Project Design Phase-II

Data Flow Diagram and User Stories

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Team ID	NM2023TMID 592388
Project Name	Project - RESTAURANT RECOMMENDATION SYSTEM
Maximum Marks	5 Marks

Data Flow Diagram:

A data flow diagram (DFD) is a graphical representation of the flow of data through a system. It shows the inputs, outputs, processes, and data stores of the system. DFDs are used to model and analyze systems, and to communicate the design of a system to stakeholders.

DFDs are typically created at multiple levels of detail. The top-level DFD provides a high-level overview of the system, while lower-level DFDs provide more detailed information about the individual processes in the system.

DFDs are created using a set of symbols:

- Process: A process is an activity that transforms the data in some way. Processes are represented by rectangles.
- Data flow: A data flow is a stream of data between two processes or between a process and a data store. Data flows are represented by arrows.
- Data store: A data store is a place where data is stored. Data stores are represented by two parallel lines.

DFDs can be used to analyze systems in a variety of ways. For example, DFDs can be used to:

- Identify bottlenecks in a system
- Identify areas where data is duplicated or lost
- Identify opportunities for improvement
- Communicate the design of a system to stakeholders

DFDs are a powerful tool for modeling and analyzing systems. They are used by system analysts, software engineers, and business analysts to design and improve systems.

DFS ----Online Recommendation System

Level 0 DFD (Context Diagram):

External Entities:

Users: People who interact with the system to get restaurant recommendations.

Restaurant Database/APIs: Sources of restaurant information, which the system accesses to make recommendations.

Processes:

Recommendation System: The core process that takes user input and generates restaurant recommendations.

Data Retrieval: The process that fetches restaurant data from external sources.

Data Stores:

User Profiles: Storage for user preferences and history.

Restaurant Data: The database containing restaurant information.

User Feedback: Storage for user reviews and feedback.

Data Flow:

User Requests -> Recommendation System

Restaurant Data -> Recommendation System

User Feedback -> Recommendation System

Recommendation System -> User

Level 1 DFD (Recommendation System Details):

Processes:

User Input Processing: This process captures and validates user input, such as location and cuisine preferences.

Data Retrieval: Retrieves restaurant data from the database/APIs.

Recommendation Algorithm: The core logic that generates restaurant recommendations.

User Feedback Handling: Manages user reviews and feedback.

Data Flow:

User Input -> User Input Processing -> Recommendation Algorithm

Restaurant Data -> Data Retrieval -> Recommendation Algorithm

User Feedback -> User Feedback Handling -> Recommendation Algorithm

Recommended Restaurants -> Recommendation Algorithm -> User

Level 2 DFD (Recommendation Algorithm Details):

Processes:

Preference Analysis: Analyzes user preferences to identify the most relevant criteria (e.g., cuisine, price, distance).

Matching and Scoring: Matches user preferences with restaurant data and scores each restaurant.

Filtering: Filters the scored restaurants to present a list of recommendations.

Personalization: Considers the user's history and feedback for personalized recommendations.

Data Flow:

