addContainerGap(20,Short.MAX_VALUE))
        );
     jPanel1Layout.setVerticalGroup(
     jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
        .addComponent(jLabel1,       javax.swing.GroupLayout.Alignment.TRAILING,
javax.swing.GroupLayout.DEFAULT_SIZE, 34, Short.MAX_VALUE)
        );
        Credit_Card.setFont(new java.awt.Font("Tahoma", 1, 14));
        Credit_Card.setText("Credit Card");
        Credit_Card.addActionListener(newjava.awt.event.ActionListener(){
        publicvoidactionPerformed(java.awt.event.ActionEventevt){
          Credit_CardActionPerformed(evt);
        }
        });
        Debit_Card.setFont(newjava.awt.Font("Tahoma",1,14));//NOI18N
        Debit_Card.setText("Debit Card");
        Debit_Card.addActionListener(new java.awt.event.ActionListener()
{
        publicvoidactionPerformed(java.awt.event.ActionEventevt){
        Debit_CardActionPerformed(evt);
        }
        });
        javax.swing.GroupLayoutlayoutnewjavax.swing.GroupLayout(getContentPane());
        getContentPane().setLayout(layout);
        layout.setHorizontalGroup(
            layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .addGroup(layout.createSequentialGroup()
                .addContainerGap(154,Short.MAX_VALUE
.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
                    .addGroup(javax.swing.GroupLayout.Alignment.TRAILING,
layout.createSequentialGroup()
                        .addComponent(jPanel1,javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE)
                        .addGap(166,166,166))
                    .addGroup(javax.swing.GroupLayout.Alignment.TRAILING,
layout.createSequentialGroup()
                        .addComponent(Debit_Card)
                        .addGap(86,86,86)
                        .addComponent(Credit_Card)
                        .addGap(125,125,125))))
        );
        layout.setVerticalGroup(
            layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .addGroup(layout.createSequentialGroup()
                .addContainerGap()
                .addComponent(jPanel1,          javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE)
```

```
            .addGap(58,                                   58,                                   58)
  .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
            .addComponent(Credit_Card,javax.swing.GroupLayout.PREFERRED_SIZE,
35, javax.swing.GroupLayout.PREFERRED_SIZE)
              .addComponent(Debit_Card,javax.swing.GroupLayout.PREFERRED_SIZE,
                                                                                                   35,
javax.swing.GroupLayout.PREFERRED_SIZE))
            .addContainerGap(266,Short.MAX_VALUE))
      );
      pack();
   }
   privatevoidCredit_CardActionPerformed(java.awt.event.ActionEventevt){
      setVisible(false);
      Credit_Cardob=newCredit_Card();
      ob.setVisible(true);
   }
   privatevoidDebit_CardActionPerformed(java.awt.event.ActionEventevt){
      setVisible(false);
      Debit_Cardob=newDebit_Card();
      ob.setVisible(true)
   }
   publicstaticvoidmain(Stringargs[]){ try {
         for(javax.swing.UIManager.LookAndFeelInfoinfo:
javax.swing.UIManager.getInstalledLookAndFeels()) {
         if ("Nimbus".equals(info.getName())) {
         javax.swing.UIManager.setLookAndFeel(info.getClassName());
               break;
            }
         }
```

```
        } catch (ClassNotFoundException ex) {
java.util.logging.Logger.getLogger(Payment_Option.class.getName()).log(java.util.loggi
ng.Level.SEVERE, null, ex);

        } catch (InstantiationException ex) {
java.util.logging.Logger.getLogger(Payment_Option.class.getName()).log(java.util.loggi
ng.Level.SEVERE, null, ex);

        } catch (IllegalAccessException ex) {
java.util.logging.Logger.getLogger(Payment_Option.class.getName()).log(java.util.loggi
ng.Level.SEVERE, null, ex);

