1.1 Scope

The name of the system is “Airline Reservation System” (ARS). This system provides search options for searching the source point and destination point are entered by customer and viewing different flights available with different timings for a pa rticular departure and arrival date and provides customers with the facility to book a ticket, modify or cancel a particular reservation but it also provide the customers with details of cost of the ticket, allow the customer to modify a particular part of his/her reservation and he/she can modify all the details.

1.2 User Requirements Definition

- Giving search option to customer search flight information and schedule.
- Source point and destination point already provide to customer.
- Arrival and departure ti me will display for the customer.
- Checking availability of the ticket that customer has already chosen.
- If ticket is not available system will pop a short massage “ticket unavailable” will be displayed to the customer
- System will have facility to cancel th e reservation of the ticket to the customer.
- Customer can modify in the reservation ticket if customer need any changes.
- If customer cancel their ticket there will displayed a small statement regarding to the cancellation.
- Ticket will be printing all the d etail such as data, name of the plane, destination and ticket price with timings and the class along with the passenger details.

1.3 User Requirement Specification

- Customer can search flight information and flight schedule with search option.
- Customer need select source point and destination point.
- Customer will have arrival and departure time after selection the flight.
- Customer can check ticket availability to their chosen flight.
- Customer will inform if ticket is unavailable.
- Customer can cancel t icket reservation if customer wants to.
- Customer can modify the ticket reservation if want to make any changes.
- Customer can cancel the ticket reservation if don want to continue.
- Customer will get a ticket with all the detail such as data, name of plane, ticket price destination with timings and the class along with the passenger details.

2.0 Object-Oriented Design

Unified Modeling Language (UML) diagram is also the underlying semantics of what these diagrams and symbols mean. Whereas there has been to t his point many notations and methods used for object-oriented design, now there is a single notation for modelers to learn. UML can be used to model different kinds of systems: software systems, hardware systems and real-world organizations.
UML offers 4 diagrams in this report which is to model systems:

- **Use Case diagram**
  Use case diagrams model the functionality of a system using actors and use cases. Use cases are services or functions provided by the system to its users.

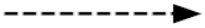
- **Sequence diagram**
  Sequence diagrams describe interactions among classes in terms of an exchange of messages over time

- **Class diagram**
  Class diagrams are the backbone of almost every object-oriented method including UML. They describe the static structure of a system.

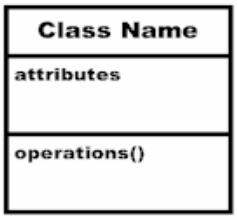
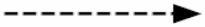
- **State diagram**
  A state diagram shows the behaviour of classes in response to external stimuli. This diagram models the dynamic flow of control from state to state within a system.

2.1 Notation

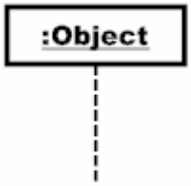
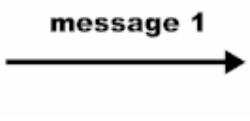
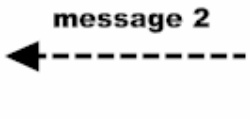
2.1.1 Basic use case diagram symbol and notation

	The user of the system
	The use case of the system
	The generalization of each use case
	The relationship between two use case
	The system boundary
	The communication between the user and the use case

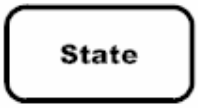
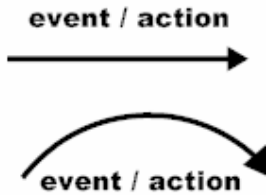
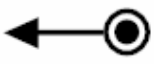
2.1.2 Basic Class diagram symbol and notation

	The Structure of a class
	The aggregation(containing)between two classes
	The generalization (composition)between two classes
	The relationship(dependency)between two classes
	The relationship(association)between two class

2.1.3 Basic sequence diagram symbol and notation

	The lifeline of an user
	The lifeline of an object
	The communication between the user and the object
	The return message from the object

2.1.4 Basic state diagram symbol and notation

	Situations during the life of an object
	Path between different state of an object
	The object's initial
	The object's final state

