SOFTWARE ENGINEERING
EXPERIMENT 06

AIM: Estimate effort and cost required using Functional Point Analysis for the proposed project. Develop and Work Breakdown Structure (WBS) and Gantt Chart for the same.

IMPLEMENTATION:

FUNCTIONAL POINT ANALYSIS:

- **External Inputs (EIs):**

Registration input, QR code
Selecting a table or seating preference
Adding a new menu item
Placing an order
Customizing an order (e.g., adding extra toppings)
Cancelling an order
Payment
Feedback
Requesting assistance or calling a waiter
Updating personal information (e.g., contact details, dietary preferences)
Requesting a table reservation
Providing feedback on a previous dining experience
Joining a loyalty program or rewards scheme
Requesting a special dietary menu (e.g., vegetarian, gluten-free)
Requesting a high chair or special seating arrangement
Providing allergy information
Requesting a split bill
Ordering from a digital menu at the table
Requesting a call back from the restaurant for inquiries or feedback
Providing a review or rating for a menu item or service
Requesting nutritional information for menu items
Requesting assistance with a technical issue (e.g., with a digital menu or payment terminal)
Requesting to speak to a manager or supervisor

- **External Outputs (EOs):**

Printing a receipt
Displaying an order confirmation message
Generating a sales report
Sending a confirmation email or SMS for the order
Notifying the kitchen staff of a new order
Displaying recommended items or promotions
Printing a summary of the order for the kitchen

Notifying the user when their order is ready
Notifying the user of a successful payment transaction
Sending a survey or feedback form after a dining experience
Notifying the user of a special promotion or offer
Displaying a message to the user when the restaurant is closed
Sending a notification to the user when their table is ready
Displaying a message to the user when a menu item is sold out
Sending a reminder to the user about an upcoming reservation
Displaying a message to the user when a requested item is unavailable
Sending a notification to the user when their order is out for delivery
Displaying a message to the user when there is a delay in their order
Sending a notification to the user when their loyalty points or rewards balance has changed
Displaying a message to the user when their feedback or review has been received
Sending a notification to the user when their requested special seating arrangement is confirmed

- **External Inquiries (EQs):**

Checking the availability of a table
Viewing the menu
Checking order status
Checking the current wait time for a table
Viewing the restaurant's operating hours or contact information
Checking the status of a order
Asking about the ingredients or nutritional information of a menu item

- **External Interfaces (EIs):**

Integration with a payment gateway
A kiosk for placing orders
A kitchen display system for managing orders
Integration with a reservation system for table bookings
Integration with a loyalty program or app for discounts and rewards

- **Internal Logical Files (ILFs):**

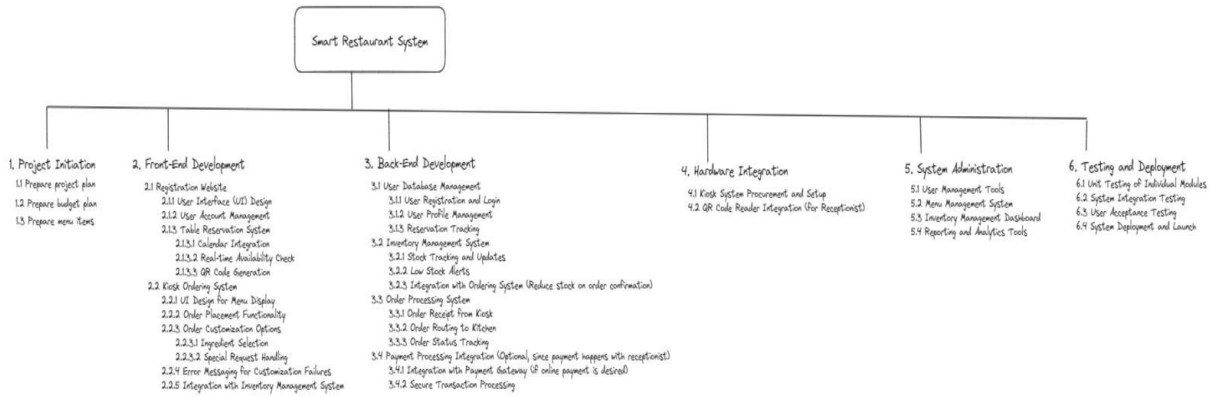
A menu database
Customer information database
Inventory management database for tracking stock levels
Employee database for managing staff information and schedules
Feedback database for storing customer reviews and ratings
Order history database

Average: The system has moderate complexity.

- Does the system require reliable backup and recovery? = 4
- Are data communications required? = 4
- Are there distributed processing functions? = 3

- Is performance critical? = 5
- Will the system run in an existing, heavily utilized operational environment? = 3
- Does the system require online data entry? = 4
- Does the online data entry require the input transaction to be built over multiple screens or operations? = 5
- Are the master files updated online? = 4
- Are the inputs, outputs, files, or inquiries complex? = 3
- Is the internal processing complex? = 3
- Is the code designed to be reusable? = 2
- Are conversion and installation included in the design? = 2
- Is the system designed for multiple installations in different organizations? = 1
- Is the application designed to facilitate change and ease of use by the user? = 4

WORK BREAKDOWN STRUCTURE:



GANTT CHART: