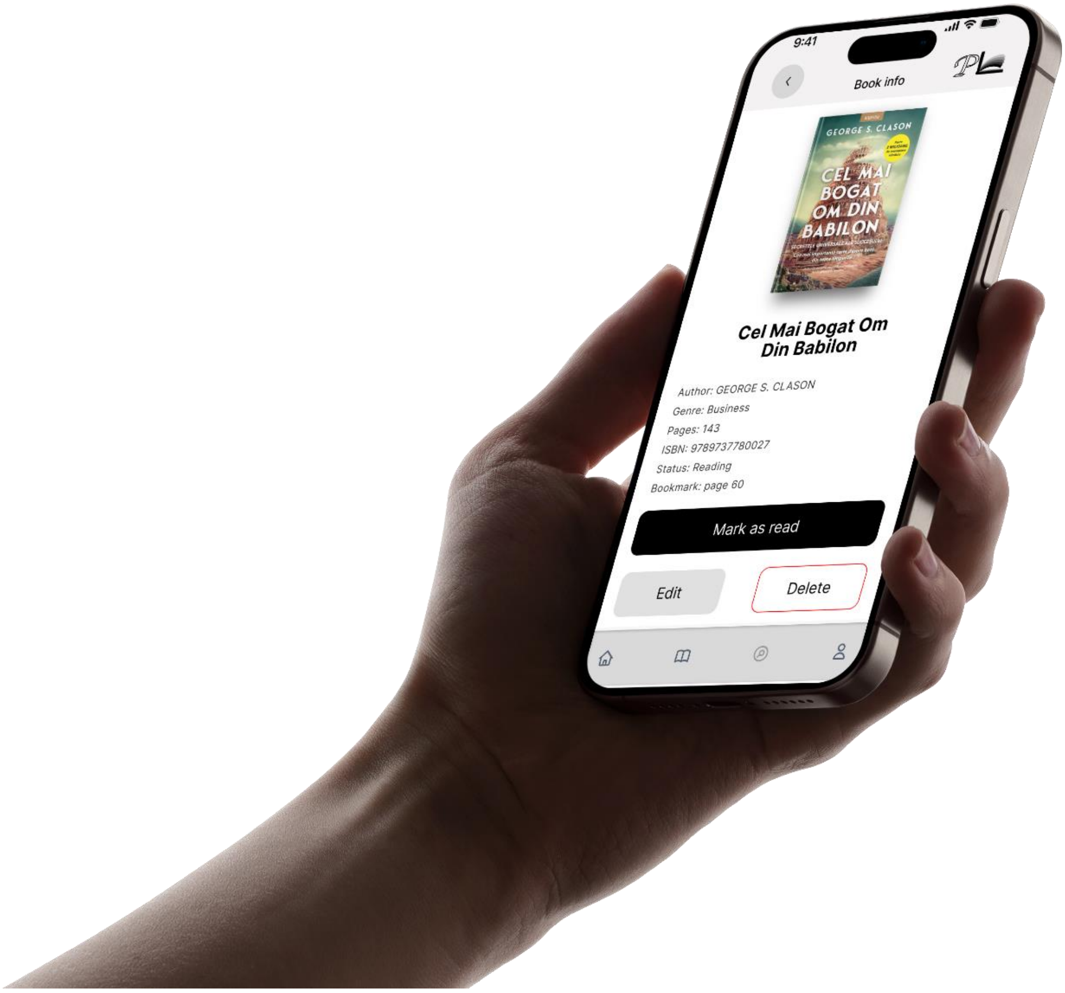
PERSONAL LIBRARY APP

Project Documentation



9:41

Book info

Cel Mai Bogat Om Din Babilon

Author: GEORGE S. CLASON

Genre: Business

Pages: 143

ISBN: 9789737780027

Status: Reading

Bookmark: page 60

PROJECT NAME:	**Personal Library Desktop App**
STUDENT:	**Cristian Macovei**
COURSE:	**C#**
TEACHER:	**Mihai Gonciar**
ACADEMY:	**IT School**
GITHUB PROJECT:	**Click here**

Table of Contents

1. INTRODUCTION (PROJECT DESCRIPTION)

1.1. About the Project

The Personal Library application is a project assignment for the C# course at IT School Academy. Built using C#, it provides a comprehensive set of features for organizing, filtering, and maintaining a record of your books. The application can be developed for multiple platforms, including console, Windows, and mobile. Future sections of this documentation will explore these implementations.

The application was initially designed for mobile application but the implementation was reconfigured for windows desktop use because the design framework learned in the C# course is "Microsoft Windows Forms".

The phone layout design was implemented in windows application as a widget.

1.2. Main Application Features

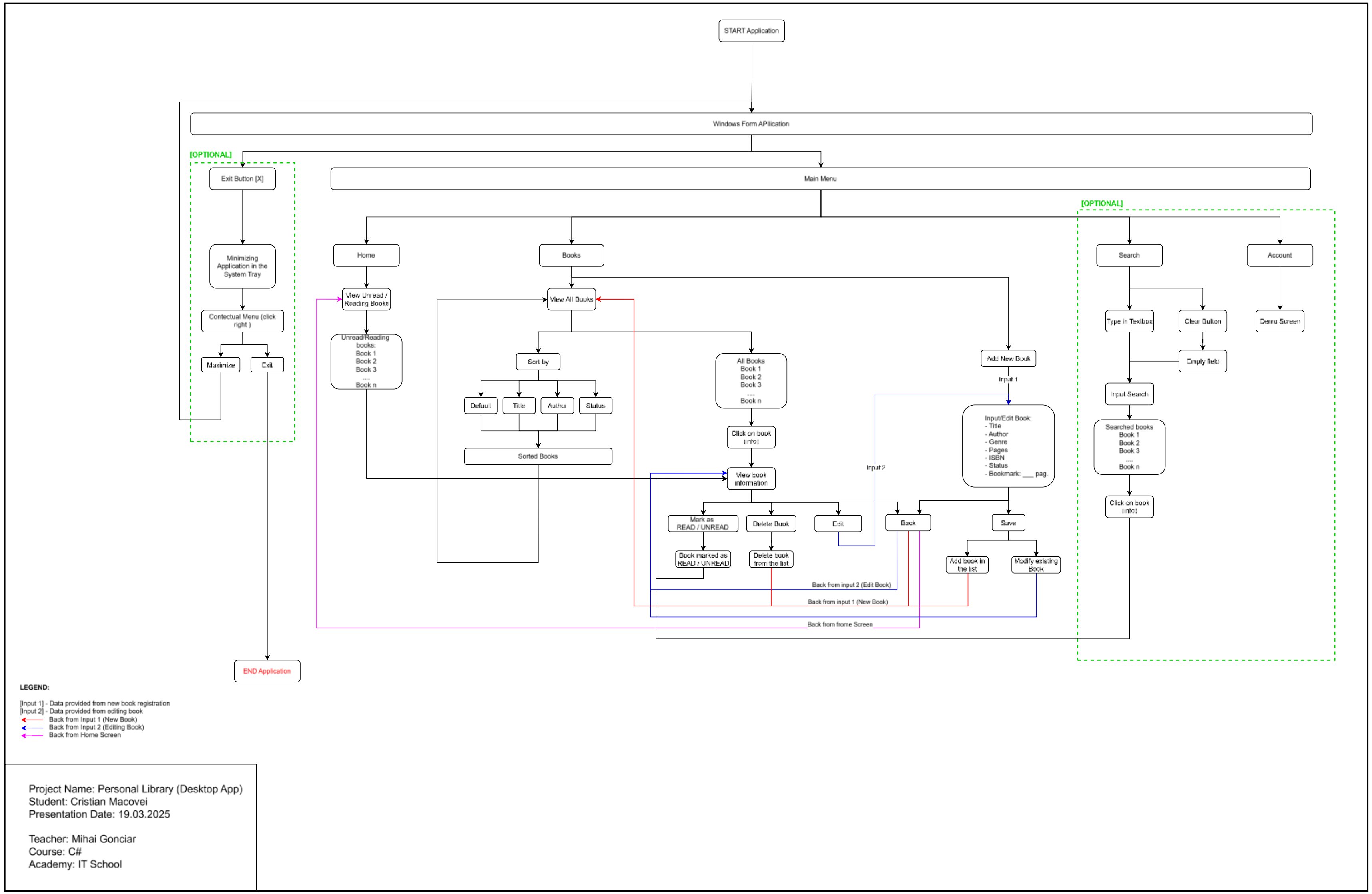
- **Home Page:** Displays books marked as 'Reading' or 'Unread' for a quick overview.
- **Book Management:** Add, edit, and delete books from your collection.
- **Sorting Options:** Sort books by title, author, or status.
- **Search Functionality:** Search for books by title or author.
- **Book Details:** View and modify book details.
- **System Tray Support:** The app minimizes in the system tray for easy access.
- **Settings Persistence:** Saves the last window location preferences.

1.3. Technology Used

- **Programming Language: C#** (Windows Forms for UI development)
- **IDE:** Visual Studio 2022

2. APPLICATION ARCHITECTURE

2.1. Logic Diagram

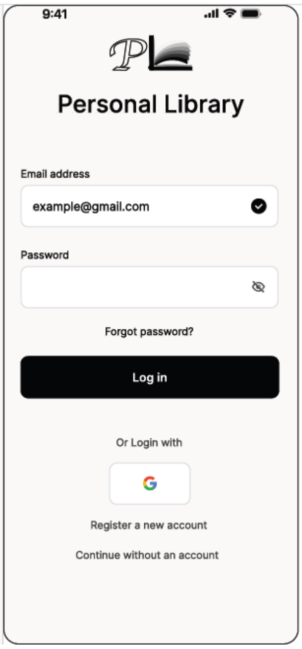


Project Name: Personal Library (Desktop App)
Student: Cristian Macovei
Presentation Date: 19.03.2025

Teacher: Mihai Gonciar
Course: C#
Academy: IT School

2.2. User Interface - Wireframe Sketch

Program used: Figma



9:41

Personal Library

Email address

example@gmail.com

Password

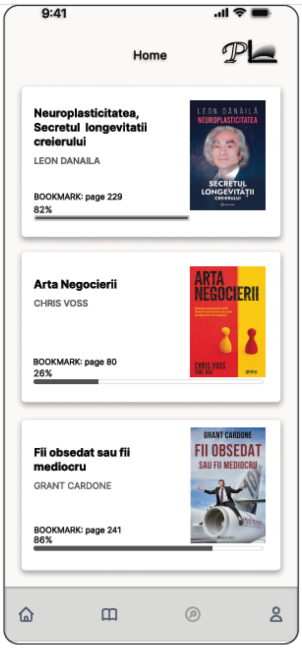
Forgot password?

Log in

Or Login with

Register a new account

Continue without an account



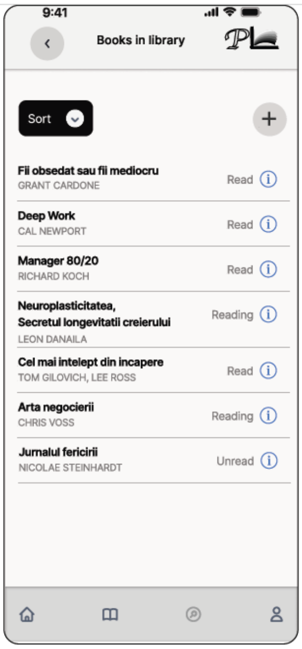
9:41

Home

Neuroplasticitatea, Secretul longevitatii creierului
LEON DANAILA
BOOKMARK: page 229
82%

Arta Negocierii
CHRIS VOSS
BOOKMARK: page 80
26%

Fii obsedat sau fii mediocru
GRANT CARDONE
BOOKMARK: page 241
86%

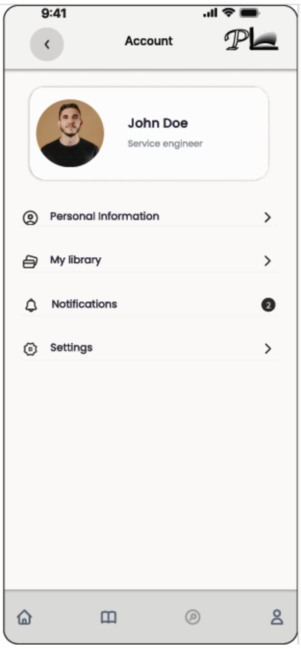


9:41

Books in library

Sort

Fii obsedat sau fii mediocru — GRANT CARDONE — Read
Deep Work — CAL NEWPORT — Read
Manager 80/20 — RICHARD KOCH — Read
Neuroplasticitatea, Secretul longevitatii creierului — LEON DANAILA — Reading
Cel mai intelept din incapere — TOM GILOVICH, LEE ROSS — Read
Arta negocierii — CHRIS VOSS — Reading
Jurnalul fericirii — NICOLAE STEINHARDT — Unread