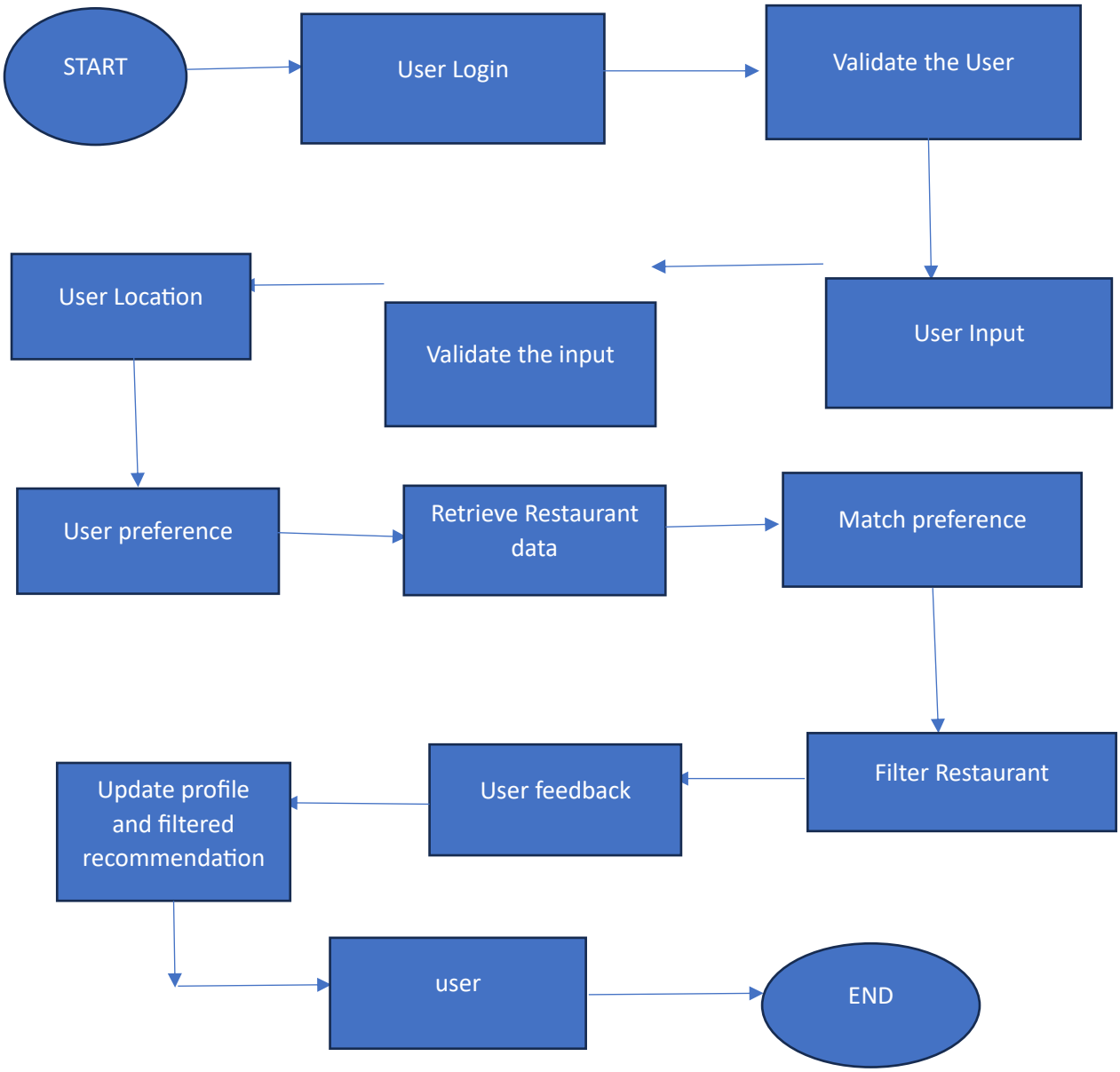
User Preferences -> Preference Analysis -> Matching and Scoring

Restaurant Data -> Matching and Scoring -> Filtering

User History & Feedback -> Personalization -> Filtering

Filtered Recommendations -> Filtering -> User

DFD


START
User Login
Validate the User
User Location
Validate the input
User Input
User preference
Retrieve Restaurant data
Match preference
Update profile and filtered recommendation
User feedback
Filter Restaurant
user
END

User Stories

Use the below template to list all the user stories for the product.

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance criteria	Priority	Release
Customer (Mobile user)	Registration	USN-1	As a user, I can register for the application by entering my email, password, and confirming my password.	I can access my account / dashboard	High	Sprint-1
		USN-2	As a user, I will receive confirmation email once I have registered for the application	I can receive confirmation email & click confirm	High	Sprint-1
		USN-3	As a user, I can register for the application through Facebook	I can register & access the dashboard with Facebook Login	Low	Sprint-2
		USN-4	As a user, I can register for the application through Gmail	I can register & access the dashboard with gmail.	Medium	Sprint-1
	Login	USN-5	As a user, I can log into the application by entering email & password	My searches stay private to me.	High	Sprint-1
	Dashboard	USN-6	As a User, I want to search for restaurants by location or cuisine type to find options that suit my preferences.	I can find the restaurants that suit my needs.	High	
Customer (Web user)	Website	USN-7	As a User, I want to see detailed information about a restaurant, including its menu, opening hours, and contact details	I can get more details for the restaurant that I'm looking for.	High	
Customer Care Executive		USN-8	As a Customer Care Executive , I want to respond to customer queries about the restaurant	The customer gets clear view on the restaurant.	High	
Administrator		USN-9	As an Administrator, I want to be able to moderate user-generated content to maintain the quality and appropriateness of reviews and comments.	The restaurant can set high standards for the customer-friendly.	High	
Restaurant Management		USN-10	As a Restaurant Owner, I want to create a profile for my restaurant to make it visible to potential customers.	I can make my restaurant more popular.	High	
		USN-11	As a Restaurant Owner, I want to update my restaurant's information, including the menu, opening hours, and special offers.	I can keep my customers updated about the restaurant	High	

		USN-12	As a Restaurant Owner, I want to respond to user reviews and comments about my restaurant.	I can further improve my restaurant quality	High	