B.Sc. Engg. Project
A Project on Ticket Reservation System

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Contents

List of Figures

Objective Of Our System

The main objective of the Ticket Reservation System, which is a web-based booking project, is to create a ticket reservation system that will help people to book tickets online for travel by any vehicle and to minimize errors resulting from manual system operations. Other objectives of this project are to study the current system identifying its inefficiencies and determine the requirements for the new system.

Literature Review

Website	URL	Feature 1	Feature 2	Feature 3	Feature 4	Feature 5
Bdtickets	https://bdtickets .com/	Both Traditional and Social Authentication (SSO based)	Robust Integration with Relevant Online Service Providers	Generic Frame-work for Payment Gateway Integration	Distributed Service Ecosystem for Ease of Adding New Features	Unparalleled Ecosystem Visibility Through Distributed Tracing and Logging
Huntbd	https://www. huntbd.com	Book any kind of ticket such as air, launch, bus etc.	Book movie Tickets, room tickets, and car.	They provide faster and quickly service.	Available launch and timings for all with car tickets free of cost.	They provide Fast and easy booking services. It is suitable for all.
Make me trip	https://www. makemytrip.com/	Online IRCTC Train Booking	Book Cheap Flight Tickets	It is a Bus Bookings service for all user.	Flexible booking and easy cancellation.	User can Book cars, hotels and other services for all types of tickets.
Bus Bd	http://www. busbd.com.bd	Including A/C, no A/C) tickets for over 600+ routes and choose from over 22+ operators.	They provide easy to ticket buying systems for all user. Easy Can collation of ticket.	History of bookings. They can generate our previous booking history.	Secure payment system. They provide online payment system which is secure and trusted for all users of this side.	All banking card payment option available. It is also a good side for rent or buying a ticket cause this side allows all kind of banks.
Esky.com	https://www.esky .com/airlines	Book air tickets on easy steps, it is a one click booking system with car tickets free of cost.	Many kinds of tickets opportunity with their regular air thickets, with food facilities.	Up to 15 percent discount on room and car rental with other services.	Secure payment and personal details secure by SSL certificate. It is a safe payment system for all.	Instant confirmation of your booking, right on your smartphone. Anyone can easily use this service without no time waste.

Features of our proposed system:

A Ticket reservation system (TRS) is a beneficial solution for tracking, finding, and managing containers aimed to deliver various kinds of goods from a specific location to the destination. TRS is usually a web-based tool with customizable Functionalities to ensure a good match with customer preferences and operational requirements that enable registered users to:

1. Set a time for delivery. which is important for knowing user when they got their goods.
2. Manage customer orders faster and easier by tracking their information.
3. Track delivery process in a real-time which is beneficiary for customer and seller also.
4. Check and confirm the customer details after receiving a new booking
5. Simple bookings, smooth terminal visits, transport coordinators
6. Pick up an available time slot and entering driver, vehicle, and container details in an advanced user interface.
7. Arrange terminal visit, executing customer-specific logic and at the gate area to allow access to and from the terminal area.
8. Compare the booking information with real-time identification data captured by the terminal's gate operating system.
9. Get access to a comprehensive management system for reviewing current and upcoming traffic events and truck appointments
10. Use extensive management tools for operational planning.

