Group Case Analysis Activity
       Designing and Prototyping a Food Delivery App

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1. Case Analysis

Scenario Summary:
 Our team developed a mobile-based food delivery application named **Nom'Nom Express**.
Users can log in via Facebook or Email, browse different fast food chains around the world including our own restaurant (**Nom'Nom**), view menus, select items, choose payment methods, and manage their profile information.

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2. Detailed Design Specification

System Requirements

Functional Requirements:

- Customers can log in using Facebook or Email.

- Customers can browse restaurants and their menus.

- Customers can place food orders and choose payment options.

Non-Functional Requirements:

- The app should have a mobile-friendly and responsive design.

- The login process must complete within 3 seconds.

- The system must ensure secure storage of user credentials.

System Architecture

We propose a **Client-Server Architecture**:

- The mobile app acts as a **client**.

- A backend server handles restaurant data, user authentication, orders, and payment processing.
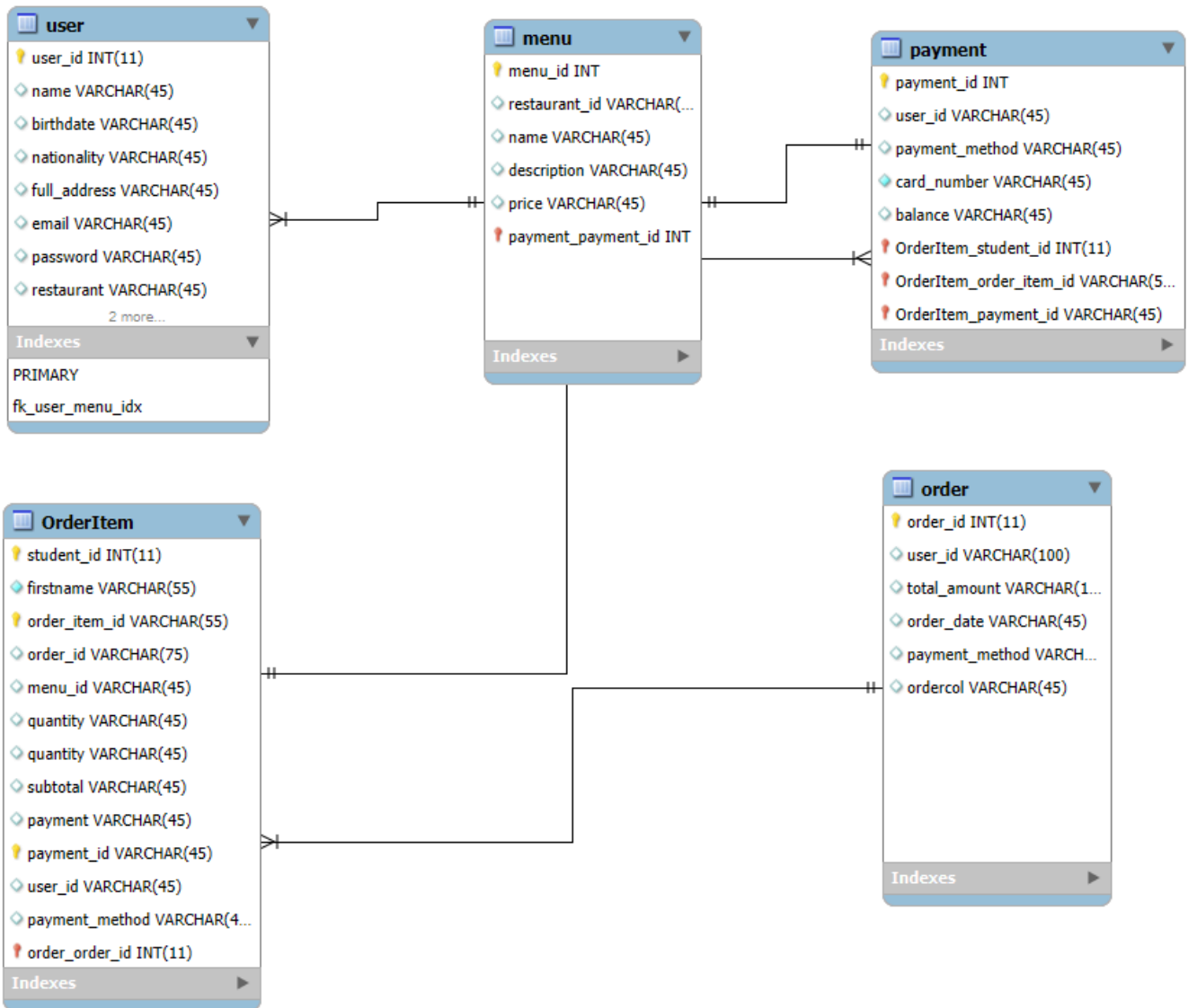
Component Interaction

- The mobile app communicates with the backend server through **RESTful APIs**.

