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# Mini Project Report: BiblioGest

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# Contents

# 1 Introduction

This report presents the development of **BiblioGest**, a library management system created using **Windows Presentation Foundation (WPF)** and **Entity Framework Core**. The application provides librarians with a complete interface to manage books, members, borrowings, and returns.

# 2 Technology Stack

- **.NET (C#)** — for business logic and backend development.

- **WPF (Windows Presentation Foundation)** — for UI/UX using XAML.

- **Entity Framework Core** — as the Object-Relational Mapper (ORM).

- **MySQL** — as our relational database server .

# 3 Application Features

- Book Management: Add, edit, delete books with complete metadata.

- Member Management: Register and manage library members.

- Borrowing System: Handle book loans and returns with due dates.

- Advanced Search: Filter catalog using multiple criteria.

- Dashboard: Real-time statistics (active loans, overdue books, etc.).

# 4 Database Model

## 4.1 Main Entities

- Book: ISBN, Title, Author, Publisher, Year, Copies, Category

- Member: ID, Name, Address, Email, Phone, Registration Date

- Loan: Book ID, Member ID, Loan Date, Due Date, Return Date

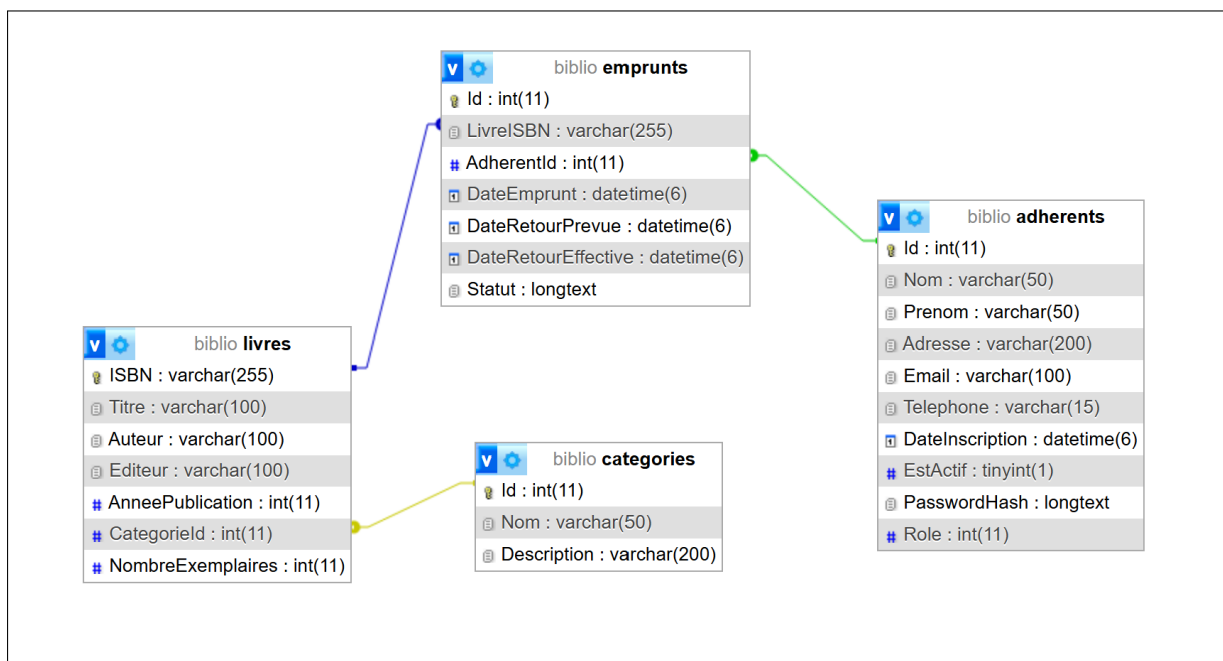- Category: ID, Name, Description

## 4.2   Database Architecture



Figure 2: DB Architecture

