

# **Food Ordering System – Assignment (Collections & Exception Handling)**

## **Assignment Objective**

This assignment helps trainees implement Java Collections and Exception Handling using a real-world Food Ordering System. This is Phase-1 of a project that will later be converted into a Spring Boot application.

## **Important Rules**

- 1 Use Core Java only (No Spring, No Database).
- 2 Store data using Java Collections only.
- 3 Handle all business validations using custom exceptions.
- 4 Do not use generic Exception in business logic.
- 5 Write clean and readable code.

## **Functional Modules**

- 1 User Management using Map
- 2 Restaurant Management using List
- 3 Menu Management using Map
- 4 Cart Management using Map
- 5 Order Management using List

## **Mandatory Custom Exceptions**

- 1 UserAlreadyExistsException
- 2 InvalidCredentialsException
- 3 RestaurantNotFoundException
- 4 ItemNotAvailableException
- 5 InvalidQuantityException
- 6 EmptyCartException
- 7 PaymentFailedException

## **Mandatory Scenarios to Handle**

- 1 Signup with duplicate email
- 2 Login with wrong credentials
- 3 Select invalid restaurant
- 4 Add item with invalid quantity
- 5 Checkout with empty cart
- 6 Remove non-existing cart item

## **Evaluation Criteria**

- 1 Correct usage of Java Collections

- 2 Proper custom exception handling
- 3 Clean try-catch blocks
- 4 Readable code structure
- 5 Meaningful comments