        } catch (javax.swing.UnsupportedLookAndFeelException ex) {
java.util.logging.Logger.getLogger(Payment_Option.class.getName()).log(java.util.loggi
ng.Level.SEVERE, null, ex);

        }

        java.awt.EventQueue.invokeLater(newRunnable(){

            public void run() {

                new Payment_Option().setVisible(true);

            }

        });

    }

    privatejavax.swing.JButtonCredit_Card;

    private javax.swing.JButton Debit_Card;

    private javax.swing.JLabel jLabel1;

    private javax.swing.JPanel jPanel1;

}
```

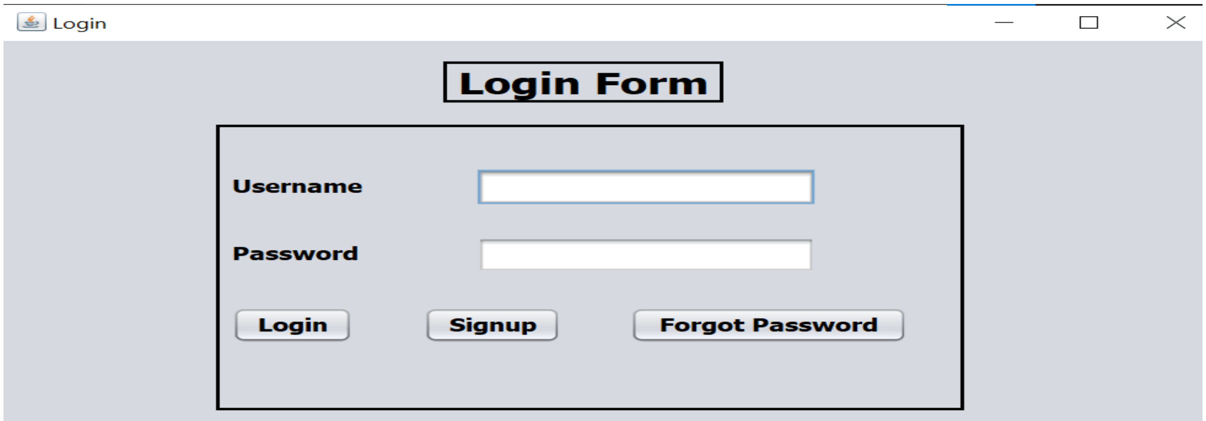
SCREENSHOTS

HOMEPAGE

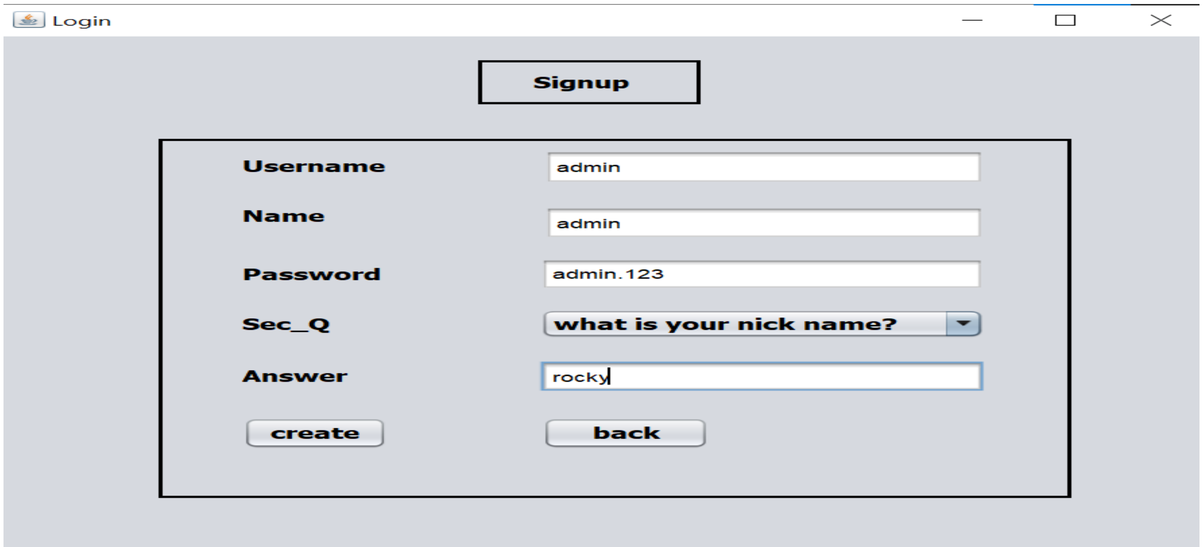

Welcome to Airline ticket booking system

Click given below button where you want to go

LOGINPAGE



SIGNUPPAGE



Username admin

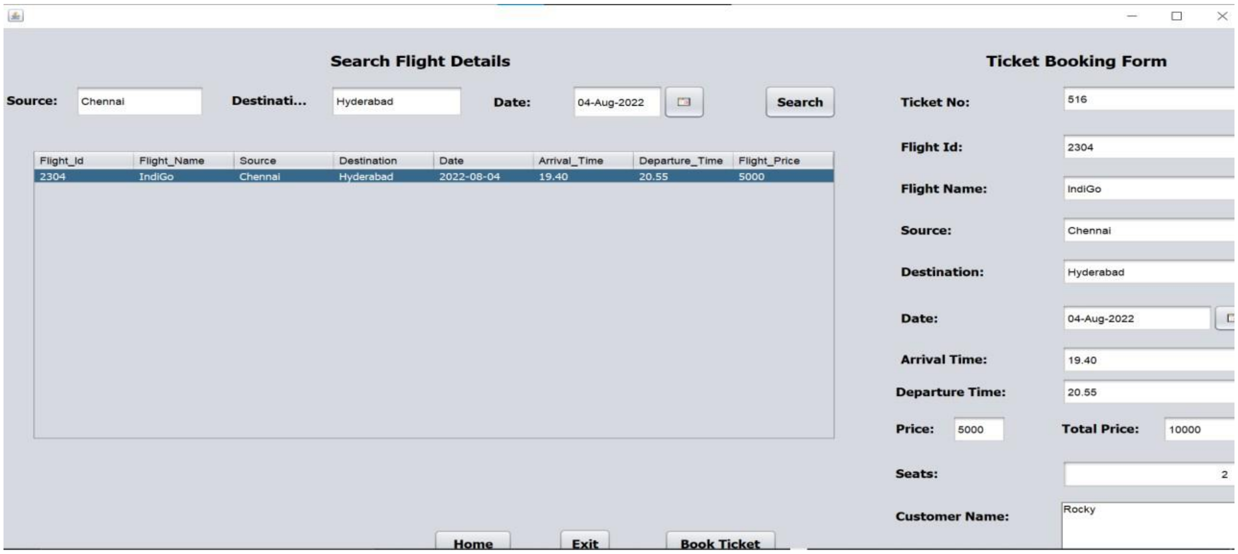
Name admin

Password admin.123

Sec_Q what is your nick name?

Answer rocky

FLIGHTTICKETBOOKINGPAGE



Search Flight Details

Source: Chennai

Destinati... Hyderabad

Date: 04-Aug-2022

Flight_Id	Flight_Name	Source	Destination	Date	Arrival_Time	Departure_Time	Flight_Price
2304	IndiGo	Chennai	Hyderabad	2022-08-04	19.40	20.55	5000

Ticket Booking Form

Ticket No: 516

Flight Id: 2304

Flight Name: IndiGo

