Analysis Report (Student #4)



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**Date:** 20/02/2025

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# Executive Summary

This analysis report focuses on the requirement to modify the anonymous menu to display an option with the title "〈id-number〉: 〈surname〉, 〈name〉". The requirement was analyzed in detail, and various alternatives for implementing the display of the identification number were considered. The selected solution involved showing a few random digits of the identification number along with the letter, while the rest of the digits remain masked. This approach balances usability with data privacy.

# Revision Table

|  |  |  |
| --- | --- | --- |
| **Revision Number** | **Date** | **Description** |
| 0.1 | 20/02/2025 | Initial Draft of the Analysis Report |
| 1.0 | 20/02/2025 | Added Detailed Analysis and Alternatives |

# Introduction

This document presents an analysis of the requirement to modify the anonymous menu to display a user identification in the format "〈id-number〉: 〈surname〉, 〈name〉". It provides a detailed evaluation of the proposed solution, including alternative approaches to display the identification number while ensuring data privacy and usability.

The document is divided into the following sections:

* **Requirement Analysis**: This section outlines the original requirement and provides a detailed analysis of its implications. It examines how the identification number should be displayed and discusses key considerations for maintaining security.
* **Alternatives**: Here, various alternatives for fulfilling the requirement are considered and evaluated. This includes options ranging from full exposure of the identification number to partial masking of the digits for enhanced privacy.
* **Proposed Solution**: Based on the analysis and evaluation of alternatives, this section outlines the selected approach for displaying the identification number. It explains why this solution was chosen and how it strikes a balance between usability and security.
* **Conclusions**: The final section summarizes the findings from the analysis and provides a conclusion on the most suitable solution to meet the requirement.

This report aims to ensure that the menu modification aligns with functional goals while addressing privacy and security concerns.

# Contents

## Requirement Analysis

* **Summary of the Requirement:** The requirement specifies that the anonymous menu should display a title with the user’s identification number and personal details (surname and name). The identification number must be presented in the format "〈id-number〉: 〈surname〉, 〈name〉", with the "id-number" being partially exposed for user recognition.
* **Detailed Analysis of the Requirement:** The requirement demands a clear representation of the identification number while ensuring that sensitive data is not fully exposed. Various methods were considered for partially displaying the identification number to balance user convenience with privacy.

## Alternatives

* **Alternative 1: Full Exposure of ID Number**
* This alternative involved displaying the entire identification number without any obfuscation. While this would allow users to see their full ID number at a glance, it posed serious security and privacy concerns, as sensitive information would be visible.
* **Alternative 2: Fully Masked ID Number (Only Showing First and Last Characters)**
* This solution involved fully masking the ID number, showing only the first and last characters (e.g., "A123456X"). While it provides maximum security, it reduces the visibility of the ID number and may create challenges for users trying to verify their identity.
* **Alternative 3: Randomized Partial Exposure of ID Number**
* The approach selected was to display a few randomly selected digits of the identification number (e.g., second, third, sixth, and penultimate digits), along with the letter at the end. The remaining digits would be masked. This option offers a good compromise between security and usability, as it allows users to verify their ID number while minimizing the risk of exposure.

## Proposed Solution

* **Selected Approach:** The solution chosen involves displaying a few random digits of the identification number along with the letter, while the rest of the number is masked with asterisks. This ensures that the user can verify their identification number easily, but only partial data is exposed to reduce privacy risks.
* **Rationale for the Proposed Solution:** This solution was selected because it allows for some level of visibility for user verification without exposing the full identification number. The random exposure of digits ensures that the risk of sensitive data being compromised is minimized. Additionally, the user is still able to recognize their identification number through the displayed digits.

# Conclusions

The analysis of the requirement and alternatives led to the selection of a solution that balances user convenience with security. Displaying random digits of the ID number along with the letter is a practical solution that meets the functional needs of the system while addressing privacy concerns. This approach ensures that the menu remains user-friendly and secure.

# Bibliography

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