SpiceVilla Food Delivery App Business Analyst Case Study

Prepared by Suumaya Kawsar

Date: 09-06-2025

Version: 1.0

Table of Content

1.Project Introduction

Project Title:

SpiceVilla Food Delivery App.

Problem Statement:

SpiceVilla, a mid-sized restaurant in a Tier 2 city is facing a decline in sales and customer satisfaction due to its manual phone-based ordering system. Customers often experience order delays, miscommunication and lack of transparency, which is pushing them toward competitors using online platforms.

Project Objective:

To design a mobile food delivery application for SpiceVilla, enabling customers to place and track orders digitally, while allowing staff to manage orders and menus via a tablet interface replacing manual phone-based processes and improving efficiency and customer experience.

2. Stakeholder Analysis

Project Stakeholders:

- **Primary Stakeholders:**
    - Customers (user who place and track orders through the app)
    - Restaurant Manager (user who oversees restaurant operations and manages orders)
    - Kitchen Staff (user who prepares food based on real-time orders)
    - Delivery Staff (user who uses the app to full fill deliveries and update status)

- **Secondary Stakeholders:**
    - App Admin/IT Support (ensures smooth technical operations of the app)
    - Finance Team (tracks payment transactions and revenue)
    - Restaurant Owner (monitors overall business performance)
    - Marketing Team (manages offers, promotions, and user engagement)

3. User Personas

User Personas:

- **Persona 1: Customer**

  Name: Priya Sharma
  Age: 24
  Location: Tier 2 city, India
  Profession: Software trainee
  Goals:
    - Wants quick convenient food ordering
    - Prefers apps over calling
    - Likes order tracking and cashless payments

  Frustrations:
    - Hates calling and repeating her order
    - Gets annoyed by late or incorrect orders

- **Persona 2: Restaurant Manager**

  Name: Rajesh Verma
  Age: 38
  Location: Tier 2 city, India
  Role: Restaurant Manager at SpiceVilla
  Goals:
    - Wants to reduce order errors
    - Wants real-time view of incoming and completed orders
    - Aims to grow business through better customer experience

  Frustrations:
    - Manual tracking wastes time
    - Missed orders during peak hours

Business Requirement Document (BRD)

4. Business Requirement Document

Project Title:

SpiceVilla Food Delivery App.

4.1.Executive Summary:

SpiceVilla, a Tier 2 city-based restaurant, is facing operational inefficiencies and customer dissatisfaction due to its outdated phone-based ordering system. The aim is to transition to a digital order management system with a mobile app for customers and a tablet interface for staff to streamline processes and boost customer experience.

4.2.Business Objective:

• Launch a mobile app for customers to place and track orders.

• Provide a tablet-based interface for staff to manage orders.

• Eliminate manual ordering to reduce errors and delays.

• Improve operational efficiency and customer satisfaction.

4.3.AS -IS State:

SpiceVilla relies on a manual phone-based ordering system. Customers place orders via phone calls, and staff track orders using paper or spreadsheets. This leads to frequent order errors, missed calls during peak hours, and no transparency for customers. There is no centralized system to track orders, sales, or customer feedback, causing inefficiencies and lost business.

4.4.TO-BE State:

A mobile app will enable customers to place and track orders digitally. Restaurant staff will manage orders and menus through a tablet interface, replacing manual phone-based processes. This will reduce errors, improve order accuracy, and enhance customer satisfaction, while providing better operational efficiency and real-time order tracking.

4.5.Project Stakeholders

- **Primary Stakeholders**

  - Customer
  - Restaurant Manager
  - Kitchen Staff
  - Delivery Staff

- **Secondary Stakeholders**

  - App admin / IT Support
  - Finance Team
  - Restaurant owner
  - Marketing Team

4.6. Project Scope:

- **In Scope:**

  - Mobile app for customers (Android)
  - Tablet interface for restaurant staff
  - Order tracking and status updates
  - Integration with digital payment systems

- Basic promotional feature

- **Out Scope:**

  - Delivery route optimization using third-party logistics
  - Loyalty programs or CRM integration

4.7. Requirements

4.7.1 Business Requirements

- Replace manual phone ordering with a mobile app

- Enable customers to place and track orders digitally

- Provide restaurant staff with a tablet interface to manage orders

- Improve order accuracy and reduce delays

- Allow real-time updates and communication between staff and customers

- Collect feedback to monitor service quality

4.7.2 Functional Requirements

- **Customer**

  1. Customers can place food orders through the mobile app
  2. Customers can track order status in real-time
  3. Customers can make payments via UPI, cards, or cash on delivery
  4. Customers receive real-time notifications on order status
  5. Customers can view order history
  6. Customers can provide ratings and reviews after order completion
  7. Customers can apply promo codes during checkout