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Account

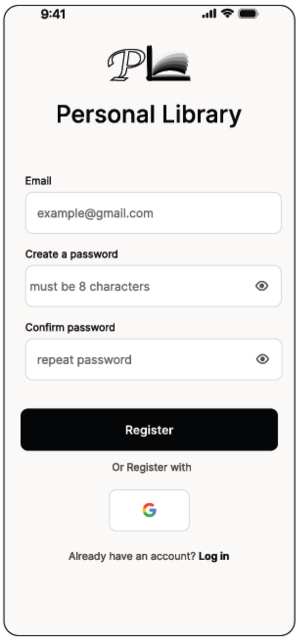
John Doe
Service engineer

Personal Information

My library

Notifications 2

Settings



9:41

Personal Library

Email

example@gmail.com

Create a password

must be 8 characters

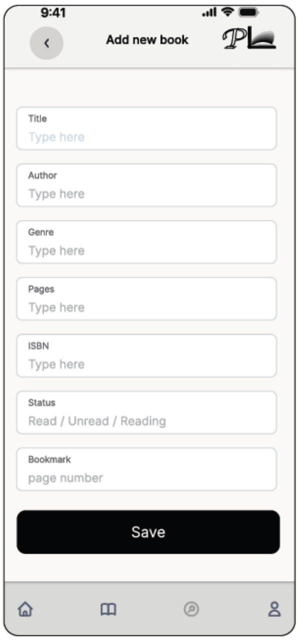
Confirm password

repeat password

Register

Or Register with

Already have an account? **Log in**



9:41

Add new book

Title
Type here

Author
Type here

Genre
Type here

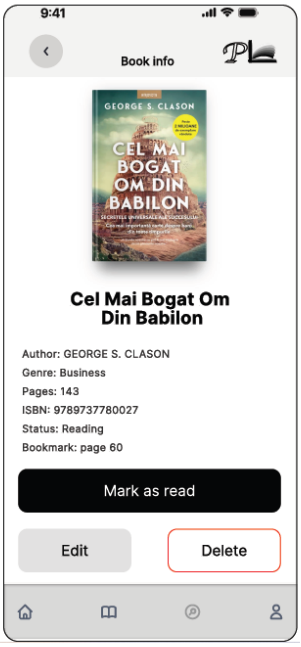
Pages
Type here

ISBN
Type here

Status
Read / Unread / Reading

Bookmark
page number

Save



9:41

Book info

Cel Mai Bogat Om Din Babilon

Author: GEORGE S. CLASON
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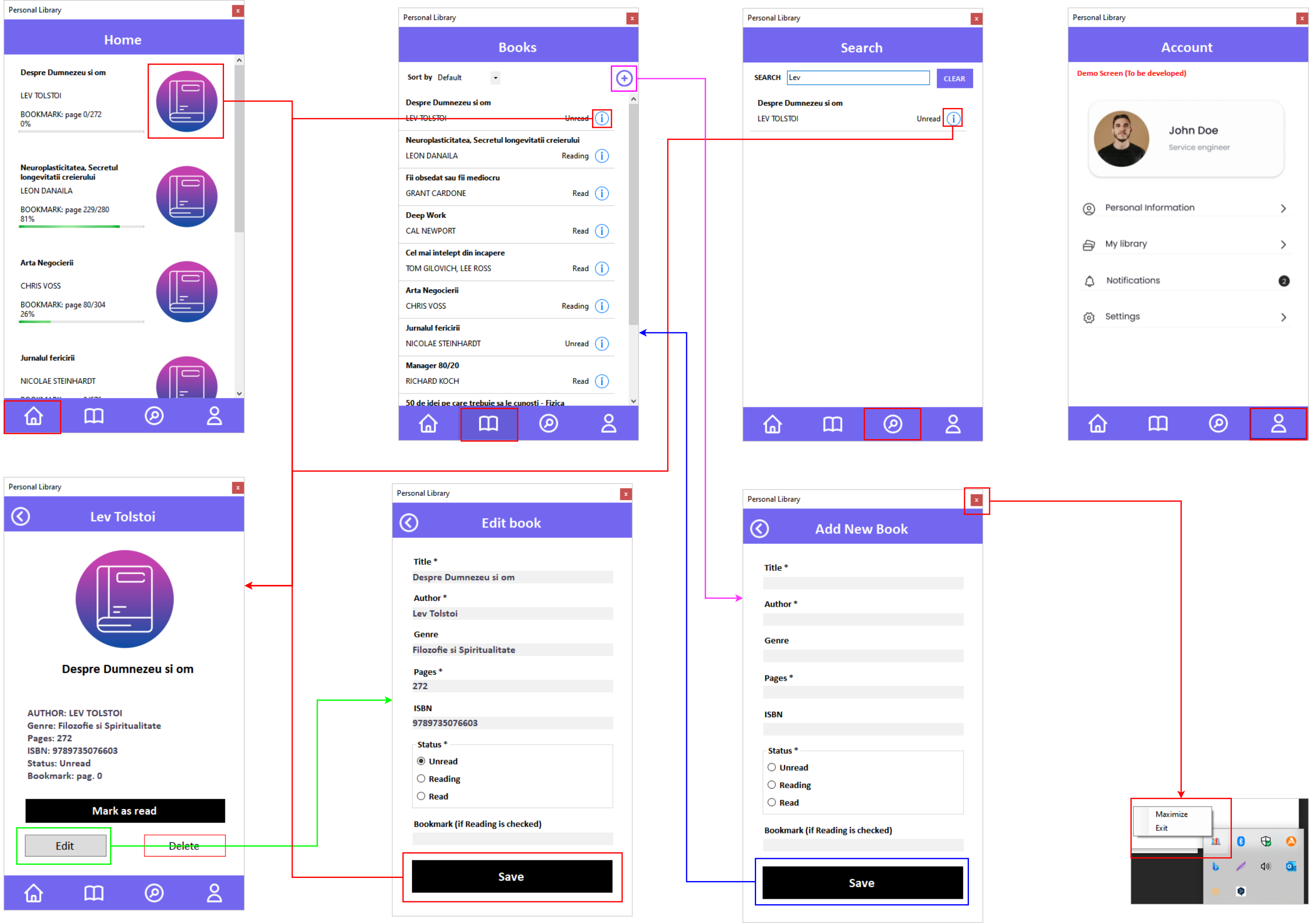
ISBN: 9789737780027
Status: Reading
Bookmark: page 60

Mark as read

Edit

Delete

2.3. User Interface Design – Windows Forms



Personal Library

Home

Despre Dumnezeu si om
LEV TOLSTOI
BOOKMARK: page 0/272
0%

Neuroplasticitatea, Secretul longevitatii creierului
LEON DANAILA
BOOKMARK: page 229/280
81%

Arta Negocierii
CHRIS VOSS
BOOKMARK: page 80/304
26%

Jurnalul fericirii
NICOLAE STEINHARDT

Personal Library

Books

Sort by Default

Despre Dumnezeu si om		
LEV TOLSTOI	Unread	ⓘ
Neuroplasticitatea, Secretul longevitatii creierului		
LEON DANAILA	Reading	ⓘ
Fii obsedat sau fii mediocru		
GRANT CARDONE	Read	ⓘ
Deep Work		
CAL NEWPORT	Read	ⓘ
Cel mai intelept din incapere		
TOM GILOVICH, LEE ROSS	Read	ⓘ
Arta Negocierii		
CHRIS VOSS	Reading	ⓘ
Jurnalul fericirii		
NICOLAE STEINHARDT	Unread	ⓘ
Manager 80/20		
RICHARD KOCH	Read	ⓘ
50 de idei pe care trebuie sa le cunosti - Fizica		