3.0 Use case diagram

3.1 Use case diagram for booking

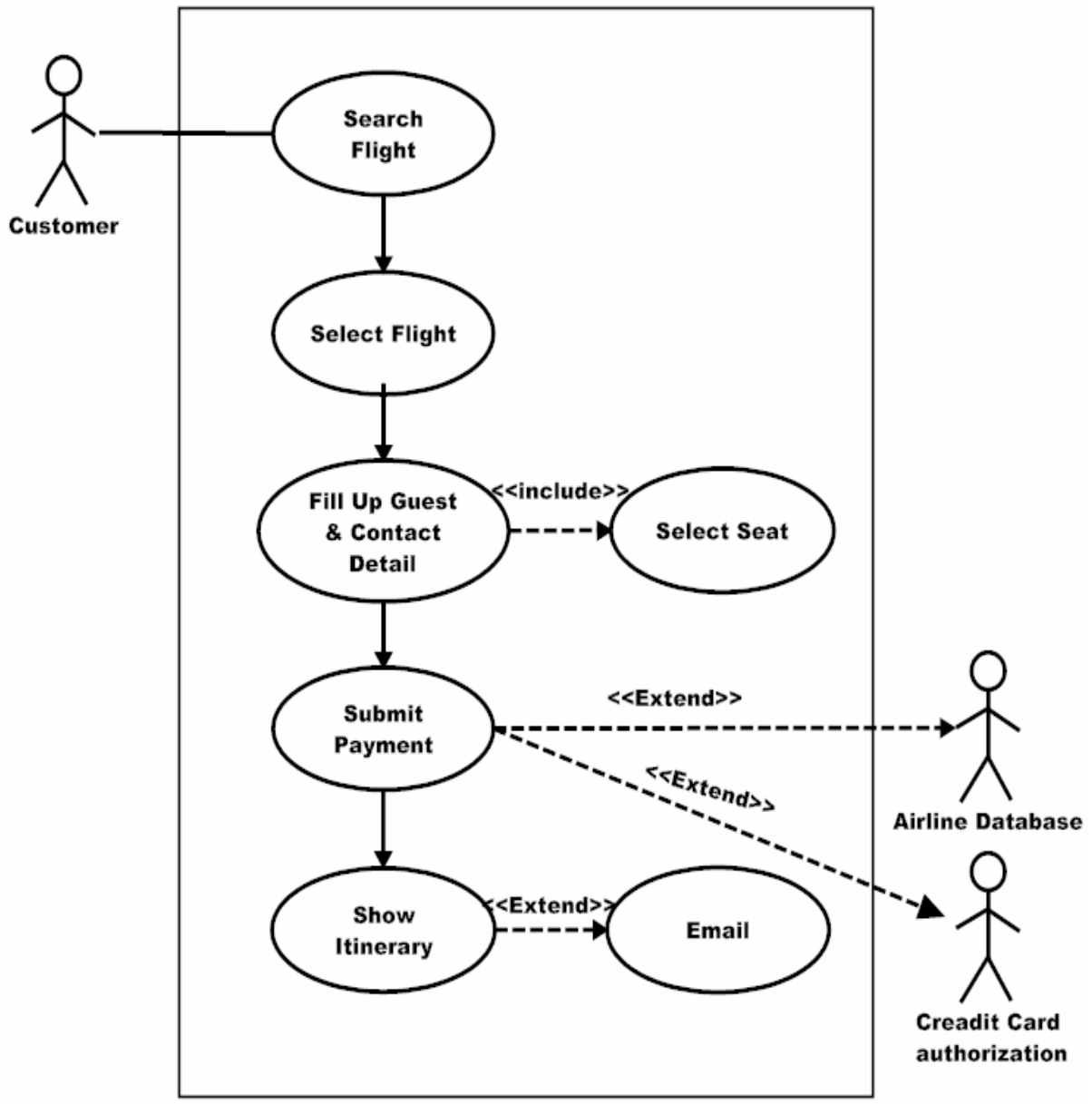


Figure 3.1.1 booking use case diagram

4.0 class diagram for booking

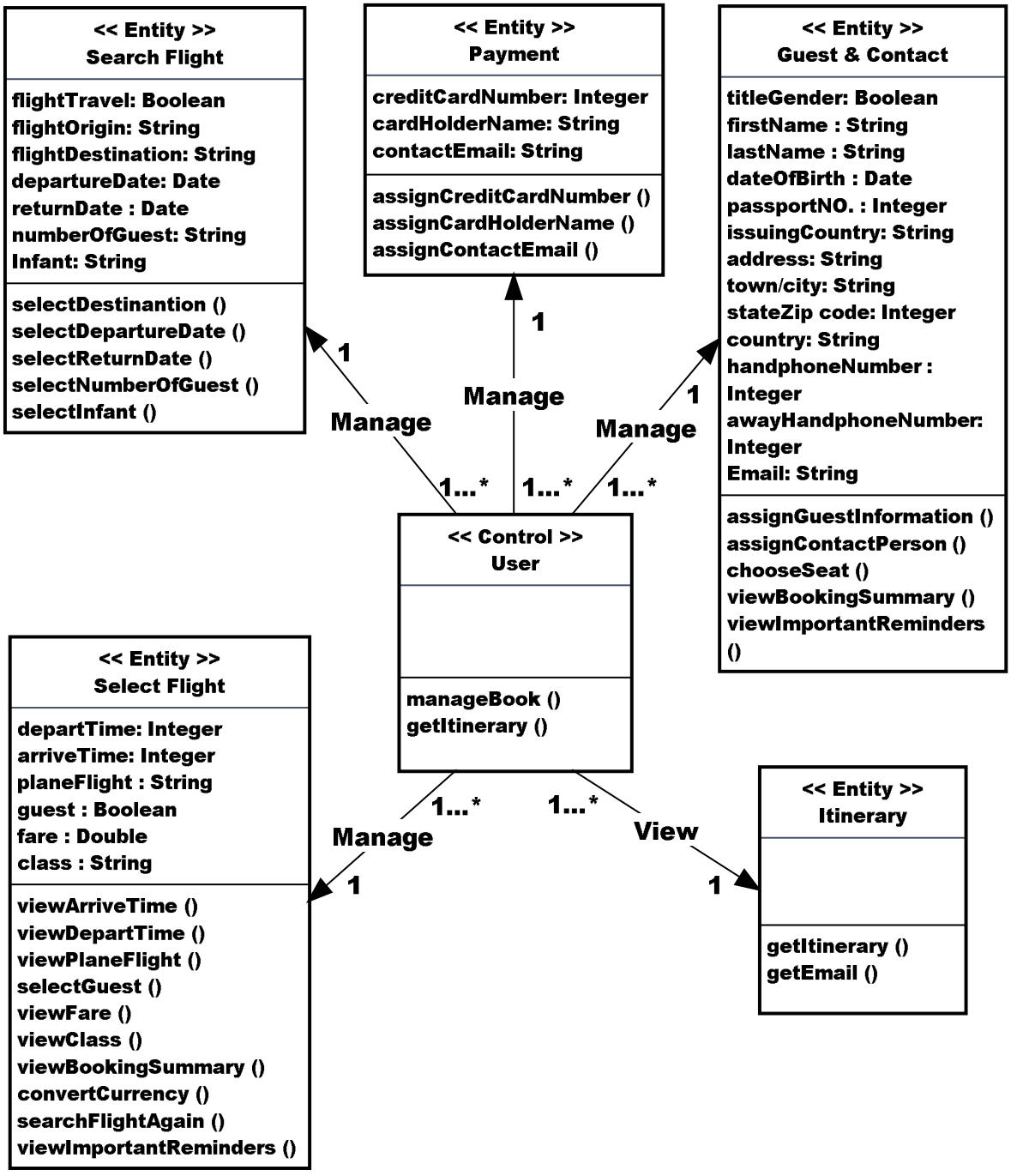


Figure 5.1 booking class diagram

5.0 Sequence diagram for booking

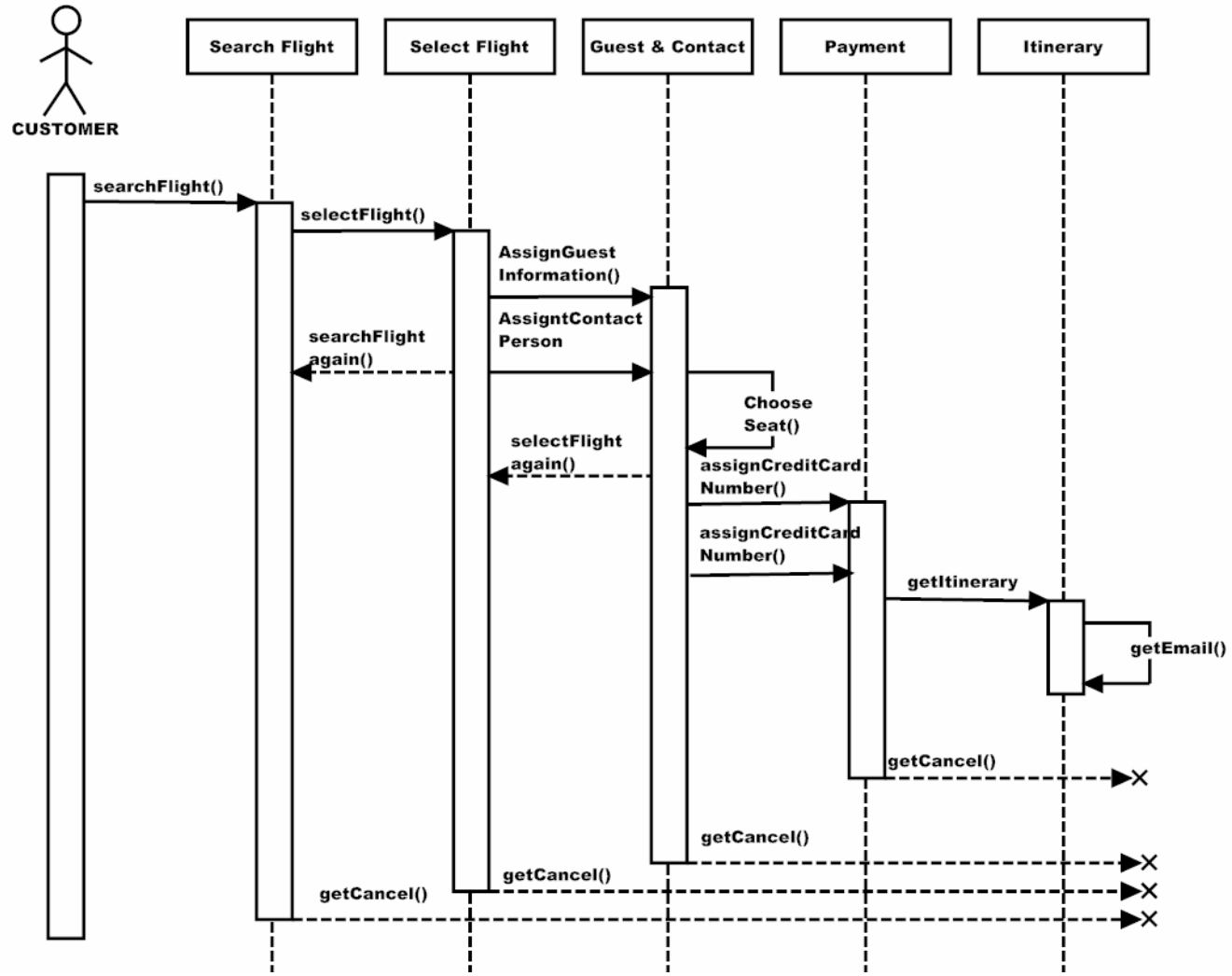


Figure 4.2.1 Sequence diagram of booking

Figure 4.2 is showing the sequence from left to right start from search flight, when user search flight with proper selection will continue to select flight to choose a flight that user desire. When flight have been selected it will continue to guest & contact user is need to assign personal detail and contact detail in order to continue to payment. Payment get user is needed to assign credit card number and cardholder name. can be cancel from the Airline Reservation System. If transaction completed user will get display itinerary and receive email from the E-ticket System.

6.0 state diagram of booking