# 3.REQUIREMENT ANALYSIS

The **Requirement Analysis Phase** focuses on gathering, structuring, and validating all essential system needs to ensure a clear roadmap for development. It ensures that the solution is not only technically robust but also directly aligned with what key stakeholders—such as banquet hall managers, event coordinators, vendors, and clients—actually require.

In our project, **"A CRM Application for Banquet Hall Booking,"** this phase acted as the bridge between identifying booking-related challenges and shaping an intelligent system design. Through detailed user journeys, workflow analysis, and functional requirement gathering, we outlined critical needs such as real-time scheduling, customer data handling, vendor assignment, and seamless communication.

3.1 Customer Journey Map-Understanding User Experience Flow

Purpose: The Customer Journey Map visualizes how key stakeholders in the banquet hall ecosystem—such as Venue Managers, Event Coordinators, Clients, and Service Vendors—interact with the booking and event management process on a daily basis. It highlights core actions, common pain points, emotional highs and lows, and potential areas of improvement. This real-world perspective informs the CRM design to ensure it aligns seamlessly with user behaviors, eliminates manual inefficiencies, and enhances the overall event planning experience.

Journey steps:
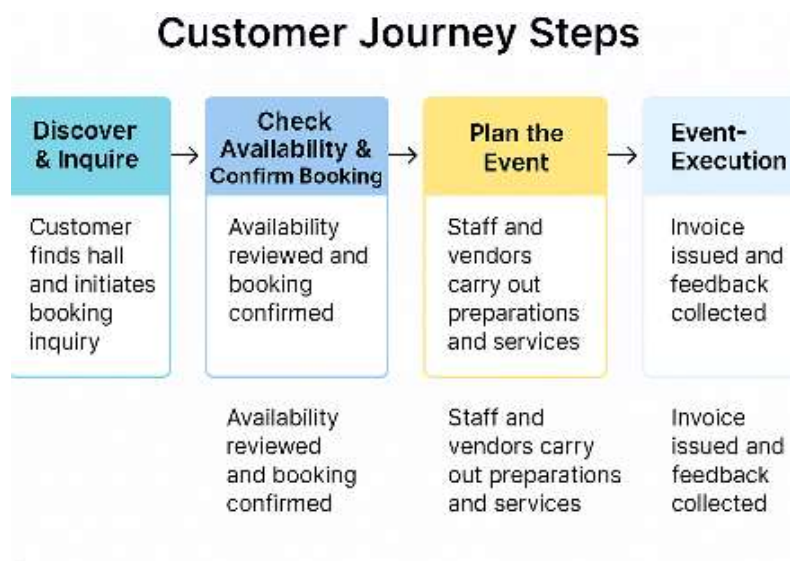
3.2 Data Flow Diagram:

Purpose: Mapping Information Flow Between Objects

The **Data Flow Diagram (DFD)** models how information moves between Salesforce objects and components in the banquet hall CRM system. It helped us structure relationships between:

- **Customer**, **Booking**, **Venue**, **Event Details**, **Vendor**, and **Payment**