- **Restaurant Staff**

  1. Staff can view new orders in real-time
  2. Staff can mark orders as accepted, prepared, and completed
  3. Kitchen staff receives clear order details with item-level info
  4. Staff can update item availability

- **Restaurant Manager**

  1. Manager can update menu items, prices, and descriptions
  2. Manager can view daily/weekly sales reports
  3. Manager can monitor customer feedback and ratings

- **Delivery Staff**

  1. Delivery personnel can view delivery assignments on mobile
  2. Delivery status can be updated

4.7.3 Non-Functional Requirements

- **Performance:** App should load within 3 seconds on 4G networks
- **Usability:** Interfaces should be user-friendly for non-tech-users
- **Availability:** App must be available 99% of the time during business hours
- **Security:** Payment data must comply with PCI-DSS standards
- **Scalability:** App should handle up to 1,000 orders per day without crashing
- **Compatibility:** App should support Android devices running Android 8 and above

4.8. Risks

- Low customer adoption due to change in ordering habits.
- Technical issues or bugs at launch affecting operations.
- Delay in training leading to improper use of the system.

4.9. Assumptions

- All staff members will be trained to use the tablet interface.
- Most customers use Android devices.
- Delivery staff owns smartphones with internet access.

4.10. Constraints

- Budget constraints for marketing and iOS app development.
- Limited availability of internal tech support post-launch.
- Internet reliability issues in certain locations.

4.11. Glossary

- UPI: Unified Payments Interface

- PCI-DSS: Payment Card Industry - Data Security Standard

- CRM: Customer Relationship Management

5.Prioritization of Requirements using MoSCoW Technique

Must Have (M)

These are critical requirements that must be implemented for the system to function and deliver its core value.

1. **Customer Ordering**
   a. Customer can place orders via the mobile app.
   b. Orders are received in real-time by restaurant staff via a tablet.

2. **Payment Integration**
   a. Customers can make payments via UPI, credit/debit cards, or Cash on Delivery.
   b. Payment Confirmation is reflected in the system for staff and customers.

3. **Order Management**
   a. Staff can view, accept, and update order status via the tablet interface.
   b. Kitchen staff receives accurate and real-time order details.

4. **Admin Dashboard**
   a. Admin can monitor system health and usage.
   b. Technical issues or downtimes are flagged for IT support.

5. **Data Security**
   a. Customer data and payment details are securely encrypted.
   b. Admins are notified of any suspicious login attempts.

Should Have(S)

These requirements add significant value and enhance the experience but are not absolutely critical for MVP.

1. **Ordering Tracking**
   a. Customers can track order status in real-time within the app.

    b. Delivery staff can update the order delivery status live.

  2. Push Notification

    a. Customers receive order confirmation, updates, and delivery status via notifications.

    b. Staff are notified of new and modified orders instantly.

Could Have (C)

These features improve usability and satisfaction but can be delivered in later iterations.

  1. Offers and Discounts

    a. Display available offers and discount coupons in-app.

    b. Automatically apply eligible discounts during checkout.

  2. Customer Feedback

    a. Customers can rate their order and leave feedback post-delivery.

    b. Feedback reports can be accessed by the manager.

Won't Have (W)

These features are out of scope for the current project and will not be implemented.

  1. **Loyalty and Rewards Program**

    a. Customers earn points for every order placed.

    b. Points can be redeemed for discounts or free items.

  2. **AI based Recommendations**

    a. Show food recommendations based on previous orders.

    b. Customize menu visibility based on customer preferences.

6.User Stories for SpiceVilla Food Delivery App

Epic 1: Customer Ordering Experience

- **User Story 1.1**
  As a customer, I want to browse the menu, so that I can see available dishes before ordering.

- **User Story 1.2**
  As a customer, I want to add items to a cart, so that I can place a complete order at once.

- **User Story 1.3**
  As a customer, I want to choose a delivery address and time, so that I can receive my food at my preferred location and time.

- **User Story 1.4**
  As a customer, I want to pay via UPI, cards, or COD, so that I can choose my preferred payment method.

Epic 2: Order Fulfillment & Tracking

- **User Story 2.1**
  As a restaurant manager, I want to receive real-time order notifications, so that I can assign them to the kitchen quickly.

- **User Story 2.2**
  As a kitchen staff member, I want to see all incoming orders in the tablet, so that I can prepare dishes efficiently.

- **User Story 2.3**
  As a delivery staff, I want to update the delivery status, so that customers can track their order progress.

