# WORKSHOP N° 1
# SOFTWARE ENGINEERING II

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# Software Requirements Specification - Click & Munch

## Introduction and Scope

The system aims to allow restaurant customers to make table reservations and place orders in advance, reducing wait times and improving service efficiency. Meanwhile, restaurants can manage table availability, menus, and orders while monitoring customer satisfaction. The MVP version focuses on core features such as authentication, restaurant listings, reservations, menu management, and notifications. Future iterations will include online payments, real-time chat, and collaborative ordering.

## Functional Requirements (FR)

### FR-01. User Authentication and Management

- FR-01.1 The system shall allow customers to register with name, email, and password.
- FR-01.2 The system shall enable login/logout functionality.
- FR-01.3 Users shall be able to update their profile information.
- FR-01.4 Restaurants shall register their business data and contact information.
- FR-01.5 The system administrator shall approve or reject restaurant registrations.

### FR-02. Restaurant and Menu Management

- FR-02.1 Restaurants shall create, edit, and delete menu items.
- FR-02.2 Menu items shall include name, category, description, price, and ETA.
- FR-02.3 Menus shall be subject to administrative approval before publication.

### FR-03. Geolocation and Restaurant Listing

- FR-03.1 The system shall automatically obtain the user's geolocation.
- FR-03.2 Restaurants shall be listed within a 3 km radius, sorted by rating and distance.
- FR-03.3 The system shall display restaurants in both list and map view.

### FR-04. Reservations

- FR-04.1 Customers shall select restaurant, date, time, and number of people.
- FR-04.2 The system shall confirm reservations automatically based on availability.
- FR-04.3 Restaurants may temporarily disable reservations when full.
- FR-04.4 Customers shall modify or cancel reservations at least one hour in advance.
- FR-04.5 The system shall send push notifications to remind and confirm reservations.

### FR-05. Orders
- FR-05.1 Customers shall place their order alongside the reservation.
- FR-05.2 Orders can be modified or canceled before the cutoff time.
- FR-05.3 Restaurants shall receive the order automatically after confirmation.
- FR-05.4 Chefs shall update dish status: 'Preparing', 'Ready', 'Served', 'Delivered' 'Cancelled'.
- FR-05.5 Waiters shall view ready orders for serving.

### FR-06. Feedback and Ratings
- FR-06.1 Customers shall rate restaurants and dishes after their visit.
- FR-06.2 Customers may optionally rate the waiter.
- FR-06.3 The system shall compute average restaurant ratings.

### FR-07. Notifications
- FR-07.1 The system shall send push notifications for upcoming reservations.
- FR-07.2 Restaurants shall be notified of new or canceled reservations.
- FR-07.3 Waiters shall be notified when dishes are ready to serve.

### FR-08. Roles and Permissions
- FR-08.1 Each role (Customer, Manager, Waiter, Chef, Administrator) shall have distinct privileges.
- FR-08.2 Only managers may modify menus and restaurant data.
- FR-08.3 Chefs may only update dish preparation statuses.
- FR-08.4 Waiters may only view ready orders and mark as served.

### FR-09. History
- FR-09.1 Customers shall access their order and reservation history.
- FR-09.2 Restaurants shall review service performance and customer feedback history.

# Non-Functional Requirements (NFR)

### NFR-01: Availability

- The system should be available 99.5% of the time.

### NFR-02: Performance

- Average response time for any request should not exceed 3 seconds.

### NFR-03: Scalability

- The application must be scalable to support multiple restaurants and users concurrently.

### NFR-04: Security

· All communications must be encrypted using HTTPS and SSL.

### NFR-05: Usability

· The mobile and web interfaces should be intuitive and user-friendly.

### NFR-06: Architecture

· NFR-06.1: The backend should be designed with RESTful APIs.

· NFR-06.2: Database should be normalized to maintain data integrity.

### NFR-07: Compliance

· The system must comply with local data protection and privacy regulations.

### NFR-08: Localization

· The solution should support localization (e.g., English and Spanish).

### NFR-09: Real-Time Updates

· Restaurant staff interface must support real-time updates for orders and reservations.

# User Stories (MVP)

## Customer Stories

US-01: As a Customer, I want to register and log in so I can use the platform.

· Acceptance Criteria:
Given the registration screen, when I enter valid details, then my account is created.
Given the login screen, when I enter valid credentials, then I am authenticated.
Given invalid credentials, when I try to log in, then I receive an error message.

US-02: As a Restaurant Manager, I want to create and manage my restaurant account.

· Acceptance Criteria:
Given the registration form, when I submit valid business data, then the account is created and pending approval.

Given an approved restaurant account, when I update information, then it is saved.

US-03: As a System Administrator, I want to approve new restaurant accounts.

- · Acceptance Criteria:
  Given a pending registration, when the admin approves it, then the restaurant is activated.
  Given a pending registration, when rejected, then the manager is notified with the reason.

US-04: As a User, I want to reset my password.

- · Acceptance Criteria:
  Given the forgot password screen, when I submit my email, then a reset link is sent.
  Given a valid reset token, when I set a new password, then it updates successfully.

US-05: As a Customer, I want to view nearby restaurants using geolocation.

- · Acceptance Criteria:
  Given location permission, when I open the discovery screen, then nearby restaurants appear.
  Given denied permission, when I try to view nearby restaurants, then I can enter a location manually.

US-06: As a Customer, I want to filter restaurants by rating, type, or distance.

- · Acceptance Criteria:
  Given the restaurant list, when I apply filters, then the results update.
  Given multiple filters, when I clear them, then the list resets.