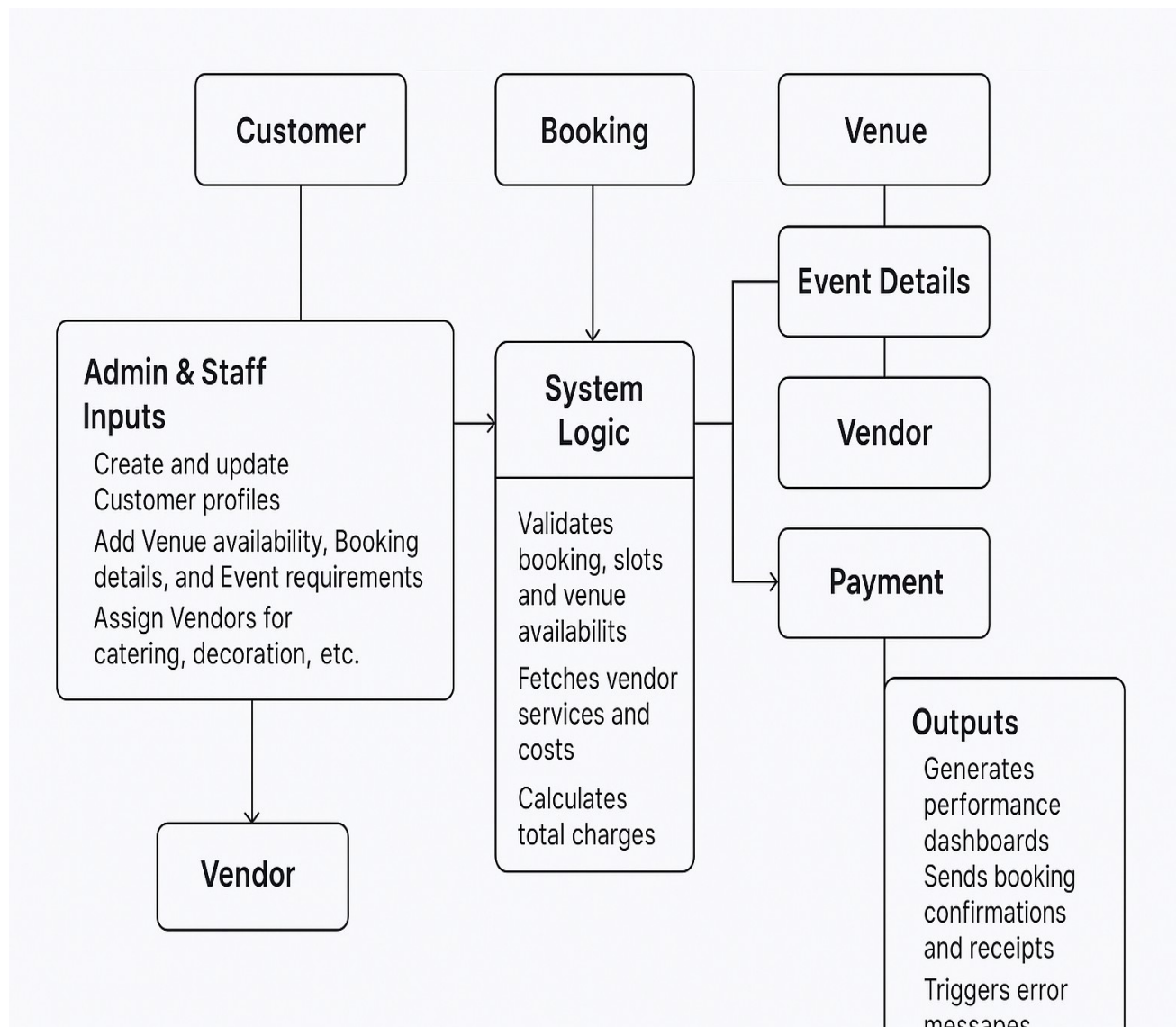**Level 1 DFD Overview**

1. Admin & Staff Inputs:

- Create and update **Customer** profiles
- Add **Venue availability**, **Booking details**, and **Event requirements**
- Assign **Vendors** for catering, decoration, etc.

2. System Logic:

- Validates booking slots and venue availability
- Fetches vendor services and costs via flows based on event type and scale
- Calculates total charges using formula (Service Costs + Venue Fees + Discounts)

3. Outputs:

- Generates performance dashboards (e.g., revenue by event type, vendor utilization)
- Sends automated booking confirmations and payment receipts
- Triggers error messages for time conflicts or missing vendor assignments

```
Customer          Booking           Venue

                                    Event Details

Admin & Staff                       Vendor
Inputs
                  System
  Create and      Logic
  update                             Payment
  Customer
  profiles        Validates
  Add Venue       booking, slots
  availability,   and venue
  Booking         availabilits
  details, and
  Event           Fetches vendor    Outputs
  requirements    services and
  Assign Vendors  costs               Generates
  for catering,                       performance
  decoration,     Calculates          dashboards
  etc.            total charges       Sends booking
                                      confirmations
                                      and receipts
  Vendor
                                      Triggers error
                                      messages
```

3.3 Solution Requirements:

What the CRM System Must Do

Functional Requirements:

- **Create custom objects for**:
  - **Venue** (with capacity, location, availability)
  - **Booking** (with date, time, customer, event type)
  - **Customer** (contact info, history, preferences)
  - **Vendor** (services, costs, availability)
  - **Payment** (methods, totals, transaction status)
- **Establish relationships** using **lookup**, **master-detail**, and **formula fields**:
  - Booking → Customer, Venue, Vendor
  - Payment → Booking
  - Dynamic pricing logic via formulas (e.g., duration × rate)
- **Validate booking logic** using **Apex Triggers**:
  - Prevent double bookings
  - Ensure vendors aren't double-assigned
  - Trigger alerts if hall capacity is exceeded
- **Automate workflows using Flows**:
  - Auto-confirm availability
  - Trigger payment reminders and vendor notifications
  - Generate event checklist from booking details

- **Support analytics through**:

  - Dashboards showing booking trends, revenue, vendor utilization
  - Reports for customer feedback, booking frequency, peak seasons

Non-Functional Requirements:

- **Intuitive Lightning App Interface** for staff and managers
- **Real-time validation** for booking conflicts and data accuracy
- **Centralized and relational database** with clear object-linking for high usability, data consistency, and scalability

3.4 Technology Stack:

CRM Technologies Used

Category	Technology Used	Description
Platform	Salesforce Lightning	Used to build custom CRM using standard & custom objects
Automation	Flows & Validation Rules	Automate booking confirmations and eforce data accuracy
Custom Logic	Apex Triggers & Classes	Used for custom business logic and validations
Reports & Dashboards	Salesforce Reports	To analyze booking data, revenue, vendor usage, etc
UI/UX	Lightning App Builder	For creating a unified app view for Banquet Hall Booking

Summary:

The Requirement Analysis Phase for the CRM Application for Banquet Hall Booking ensured that system features were rooted in real user pain points like miscommunication and booking clashes. It guided the creation of structured Salesforce objects, automated flows, and relationship logic. This phase shaped the app's UI and dashboards, aligning technology with stakeholder needs. Overall, it laid the groundwork for a smart, efficient, and user-centered solution.