# Torbaaz - Restaurant Menu Management System 🍽️

**A feature-rich Java-based desktop application developed to manage restaurant menus effectively, showcasing Object-Oriented Programming (OOP) principles and GUI development using Java Swing.**

This project was part of my **3rd semester OOP course** and served as both a 4th assignment and a final lab exam. It exemplifies my understanding of core Java concepts, file handling, and interactive GUI design. Additionally, I transformed this GUI application into a console-based backend version for my final lab submission—keeping the functionality intact while adapting the interface!

## 🌟 ****Key Features****

* **Secure User Authentication**: Login and registration functionality with file-based data persistence.
* **Dynamic Menu Management**: Categorized menu items with real-time updates and filtering options.
* **Interactive User Interface**: Responsive design with intuitive user controls for seamless navigation.
* **Category-Based Filters**: Includes sections like Appetizers, Main Course, Desserts, and Beverages.
* **Error Handling**: Robust input validation ensures a smooth user experience.

## ⚙️ ****Technical Implementation****

* **Frontend**: Java Swing for GUI design.
* **Backend**: Pure Java with Object-Oriented Programming principles.
* **Data Storage**: File handling for user account and menu data management.
* **Error Handling**: Comprehensive input validation and exception management.

## 🔄 ****Console-Based Version****

In my **final OOP lab**, I converted the project into a **console-based system**:

* **Interface Overhaul**: Replaced GUI with a text-based interface using Scanner for input.
* **Simplified Logic**: Implemented core functionality via switch cases and streamlined backend operations.

### 🛠️ Changes in the Console Version

* Removed GUI components while retaining core functionalities.
* Added CLI-based navigation with user-friendly prompts.

## 📊 ****Achievements****

* **Lab Final Grade**: A+ (50/50)
* **Course**: OOP Java (3rd Semester)
* Successfully implemented and demonstrated both GUI and console-based versions.

## 🖥️ ****Interface Overview****

### ****Menu Features****

* **Grid Layout**: Displays menu items with descriptions and prices.
* **Category Filters**: Quick filtering options for different food categories.
* **Interactive Buttons**: Easy-to-use order and navigation controls.

### ****Design Aesthetic****

* Professional theme with a sleek black-and-orange color palette.
* Modern logo featuring an eagle symbol for branding.
* Clean, consistent design for an intuitive user experience.

### ****Navigation****

* Easy logout options and category-based filtering for seamless exploration.
* Simple yet powerful controls for users of all technical backgrounds.

### ****Security****

* Secure login/signup system with proper error handling.
* Reliable data management to ensure persistence and confidentiality.

## 📸 ****Screenshots****

The repository includes snapshots of both the **GUI** and **console-based** versions, illustrating the transition and demonstrating the system's functionality. 🚀