# 5   User Interfaces

## 5.1   Authentification



Figure 3: Login Form

## 5.2 Admin / Staff Interfaces

### a. Book management :



Figure 4: Book management page



(a) Add Book

(b) Modify Book

### b. Adherent management :

Figure 6: Adherent management page



(a) Add Adherent



(b) Modify Adherent

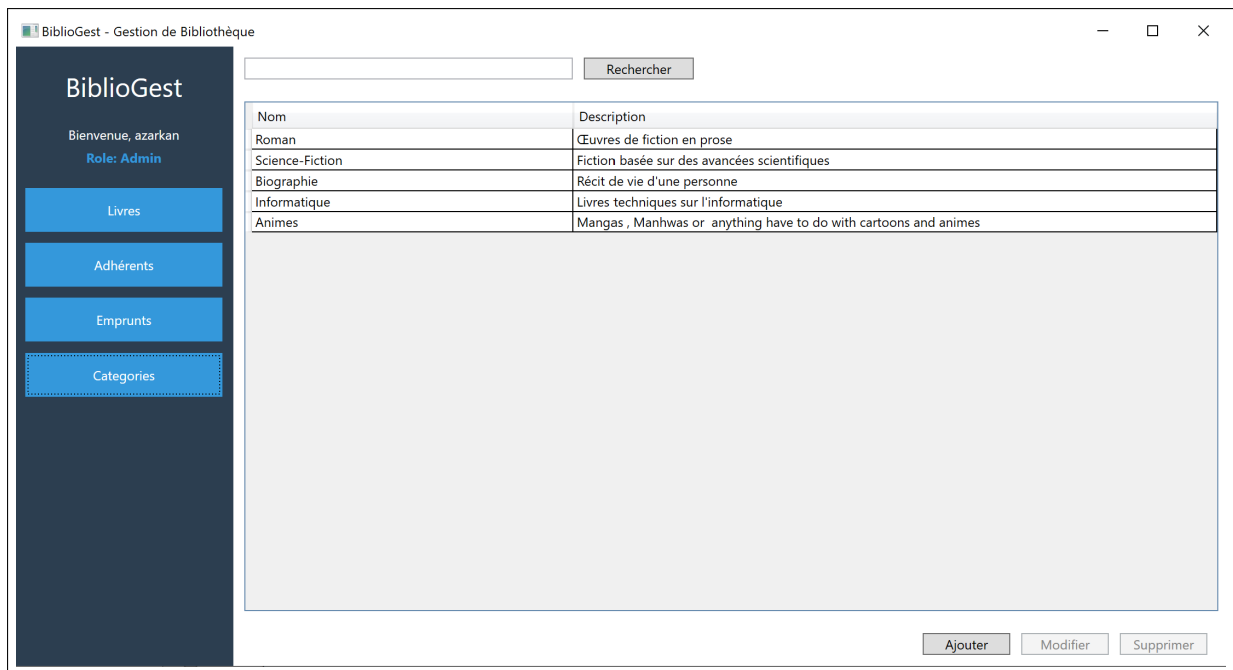**c. Categorie management :**

Figure 8: Categorie management page
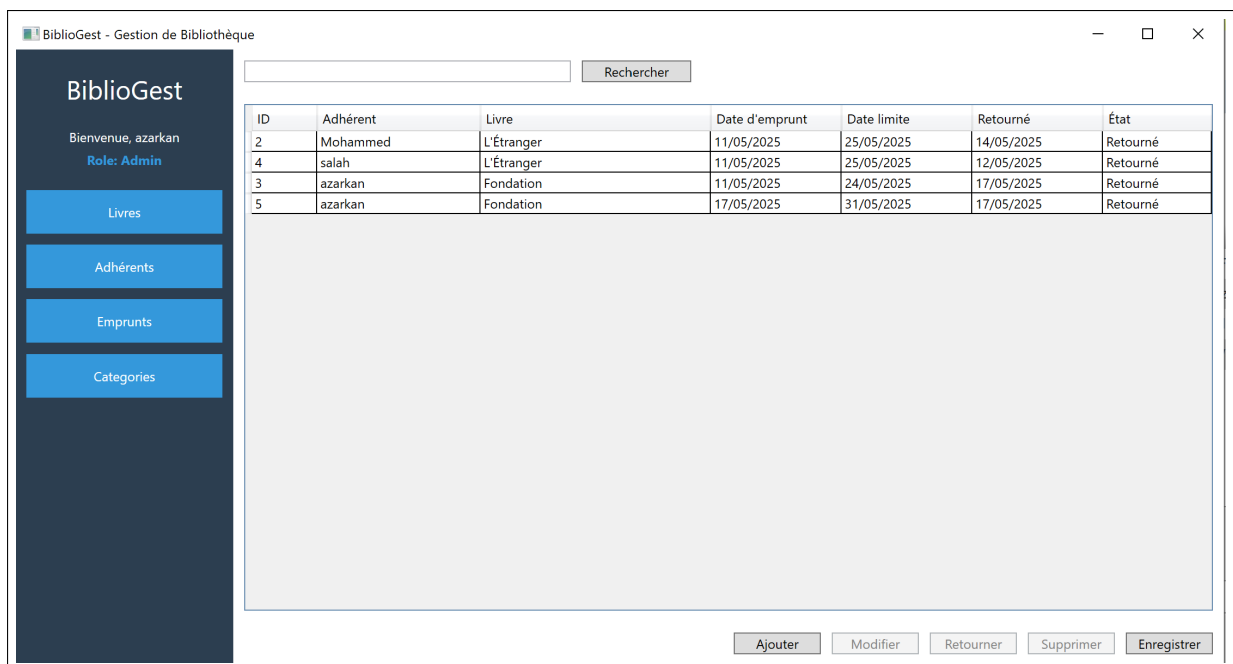
## d. Emprunt management :
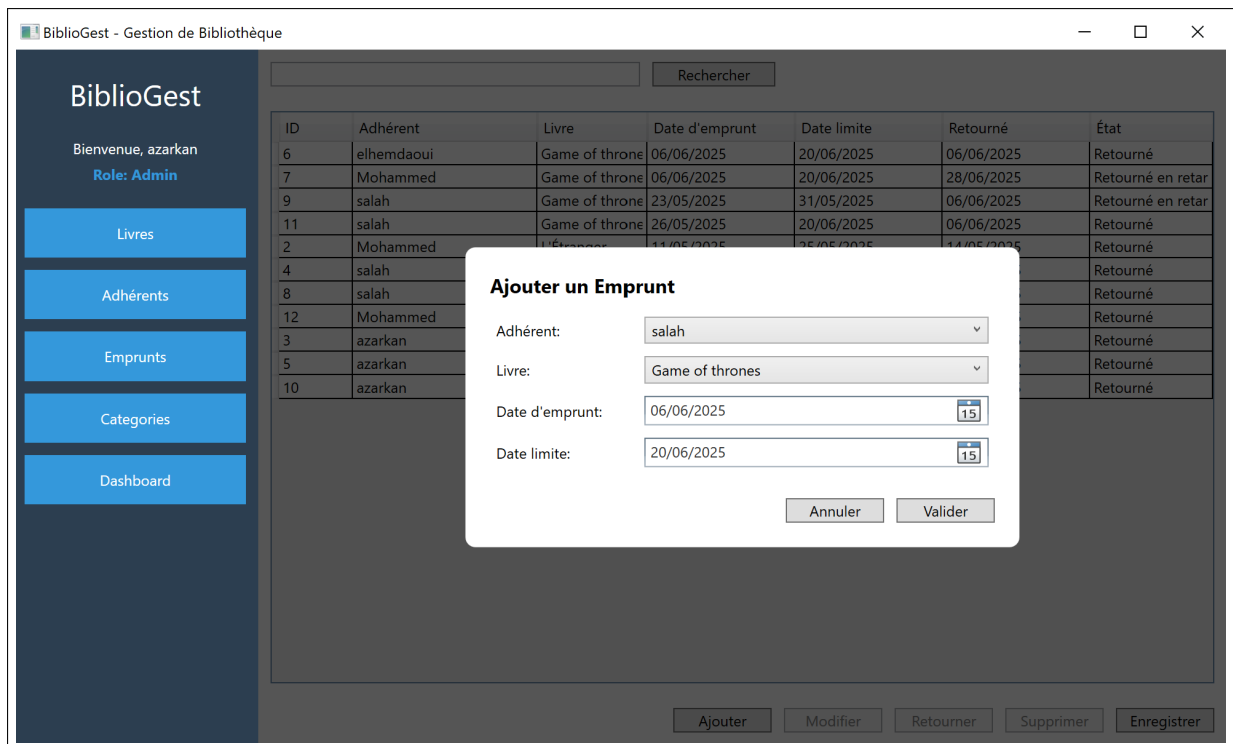


Figure 9: Emprunt management page

Figure 10: Add Emprunt (specifing the name of the user and the book )

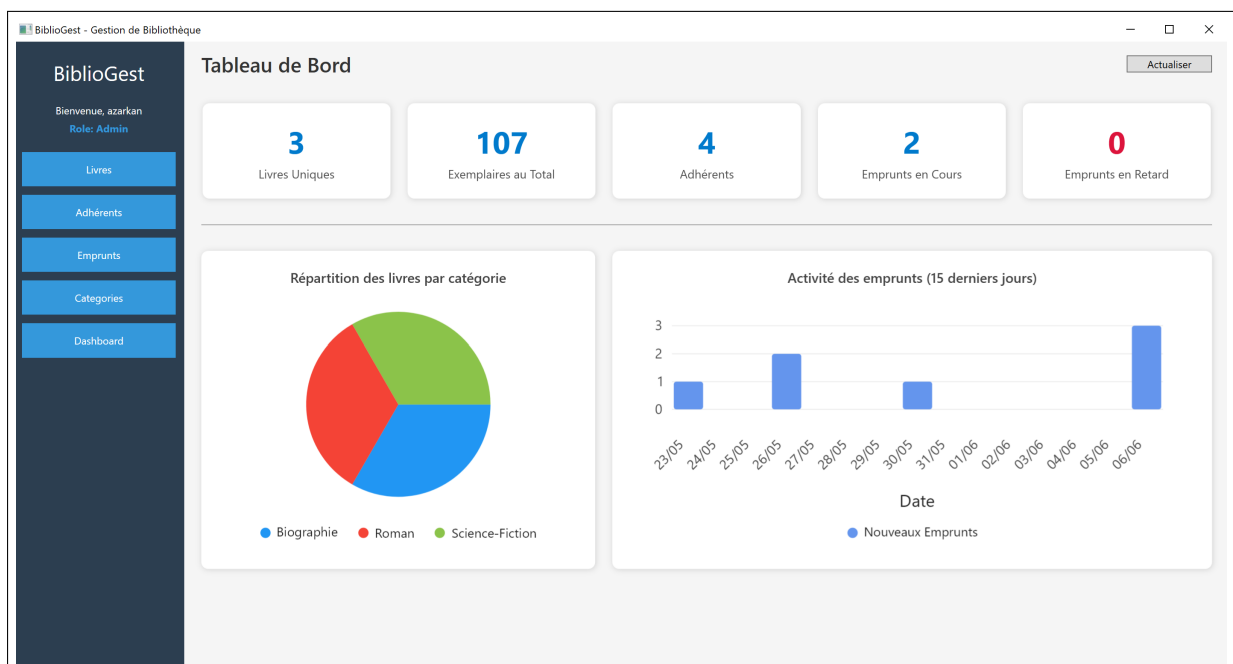## e. Dashboard with statistics :