Development Methodology and Justification

We choose Systems Development Life Cycles (SDLC) method for our project. The systems development life cycle (SDLC) is a general term used to describe the method and process of developing a new information system.
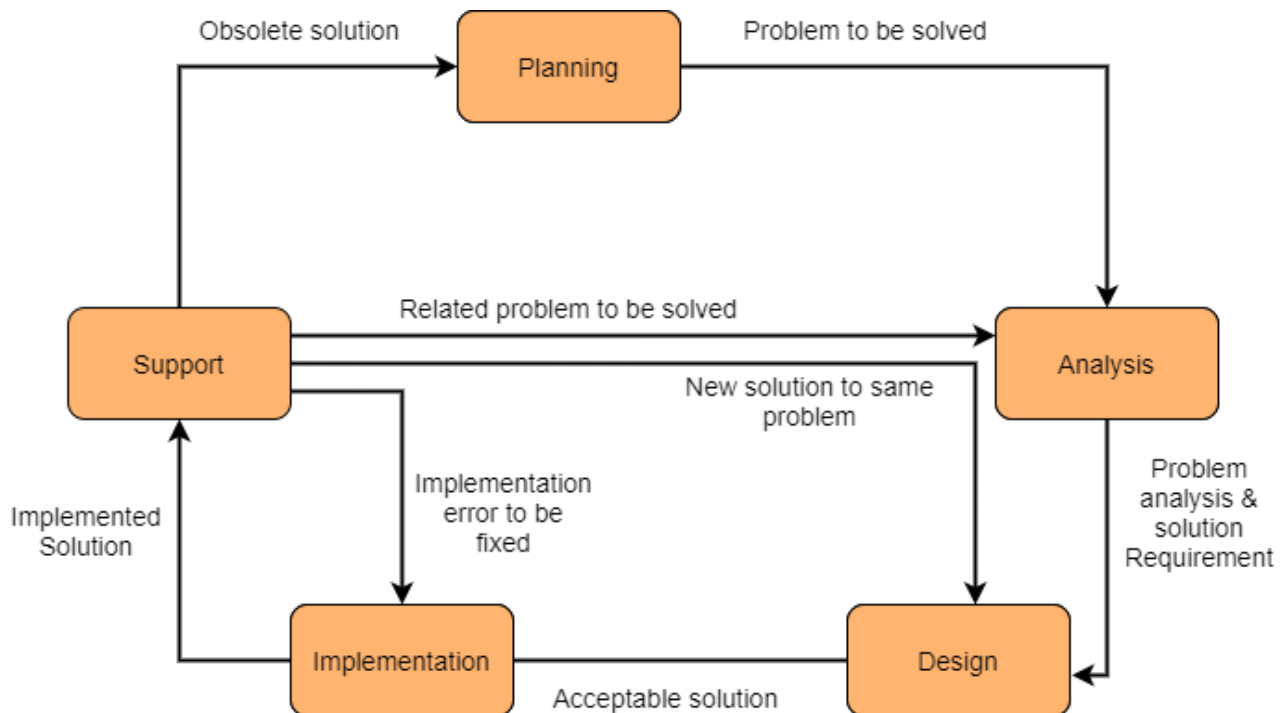

Figure 1: Systems Development Life Cycles

Reason for choose SDLC:

We choose SDLC because we are new developers and SDLC are structure base methodology. So as a new developer this method will help us. So, we choose SDLC method.

Activities of different phase of SDLC:

1. Systems Investigation and Planning
   - Define the problem.
   - Confirm project feasibility.
   - Produce the project schedule.
   - Staff the project.
   - Launch the project.

2. Systems Analysis:
   - Gather information (e.g., interview, read, observe etc.)
   - Generate and evaluate alternative solutions

- Define system requirements (reports, diagrams etc.)
- Build prototypes for discovery of requirements
- Prioritize requirements
- Review recommendations with management

3. Systems Design:
   - Design and integrate the network
   - Design the application network
   - Design the user interfaces
   - Design the system interfaces
   - Design and integrate the database
   - Prototype for design details
   - Design and integrate the system controls

4. Systems Implementation:
   - Construct software components
   - Verify and test
   - Develop prototypes for tuning
   - Convert data
   - Train and document
   - Install the system

5. Systems Maintenance and Review:
   1. Provide support to end users
      - Help desks
      - Training programs
   2. Maintain and enhance the computer system
      - Simple program error correction
      - Make sure that the system operates as expected
      - Modify functionalities that are not working properly

Interview Questionaries

Interviewing is an important method for collecting data on human and system information requirements.