- **User Story 2.4**
  As a customer, I want to track my order in real-time, so that I know when it will arrive.

Epic 3: App Administration & Security

- **User Story 3.1**
  As an admin, I want to view app activity logs, so that I can monitor system performance.

- **User Story 3.2**
  As an admin, I want to get notified of technical issues, so that I can resolve them quickly.

- **User Story 3.3**
  As a customer, I want to receive notifications of unusual login attempts, so that I can secure my account.

Epic 4: Engagement & Feedback

- **User Story 4.1**
  As a customer, I want to receive push notifications, so that I can stay informed about my order status.

- **User Story 4.2**
  As a customer, I want to give feedback after delivery, so that I can share my experience.

- **User Story 4.3**
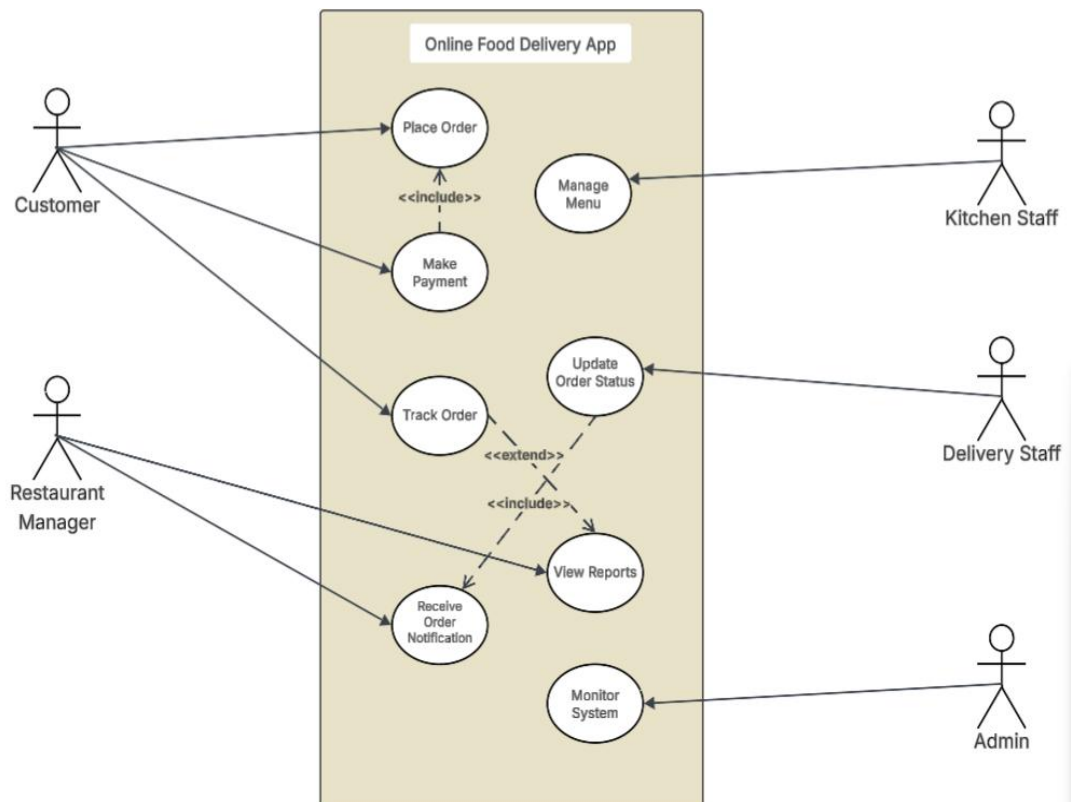 As a restaurant manager, I want to see customer reviews, so that I can improve service quality.

