**UNIVERSIDAD DE OVIEDO**

***-Oviedo-***



**FINAL LAB MODULE**

**Computerizing a chain pizza restaurant**

**Human-Computer Interaction**

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**Introduction:**

The project aims to computerize a chain pizza restaurant's order and game management system. The application allows customers (stored in reservations.dat) to view menu items (stored in menu.dat), place orders, and participate in a game to win prizes.

This document outlines the development process, focusing on meeting the functional requirements specified in the task description. The application includes internationalization features for Spanish, English, and French.

**Application Development:**

**Logic:**

The Logic.java class is the backbone of the application, managing reservations, orders, and game functionality. Key methods include:

- checkReservationDetails: Validates a customer's reservation code and removes it upon validation.

- addToOrder: Adds products to an order with specified quantities and observations.

- sendOrder: Finalizes an order, saves it, and prepares for the next.

- canPlayGame: Checks if the customer/reservation is eligible to play the game.

- getPrizes: Retrieves the prizes won in the game.

**Interface:**

The interface was designed to be user-friendly, allowing customers to navigate menus, place orders, and participate in the game efficiently. Below are placeholders for screenshots of each screen, displaying the Wireframe V2 alongside the final implementation.

Interfaz de usuario gráfica, Aplicación, Word

Descripción generada automáticamente Interfaz de usuario gráfica, Texto, Aplicación, Sitio web

Descripción generada automáticamente **Screenshots:**

Interfaz de usuario gráfica, Texto, Aplicación, Correo electrónico

Descripción generada automáticamenteInterfaz de usuario gráfica, Aplicación

Descripción generada automáticamenteInterfaz de usuario gráfica, Aplicación

Descripción generada automáticamenteInterfaz de usuario gráfica

Descripción generada automáticamenteInterfaz de usuario gráfica

Descripción generada automáticamente con confianza mediaInterfaz de usuario gráfica

Descripción generada automáticamenteInterfaz de usuario gráfica, Texto, Aplicación, Sitio web

Descripción generada automáticamente

Interfaz de usuario gráfica, Aplicación

Descripción generada automáticamente Tabla

Descripción generada automáticamente

Tabla

Descripción generada automáticamente

Imagen que contiene Interfaz de usuario gráfica

Descripción generada automáticamente

**Justifications for Interface Changes:**

The following changes were made to improve the application's usability and address user feedback:

- Start Screen: No major changes made, only the change of the Logo – Name for the final Logo and Name and the chango of “i” (of info) to “?” (done also in the game screen), the mnemonic is not changed (remains the “i”) as the method does not allow the ‘?’ as a value for the mnemonic.

-Other Screens: Elimination of the JMenus, as in a JDialog you should not have a JMenu

- Menu Screen: Rearrange of components for making it resizable, also the addition of the Finish Reservation Button due to the elimination of it from the JMenu, change of “Play Game” to “Placed Orders” for better usability.

- Order Screen: Rearrange of the components for efficient fit, also change of the remove icon (X) to a bin (familiarity), also adding the Discount Label for the pizza of the day (-20%). Change of the “Pay” button to the “Send Order” button for making possible to have different orders in a single reservation.

The “Cancel Order” does the same as the “Reset Order” in all the screens where is used. Is just a change of terms, but the purpose is the same, remove all the products from the current order.

- Placed Order Screen pregame: Changed the labels of “The order X is being prepared” that give feedback, to a Dialog in the Order Screen “Send Order” Button. The space of the labels is used to show the “Done Orders” (orders that have been confirmed and sent to the kitchen). Addition of a “Final Price” label, to show the user what is the final amount that he must pay before leaving the table.

It was also changed the JDialog of the “Play Game” to another using the Card Layout, making it look better.

- Game Screen: The only change was the rearrangement of the Attempts JLabel to a different place. (Also the change of the “i” to “?” as Antonio says)

- Placed Order Screen postgame: Any big change, only change on the distribution of the components in the Game JPanel

**Testing:**

The application was tested using 8 scenarios, all of which now pass successfully. Resolved issues include:

- Missing intolerant icons for Maria: The issue was solved by instead of icons, texts, because the icons would be so little that I think that texts are better, also with the addition of the Other Text Field so if anyone wants it in a different way, it can be prepared as the costumer wants.

- The change of the help button “i” to the question mark “?”

**Results and Discussion:**

The application meets all specified requirements, including menu browsing, order placement, and game functionality. Challenges such as managing multiple orders and ensuring proper internationalization were resolved effectively. The final product provides a seamless and engaging experience for customers.

**Conclusion:**

This project successfully computerizes the order and game management for a chain pizza restaurant. The application meets all functional requirements and incorporates optional internationalization features. Testing confirms the application's reliability and usability. This project demonstrates a robust solution to the proposed problem.