- APIs handle functions like login authentication, menu fetching, order placement, and payment processing.

Data Design (ERD Overview)

Entities:

- **User** (UserID, Name, Email, Password, Profile Info)

- **Restaurant** (RestaurantID, Name, Address, Description)

- **Menu Item** (ItemID, RestaurantID, Name, Price, Description)

- **Order** (OrderID, UserID, RestaurantID, OrderDate, TotalAmount, Status)

- **Payment** (PaymentID, OrderID, PaymentMethod, PaymentStatus)

user

- 🔑 user_id INT(11)
- ◇ name VARCHAR(45)
- ◇ birthdate VARCHAR(45)
- ◇ nationality VARCHAR(45)
- ◇ full_address VARCHAR(45)
- ◇ email VARCHAR(45)
- ◇ password VARCHAR(45)
- ◇ restaurant VARCHAR(45)

2 more...

Indexes

PRIMARY

fk_user_menu_idx

menu

- 🔑 menu_id INT
- ◇ restaurant_id VARCHAR(...
- ◇ name VARCHAR(45)
- ◇ description VARCHAR(45)
- ◇ price VARCHAR(45)
- 🔑 payment_payment_id INT

Indexes

payment

- 🔑 payment_id INT
- ◇ user_id VARCHAR(45)
- ◇ payment_method VARCHAR(45)
- ◇ card_number VARCHAR(45)
- ◇ balance VARCHAR(45)
- 🔑 OrderItem_student_id INT(11)
- 🔑 OrderItem_order_item_id VARCHAR(5...
- 🔑 OrderItem_payment_id VARCHAR(45)

Indexes

OrderItem

- 🔑 student_id INT(11)
- ◇ firstname VARCHAR(55)
- 🔑 order_item_id VARCHAR(55)
- ◇ order_id VARCHAR(75)
- ◇ menu_id VARCHAR(45)
- ◇ quantity VARCHAR(45)
- ◇ quantity VARCHAR(45)
- ◇ subtotal VARCHAR(45)
- ◇ payment VARCHAR(45)
- 🔑 payment_id VARCHAR(45)
- ◇ user_id VARCHAR(45)
- ◇ payment_method VARCHAR(4...
- 🔑 order_order_id INT(11)

Indexes

order

- 🔑 order_id INT(11)
- ◇ user_id VARCHAR(100)
- ◇ total_amount VARCHAR(1...
- ◇ order_date VARCHAR(45)
- ◇ payment_method VARCH...
- ◇ ordercol VARCHAR(45)

Indexes

UI Design (Wireframes)

Screens designed:

- **Landing Page**: Shows available restaurants including Nom'Nom.

- **Menu Page**: Displays menu items with options to select food.

- **Login Page**: Facebook or Email login.

- **Profile Page**: Displays customer profile information.

- **Payment Method Selection**: Choose preferred payment option.

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3. Prototyping Plan

- **Chosen Prototyping Method**: **Evolutionary Prototyping**

Justification:
We chose Evolutionary Prototyping to continuously improve and refine our app based on user feedback. As food delivery apps need to be highly intuitive, building a working prototype early allows us to adapt and enhance features as needed.

Prototyping Benefits:

- Allows rapid feedback from users regarding the UI/UX.

- Helps identify missing or confusing features early in the process.

Feedback Gathering Approach:

- Conduct informal user testing sessions with classmates and friends.

- Gather feedback through observation and short surveys after interacting with the prototype.

- Apply improvements based on feedback to evolve the prototype iteratively.

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4. Presentation Plan

We will present:

- A summary of our system design and component interaction.

- Our prototyping plan and why we selected Evolutionary Prototyping.

- Screenshots of our Figma prototype, including the login page, landing page, menu screen, and payment selection page.