Figure 11: Dashboard with stats )

## 5.3   Client Interfaces

we also have a Simple interface for clients to see all the books that we have available and
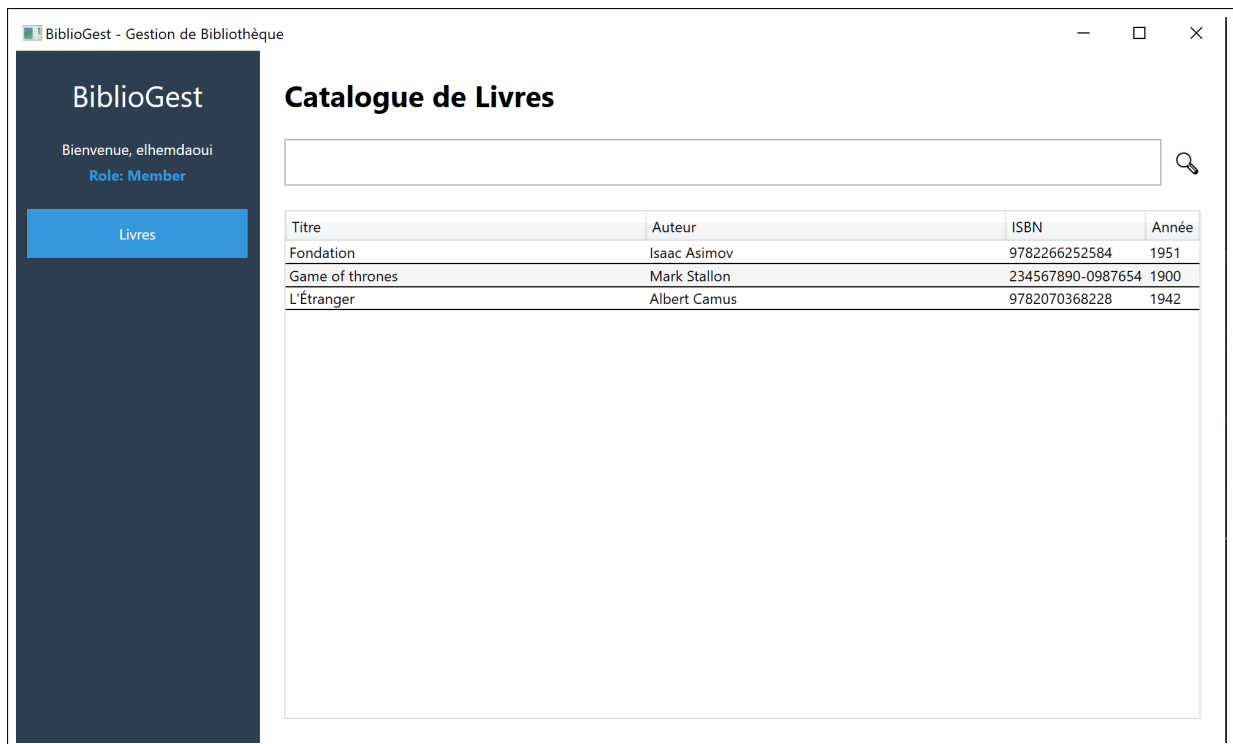search for something specific

Figure 12: Client's Page

# 6 Conclusion

This mini project allowed us to apply key concepts of **.NET**, **WPF**, and **Entity Framework Core** to build a functional library management system. Through *BiblioGest*, we gained practical experience in designing user-friendly interfaces, managing data with an ORM, and implementing essential CRUD operations. It was an enriching opportunity to learn and apply these Concepts .