- **User Story 4.4**

   As a customer, I want to see offers and discounts, so that I can save money on orders.
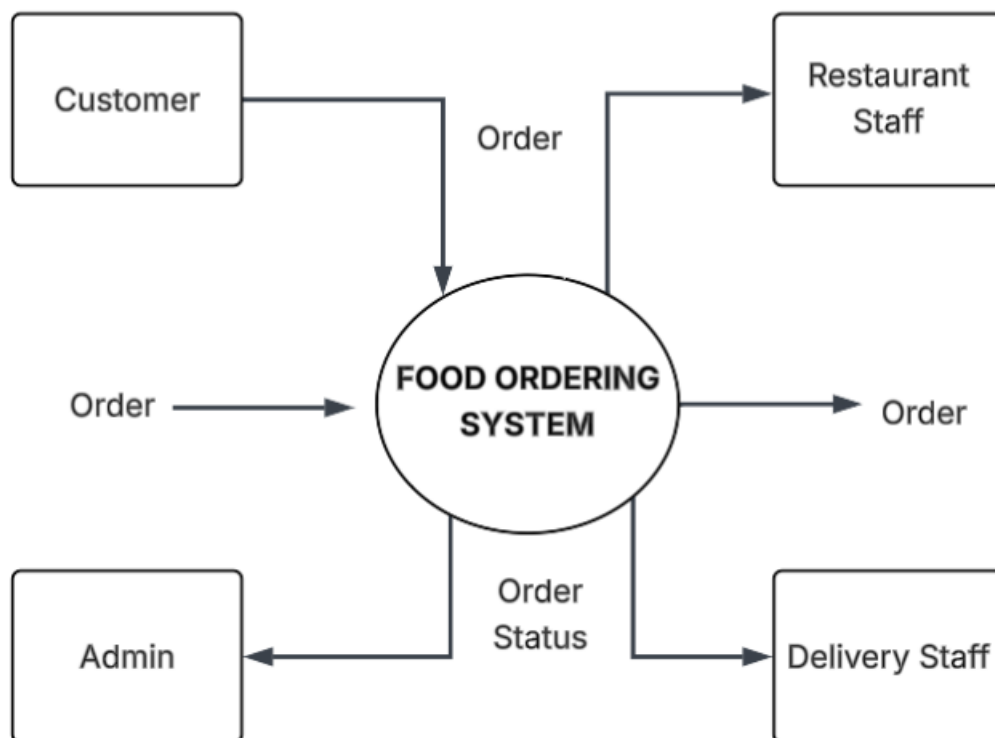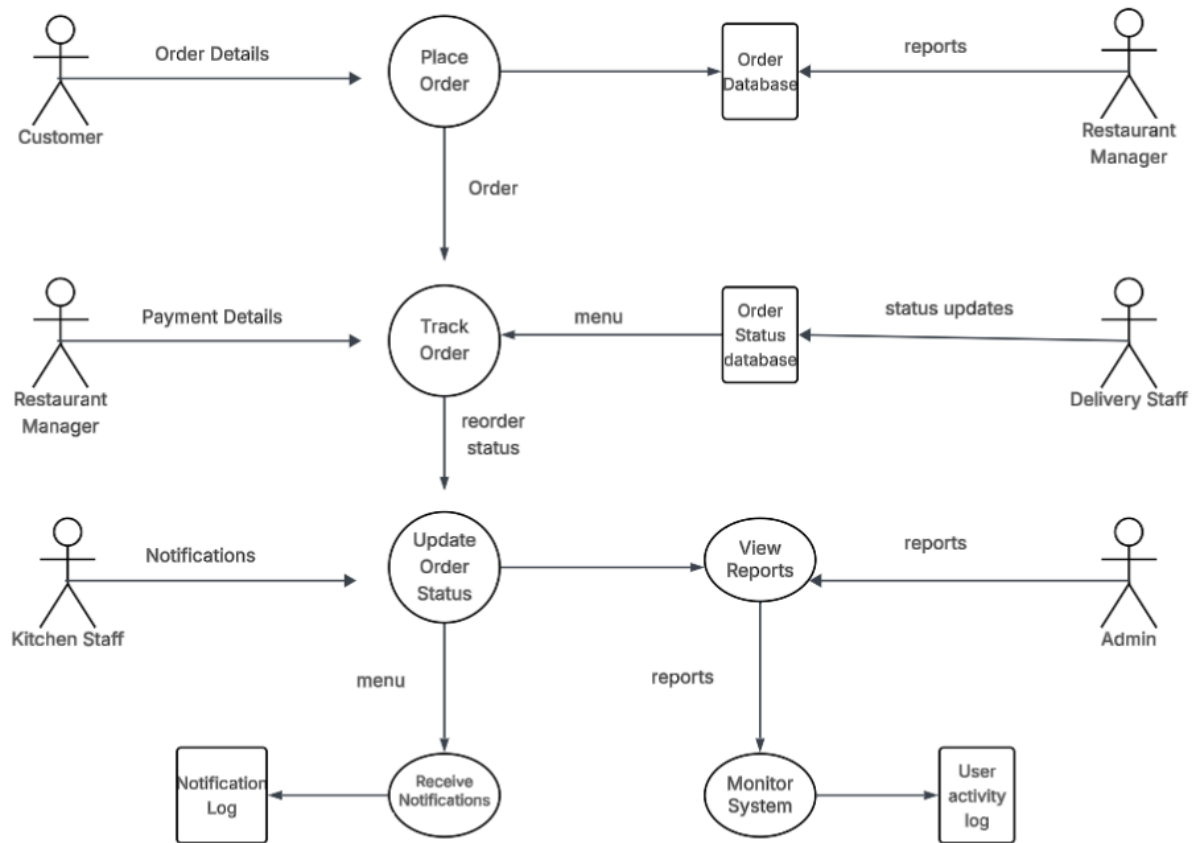
7.Use Case Diagram for SpiceVilla Food Delivery App