US-07: As a Customer, I want to see restaurant details (menu, hours, rating).

- · Acceptance Criteria:
  Given I open restaurant details, when the data loads, then I see menu, hours, address, and rating.

US-08: As a Customer, I want top-rated restaurants (3 km radius) to appear first.

- · Acceptance Criteria:
  Given location enabled, when I view the list, then restaurants within 3 km are sorted by rating and distance.

US-09: As a Customer, I want to select a restaurant and date/time to reserve a table.

· Acceptance Criteria:
Given I choose a restaurant and time, when I submit, then a reservation is created if available.

US-10: As a Customer, I want to see available tables and capacities.

· Acceptance Criteria:
Given I select date/time, when I check availability, then I see available table sizes.

US-11: As a Customer, I want to confirm my reservation.

· Acceptance Criteria:
Given a provisional reservation, when I confirm it, then I receive a confirmation notification.

US-12: As a Restaurant Manager, I want to see all reservations in real-time.

· Acceptance Criteria:
Given the dashboard, when new reservations occur, then they appear in real-time.

US-13: As a Customer, I want to cancel or modify my reservation.

· Acceptance Criteria:
Given more than one hour before the reservation, when I modify/cancel, then it updates.
Given less than one hour, when I try to cancel, then I see a policy restriction message.

US-14: As a Customer, I want to browse the restaurant's menu.

· Acceptance Criteria:
Given I open the menu screen, when data loads, then I see categories, dishes, and prices.

US-15: As a Customer, I want to select dishes for each person.

· Acceptance Criteria:
Given I build an order, when I add or remove items, then the order summary updates.

US-16: As a Customer, I want to place my order during reservation.

· Acceptance Criteria:
Given I have a confirmed reservation, when I submit an order, then it's linked and visible in my profile.

US-17: As a Chef, I want to see the order list in real-time.

- Acceptance Criteria:
  Given a new pre-order, when it's submitted, then it appears instantly in the kitchen dashboard.

US-18: As a Waiter, I want to see which orders are ready.

- Acceptance Criteria:
  Given dishes are marked ready, when that occurs, then the waiter is notified.

US-19: As a Chef, I want to update the status of each dish.

- Acceptance Criteria:
  Given an order, when I update dish status, then it's reflected to the customer and waiter.

US-20: As a Customer, I want to see my order status.

- Acceptance Criteria:
  Given my order exists, when its status changes, then I see real-time updates in my profile.

US-21: As a Customer, I want to receive a notification before my reservation.

- Acceptance Criteria:
  Given a reservation, when 30 minutes remain, then I receive a push notification.

US-22: As a Waiter, I want to receive notifications when an order is ready.

- Acceptance Criteria:
  Given a dish is ready, when it's marked ready, then I receive a notification with order info.

US-23: As a Customer, I want to rate the restaurant and food.

- Acceptance Criteria:
  Given a completed reservation, when I rate, then my feedback updates the restaurant's average rating.

US-24: As a Restaurant Manager, I want to review ratings and comments.

- Acceptance Criteria:
  Given ratings exist, when I open the feedback dashboard, then I see comments and stats.

US-25: As a Restaurant Manager, I want to add/edit/remove menu items.

- Acceptance Criteria:
  Given manager access, when I add or modify menu items, then updates are saved and may need approval.

US-26: As a Restaurant Manager, I want to set ETA for dishes.

· Acceptance Criteria:
Given menu items, when I set ETA, then it's displayed to customers.

US-27: As a System Administrator, I want to review and approve menus.

· Acceptance Criteria:
Given a pending menu, when I approve it, then it becomes visible to customers.

US-28: As a System Administrator, I want to manage users and restaurants.

· Acceptance Criteria:
Given the admin panel, when I search and filter, then I can deactivate or reactivate accounts.

US-29: As a System Administrator, I want to generate reports.

· Acceptance Criteria:
Given the reporting screen, when I select parameters, then I can export reports in CSV or PDF.

# User Story Mapping (USM)
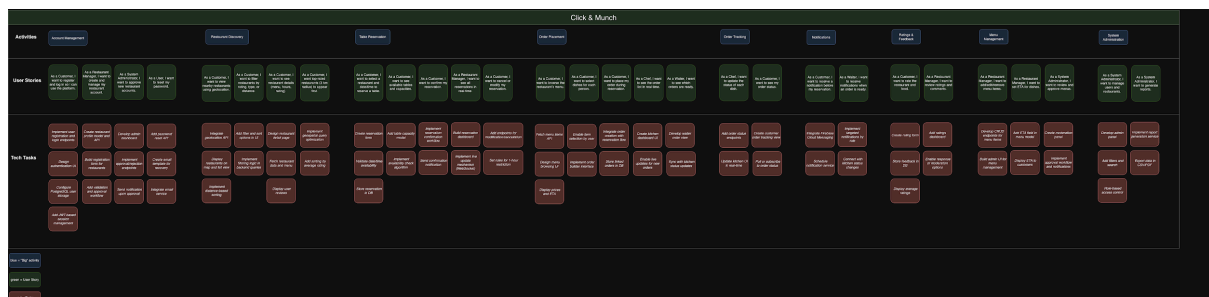


*PDF file attached with the USM in full

# References

EngAndres. (n.d.). *unal_public* [Folder: Software Engineering 2_Morning (G3)/slides]. GitHub.
https://github.com/EngAndres/unal_public/tree/main/Software%20Engineering%202_Morning%20(G3)/slides