Interviews reveal information about:
- Interviewee opinions
- Interviewee feelings
- Goals
- Key HCI (human-computer interaction) concerns

Interview Preparation:
- Reading background material
- Establishing interview objectives
- Deciding whom to interview
- Preparing the interviewee
- Deciding on question types and structure

Question Types

Questions are of two basic types:
- open-ended
- closed

And two secondary types
- Bipolar Questions
- Probes

Open-Ended Questions

Open-ended interview questions allow interviewees to respond how they wish, and to what length they wish Open-ended interview questions are appropriate when the analyst is interested in breadth and depth of reply.

Example:
- How was your experience with other ticket reservation systems as a user?
- What type of offers will the customers receive by using this system?

Advantages of Open-ended Questions
- Puts the interviewee at ease
- Allows the interviewer to pick up on the interviewee's vocabulary
- Provides richness of detail
- Reveals avenues of further questioning that may have gone untapped
- Provides more interest for the interviewee
- Allows more spontaneity

Disadvantages of Open-ended Questions
- May result in too much irrelevant detail
- Possibly losing control of the interview
- May take too much time for the amount of useful information gained.

Closed Interview Questions
Closed interview questions are appropriate for generating precise, reliable data that is easy to analyze. Closed interview questions limit the number of possible responses. The methodology is efficient, and it requires little skill for interviewers to administer.

Example:
- What will be the tagline of this system?
- Who are the target users of this system?

Advantages of Closed Questions
- Saving interview time
- Easily comparing interviews
- Getting to the point
- Keeping control of the interview
- Covering a large area quickly
- Getting to relevant data

Disadvantages of Closed Questions
- Boring for the interviewee
- Failure to obtain rich detailing
- Missing main ideas

Bipolar Questions
A special kind of closed question. Bipolar questions are those that may be answered with a "yes" or "no" or "agree" or "disagree". Bipolar questions should be used sparingly Example:
- Does the system require to have future scope of improvement?
- Do the customers get notified for latest offers?

Probes
Probing questions elicit more detail about previous questions.
Example:
- What will be the role of your different departments in the system?
- Who will be granted full access of the data of the system?
The purpose of these questions:
- To get more meaning
- To clarify
- To draw out and expand on the interviewee's point

Arranging Questions

Pyramid Structured Questions:

Pyramid Structured interview questions can be visualized as having a pyramid shape. Using this form, the interviewer begins with very detailed, often closed, questions. The interviewer then expands the topics by allowing open-ended questions and more generalized responses.

A pyramid structure should be used if you believe your interviewee needs to warm up to the topic. Using a pyramid structure for question sequencing is also useful when you want an ending determination about the topic.
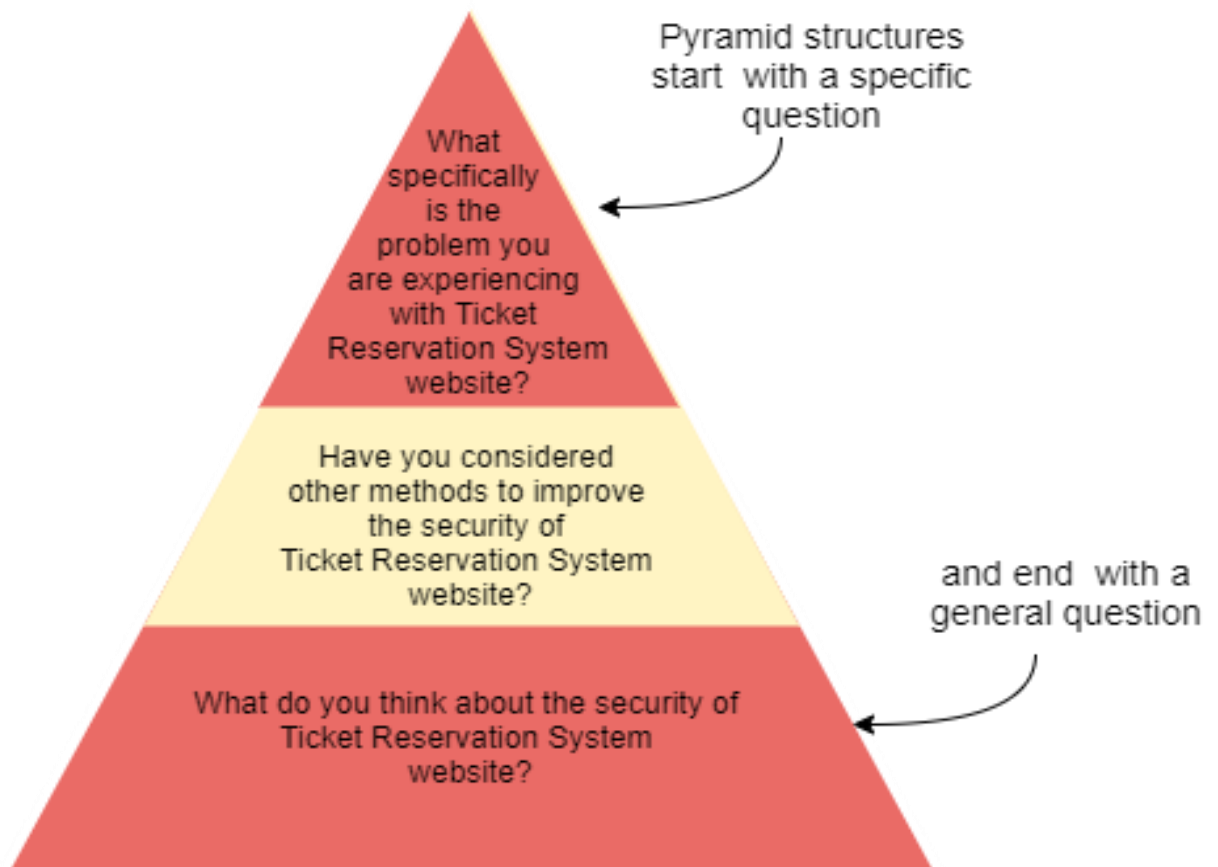

Figure 2: Pyramid Structural Questions

Funnel Structured Questions:

In the second kind of structure, the interviewer takes a deductive approach by beginning with generalized, open-ended questions and then narrowing the possible responses by using closed questions. Using the funnel structure method provides an easy, nonthreatening way to begin an interview. A funnel-shaped question sequence is also useful when the interviewee feels emotional about the topic and needs freedom to express those emotions.
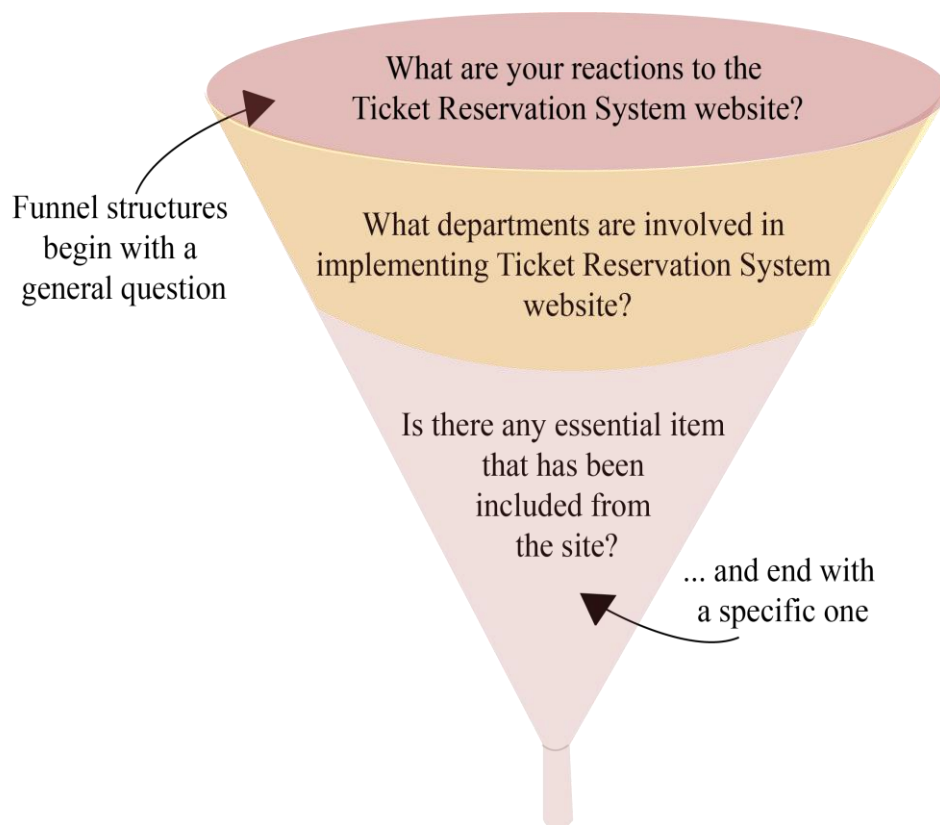
Funnel structures begin with a general question