8.Context Flow Diagram for SpiceVilla Food Delivery App (Level 0 & Level 1)

Level 0:

Level 1:

Functional Requirement Documentation (FRD)

9.Functional Requirements Document (FRD)

Project Title: SpiceVilla Food Delivery App
Prepared by: Suumaya Kawsar
Date: 09-06-2025
Version: 1.0

9.1. Introduction

This Functional Requirements Document outlines the detailed functionalities of the food delivery application to be developed for SpiceVilla. It ensures a common understanding between stakeholders and the development team regarding what the system must do to fulfill business needs.

9.2. Purpose

The purpose of this document is to define the specific functional requirements of the mobile app and staff interface. It will serve as a guideline for designers, developers, testers, and stakeholders to ensure the final product meets user expectations.

9.3. Scope

9.3.1 In Scope:

- Android mobile application for customers with functionalities such as menu browsing, item selection, order placement, and payment

- Tablet interface for restaurant staff

- Real-time order tracking for customers, including live status updates from staff and delivery personnel

- In-app notifications

- Tablet-based interface for restaurant staff to view, accept, prepare, and complete orders

- Push notifications for order confirmation, status updates, and delivery notifications

- Integration with digital payment systems including UPI, credit/debit cards, and Cash on Delivery

- Basic promotional features such as applying discount codes at checkout

9.3.2 Out of Scope:

- iOS version of the customer mobile app

- Loyalty programs or Customer Relationship Management (CRM) system integration

- AI-based food recommendations or personalized menu suggestions

- Delivery route optimization using third-party logistics or mapping tools

- Social media login or third-party authentication mechanisms

9.4. Assumptions

- Android 8+ will be the minimum requirement for the app.

- Staff will have training sessions for the tablet interface.

- Internet connectivity is assumed for customer and staff users.

9.5. Functional Requirements

9.5.1 Customer App Features

- **Menu Browsing:** Users can browse categorized menu items with images and prices

- **Cart Management:** Add, edit, and remove items from cart before checkout

- **Order Placement:** Select delivery time/location and place the order

- **Payment Gateway:** Choose UPI, cards, or COD for payment

- **Order Tracking:** Real-time status updates on order preparation and delivery

- **Notifications:** Receive push notifications for order events

- **Order History:** View previous orders and reorder easily

- **Promo Code:** Apply valid promo codes during checkout

- **Feedback:** Leave ratings and comments after delivery

9.5.2 Restaurant Staff Tablet Interface

- **Order Dashboard:** View incoming, preparing, and completed orders in real-time

- **Update Status:** Mark orders as accepted, in-progress, or ready

- **Kitchen Details:** Display item-level details for food preparation

- **Inventory Control:** Mark items as available/unavailable temporarily

- **Notifications:** Get instant alerts on new or changed orders

9.5.3 Restaurant Manager Features

- **Menu Management:** Add/edit/remove menu items, prices, and categories

- **Reports:** View daily/weekly sales and order volumes

- **Customer Feedback:** Monitor reviews and ratings to evaluate service quality

9.5.4 Delivery Staff Features

- **Delivery Assignment:** View orders assigned for delivery with details

- **Status Update:** Mark orders as dispatched, delivered, or failed

9.5.5 Admin

- **Dashboard:** System monitoring and activity logging

- **Alerts:** Get notified of downtime or errors

- **Security Logs:** Detect and log suspicious activities

9.6. Non-Functional Requirements

- **Performance:** App must load in <3 seconds on 4G

- **Usability:** Clean UI for tech and non-tech users

- **Availability:** 99% uptime during business hours

- **Security:** PCI-DSS compliance for payments

- **Scalability:** Handle up to 1,000 orders per day

- **Compatibility:** Support Android 8+ devices

9.7. Acceptance Criteria

Each requirement will be considered complete when:

- The feature is implemented as specified

- It passes internal QA testing

- It meets performance benchmarks

- It is demonstrated in a UAT session

9.8. Dependencies

- Payment gateway API integration

- Google Firebase for push notifications

9.9. Glossary

- **UAT:** User Acceptance Testing

- **COD:** Cash on Delivery

- **UPI:** Unified Payments Interface

- **PCI-DSS:** Payment Card Industry - Data Security Standard