

Practical SE Lab

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CSE B1

Aim: To design a DataFlow Diagram to represent the structural view of the system.

Theory:

Level 0: Initial System Overview: Context Diagram

The basic structure of the system and identify the main components and interactions.

Entities:

1. City Residents
2. Visitors
3. City Employees
4. Admin
5. Restaurant Guide

Processes:

1. User Registration and Authentication
2. Search and Explore
3. Interaction and Transaction
4. Administration and Feedback

Data Flows:

1. Account creation details from City Residents, Visitors.
2. User authentication details.
3. Feedback and complaints submission from City Residents, Visitors.
4. Report generation and review process.
5. Updates to restaurant information.

Data Stores:

1. User account details
2. Feedback and complaints database
3. Restaurant information database

Level 1

In this level, we'll dive deeper into the interactions between users and the system, focusing on functionalities such as account management, searching for restaurants, and making bookings.

Entities:

- City Residents: Residents of the city who interact with the system.
- Visitors: Non-residents or tourists who use the system.
- City Employees: Employees of the city administration who have access to certain functionalities.
- Admin: System administrator with comprehensive control over the system.
- Restaurant Guide: Individuals responsible for managing restaurant-related activities.

Processes:

- Account Management: Handles account creation and authentication for city residents and visitors.
- Search and Explore: Facilitates searching for restaurants and exploring detailed information about them.
- Interaction and Transaction: Manages interactions such as making bookings, processing payments, and submitting feedback.
- Administration and Feedback: Administers user accounts, generates reports, and handles feedback and complaints.

Data Stores:

- User Account Details: Stores information related to user accounts.
- Restaurant Information Database: Contains details about restaurants, menus, and other relevant information.
- Feedback and Ratings Database: Stores feedback, ratings, and complaints provided by users.
- Booking and Payment Records: Keeps records of bookings made by users and associated payment transactions.

Data Flows:

- City residents and visitors interact with the system for account management, restaurant searches, and interactions such as booking and providing feedback.
- City employees and the restaurant guide participate in interactions related to managing bookings, updating restaurant information, and handling administrative tasks.
- The admin oversees account management, generates reports, and manages feedback and complaints.

Level 2

In this Level 0 Data Flow Diagram (DFD), we provide an overview of the core functionalities and interactions within the system. Here's an explanation of the diagram:

Entities:

- City Residents: Individuals who reside in the city and interact with the system.
- Visitors: Non-residents or tourists who use the system.
- City Employees: Employees of the city administration who have access to certain functionalities.

- Admin: System administrator with comprehensive control over the system.
- Restaurant Guide: Individuals responsible for managing restaurant-related activities.

Processes:

- Account Creation: Allows city residents and visitors to create new accounts in the system.
- Account Authentication: Authenticates user credentials during the login process.
- Search for Restaurants: Enables users to search for restaurants based on various criteria.
- Make Booking: Facilitates the booking process for restaurants.
- Process Payments: Manages payment transactions for restaurant bookings.
- Submit Feedback and Ratings: Allows users to provide feedback and ratings for restaurants they have visited.
- Update Restaurant Information: Enables the update of restaurant information, such as menus and operating hours.

Data Stores:

- User Account Details: Stores information related to user accounts, including usernames, passwords, and contact information.
- Booking and Payment Records: Records details of restaurant bookings made by users and associated payment transactions.
- Feedback and Ratings Database: Stores feedback and ratings provided by users for different restaurants.
- Restaurant Information Database: Contains comprehensive information about restaurants, including their menus, location, and contact details.