What are your reactions to the Ticket Reservation System website?

What departments are involved in implementing Ticket Reservation System website?

Is there any essential item that has been included from the site?

... and end with a specific one

Figure 3: Funnel Structural Questions

Diamond Structure questions

Often a combination of the two structures, resulting in a diamond-shaped interview structure, is best. This structure entails beginning in a very specific way, then examining general issues, and finally coming to a very specific conclusion. The interviewer begins with easy, closed questions that provide a warm-up to the interview process. In the middle of the interview, the interviewee is asked for opinions on broad topics that obviously have no "right" answer. The diamond structure combines the strengths of the other two approaches.
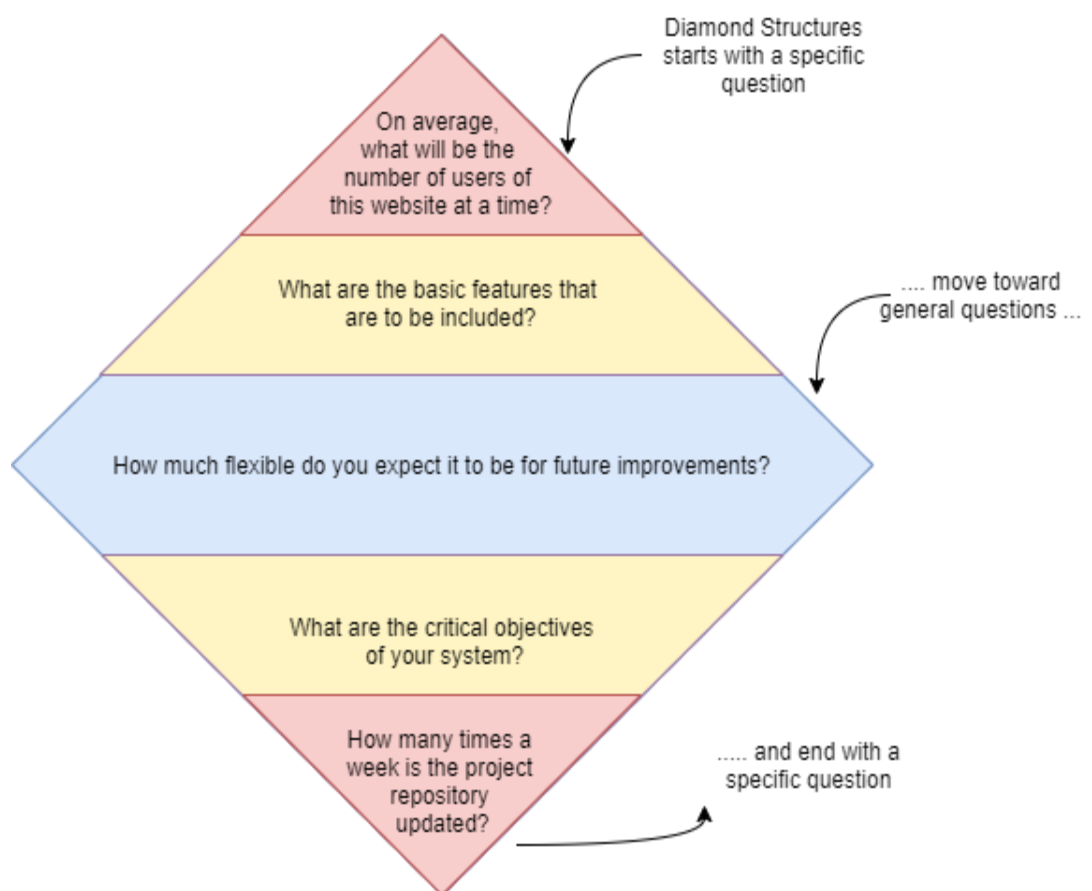

Figure 4: Diamond Structural Questions

Data Flow Diagram (DFD)

CONTEXT-level DFD

The context-level data flow diagram is one way to show the scope of the system, or what is to be included to the system.
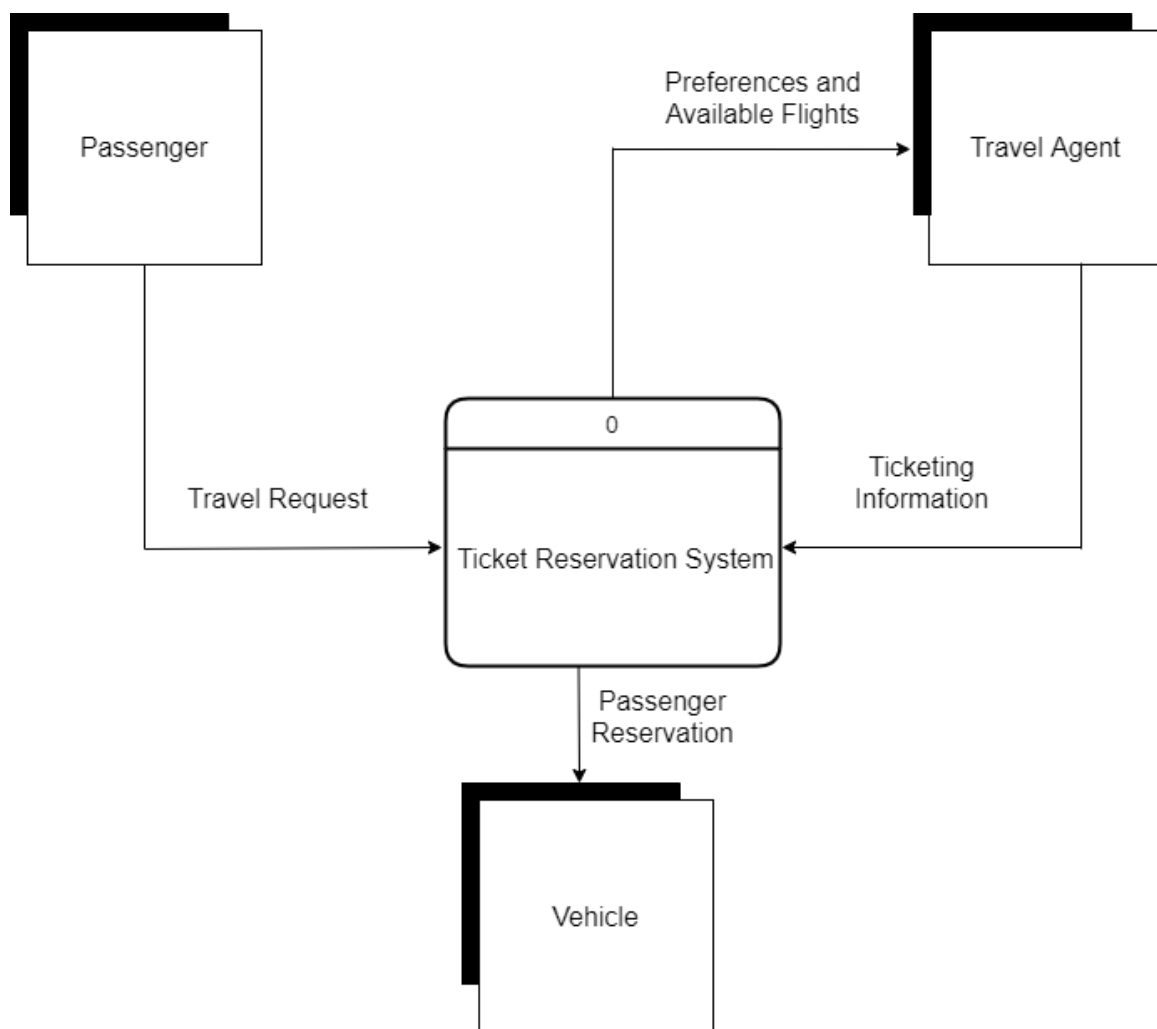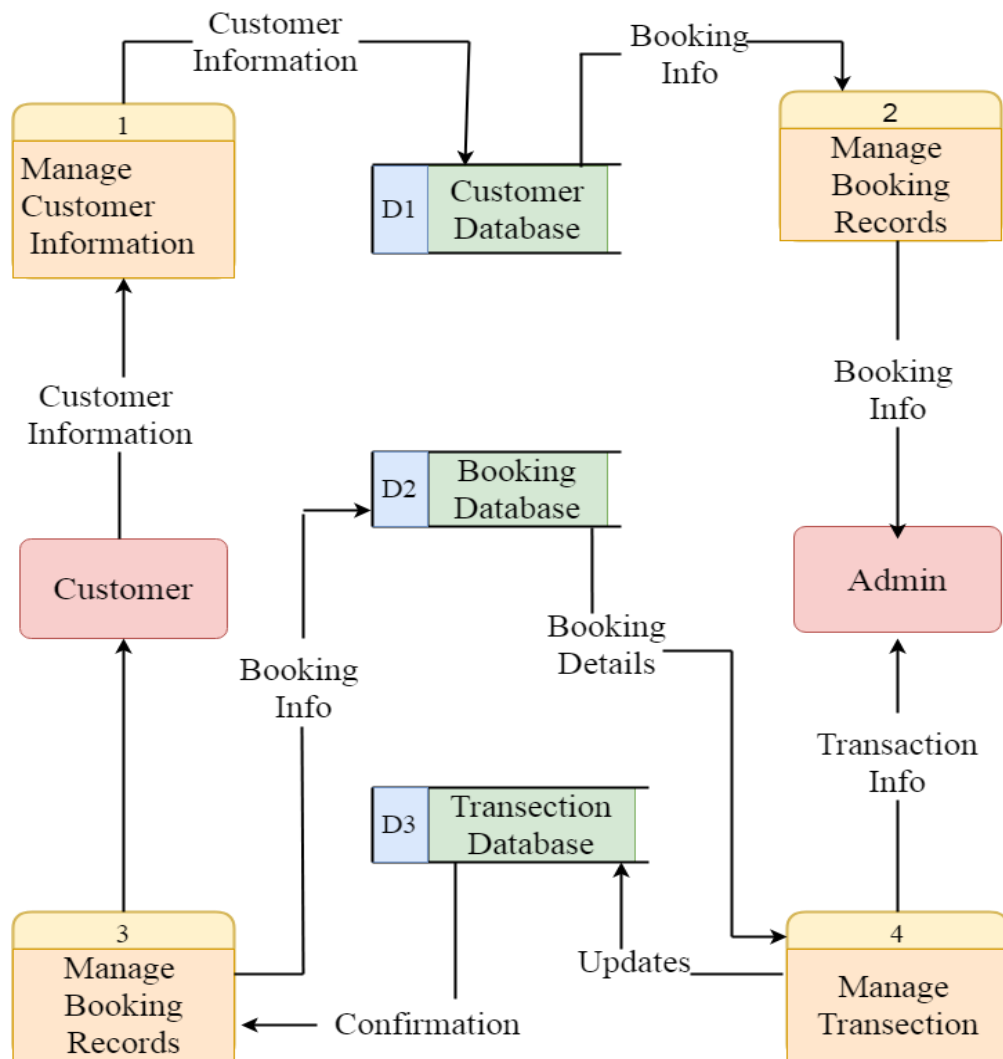

Figure 5: Context-level DFD

Level DFD

Figure 6: Level DFD