Source: Chennai

Destination: Hyderabad

Date: 04-Aug-2022

Arrival Time: 19.40

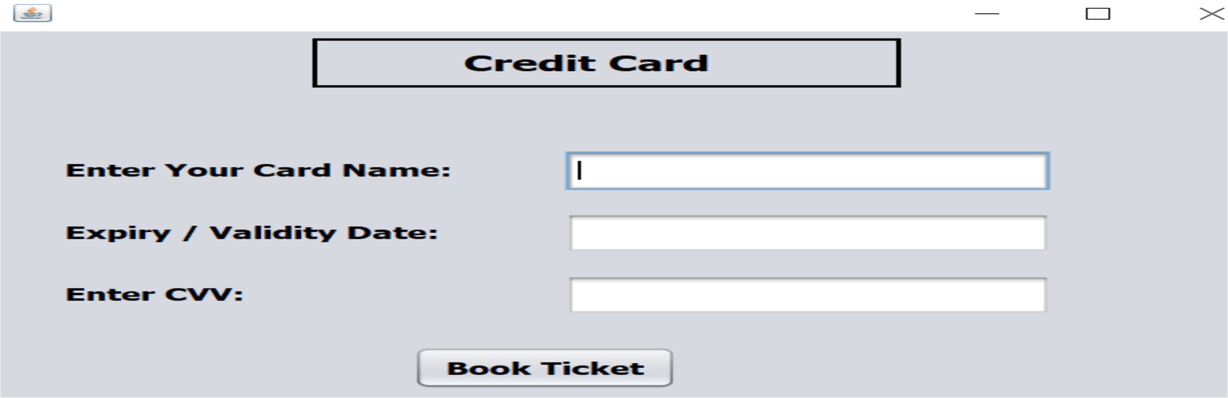
Departure Time: 20.55

Price: 5000 Total Price: 10000

Seats: 2

Customer Name: Rocky

PAYMENT PAGE



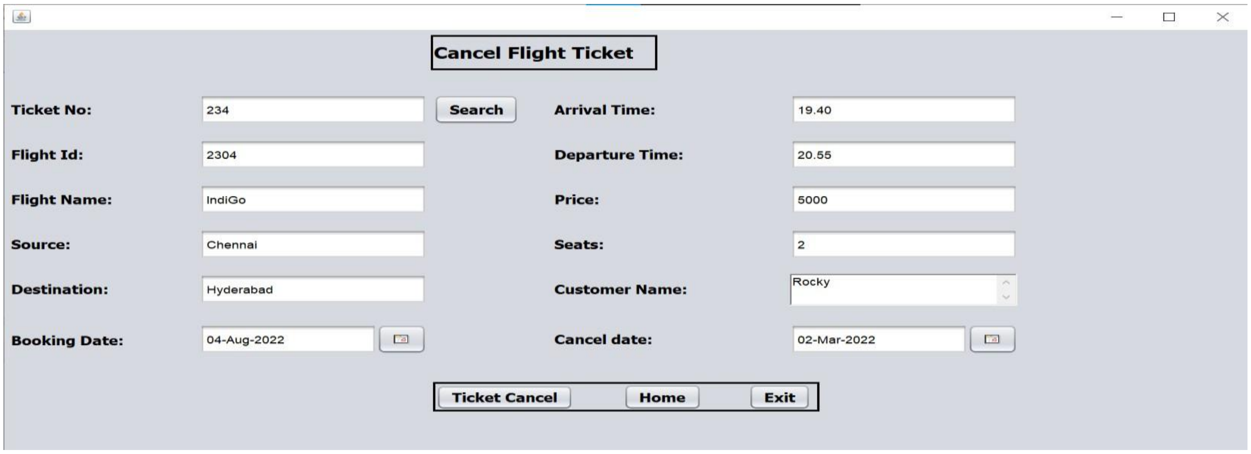
Credit Card

Enter Your Card Name:

Expiry / Validity Date:

Enter CVV:

FLIGHTTICKETCANCELLATIONPAGE



Cancel Flight Ticket

Ticket No: 234

Flight Id: 2304

Flight Name: IndiGo

Source: Chennai

Destination: Hyderabad

Booking Date: 04-Aug-2022

Arrival Time: 19.40

Departure Time: 20.55

Price: 5000

Seats: 2

Customer Name: Rocky

Cancel date: 02-Mar-2022