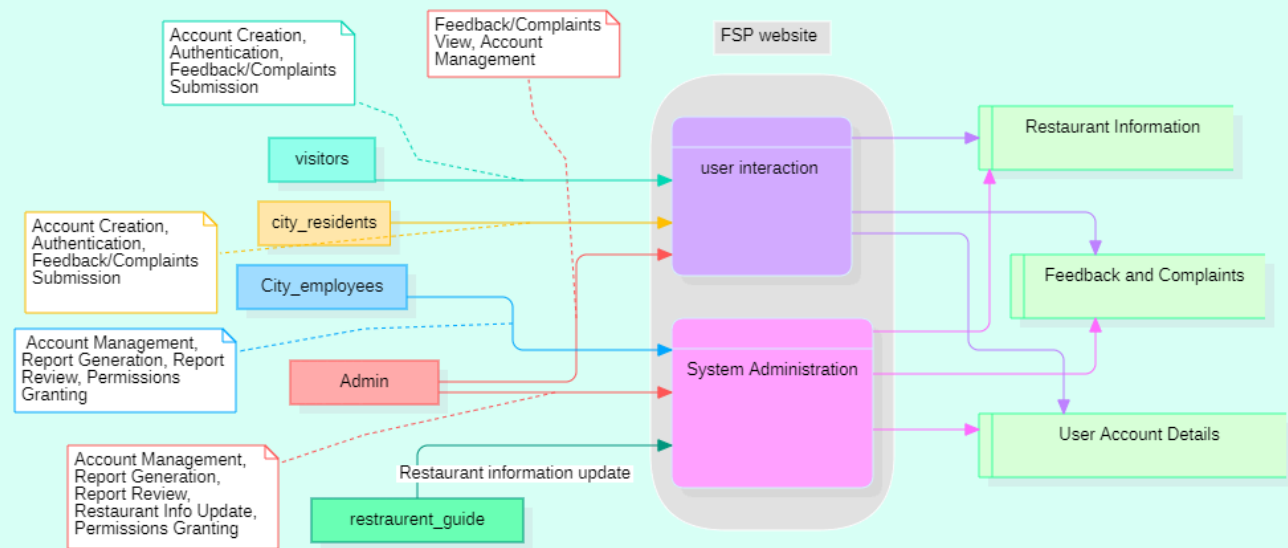
Data Flows:

- City residents and visitors interact with the system to perform account-related tasks, search for restaurants, make bookings, process payments, and provide feedback.
- City employees and the admin participate in interactions related to managing user feedback, updating restaurant information, and overseeing system operations.
- The restaurant guide is involved in updating restaurant information to ensure accuracy and relevance.

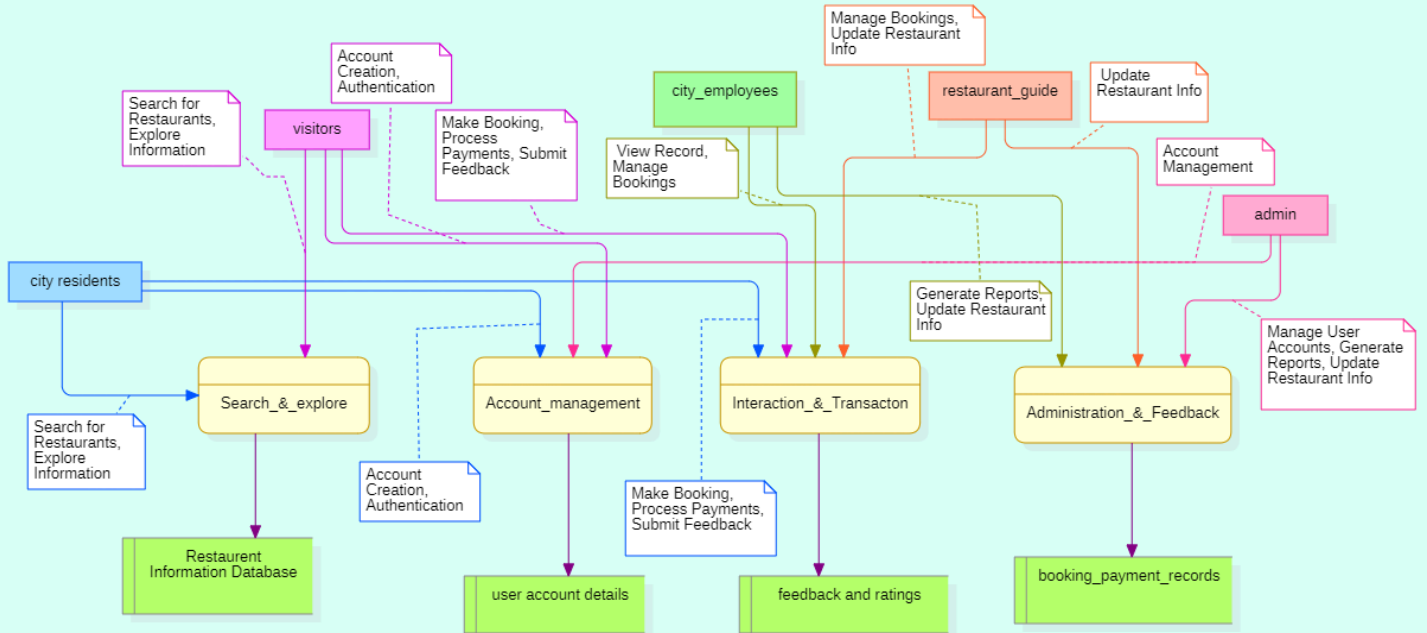
Result: DataFlow diagram has been designed and studied.

(Screenshot is attached below and also jpeg is uploaded with this docx)

Level_0_context_diagram



Level_1_Data_flow_Diagram



Level_2_Data_flow_diagram