Personal Library

Search

SEARCH Lev CLEAR

Despre Dumnezeu si om
LEV TOLSTOI Unread ⓘ

Personal Library

Account

Demo Screen (To be developed)

John Doe
Service engineer

Personal Information
My library
Notifications 2
Settings

Personal Library

Lev Tolstoi

Despre Dumnezeu si om

AUTHOR: LEV TOLSTOI
Genre: Filozofie si Spiritualitate
Pages: 272
ISBN: 9789735076603
Status: Unread
Bookmark: pag. 0

Personal Library

Edit book

Title *
Despre Dumnezeu si om

Author *
Lev Tolstoi

Genre
Filozofie si Spiritualitate

Pages *
272

ISBN
9789735076603

Status *
● Unread
○ Reading
○ Read

Bookmark (if Reading is checked)

Personal Library

Add New Book

Title *

Author *

Genre

Pages *

ISBN

Status *
○ Unread
○ Reading
○ Read

Bookmark (if Reading is checked)

3. INSTALLATION AND SETUP

3.1. System Requirements

Before installing the application, ensure that your system meets the following requirements:

- **Operating System:** Windows 10 or later
- **Development Environment:** Visual Studio 2022 (or later)
- **.NET Framework:** .NET 8.0 or later
- **Disk Space:** At least 500MB of free space

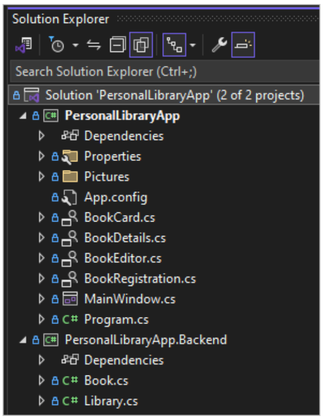
3.2. Installation Guide

Follow these steps to install and run the application:

1. **Clone the repository**
   Open a terminal or command prompt and run the following command to download the source code:

“git clone https://github.com/CristiMCV91/PersonalLibraryDesktopApp.git”

2. **Open the solution in Visual Studio**
   - Launch **Visual Studio 2022**.
   - Click on **File → Open → Project/Solution**.
   - Navigate to the cloned repository folder and open the *PersonalLibraryDesktopApp.sln* file.
   - Project structure with separate project for Frontend (Windows Forms) and Backend (Class Library):



```
Solution 'PersonalLibraryApp' (2 of 2 projects)
  PersonalLibraryApp
    Dependencies
    Properties
    Pictures
    App.config
    BookCard.cs
    BookDetails.cs
    BookEditor.cs
    BookRegistration.cs
    MainWindow.cs
    Program.cs
  PersonalLibraryApp.Backend
    Dependencies
    Book.cs
    Library.cs
```

3. **Build and Run the Project**
   - In Visual Studio, ensure the correct startup project is selected.
   - Click **Build → Build Solution** (or press Ctrl + Shift + B) to compile the project.
   - Click **Start** (or press F5) to run the application.

Once the application is running, you can start adding and managing your book collection.

3.3. Running the Application

After successfully building the project, you can run the **Personal Library** application and interact with its features.

Running from Visual Studio

If you are running the application from **Visual Studio**, follow these steps:

1. Ensure that the **Startup Project** is correctly set:
   - In **Solution Explorer**, right-click on the main project.
   - Select **Set as Startup Project** if not already selected.
2. Click the **Start** button in Visual Studio or press F5 to launch the application.

Running the Executable File

If you want to run the application without opening Visual Studio, you can execute the built .exe file:

1. Navigate to the bin folder in the project directory:

- If built in **Debug** mode:

  PersonalLibraryApp\PersonalLibraryDesktopApp\PersonalLibraryApp\bin\Debug\net8.0-windows\

- If built in **Release** mode (for distribution): PersonalLibraryApp\PersonalLibraryDesktopApp\PersonalLibraryApp\bin\Release\net8.0-windows\

2. Locate the PersonalLibraryDesktopApp.exe file.
3. Double-click the file to launch the application.

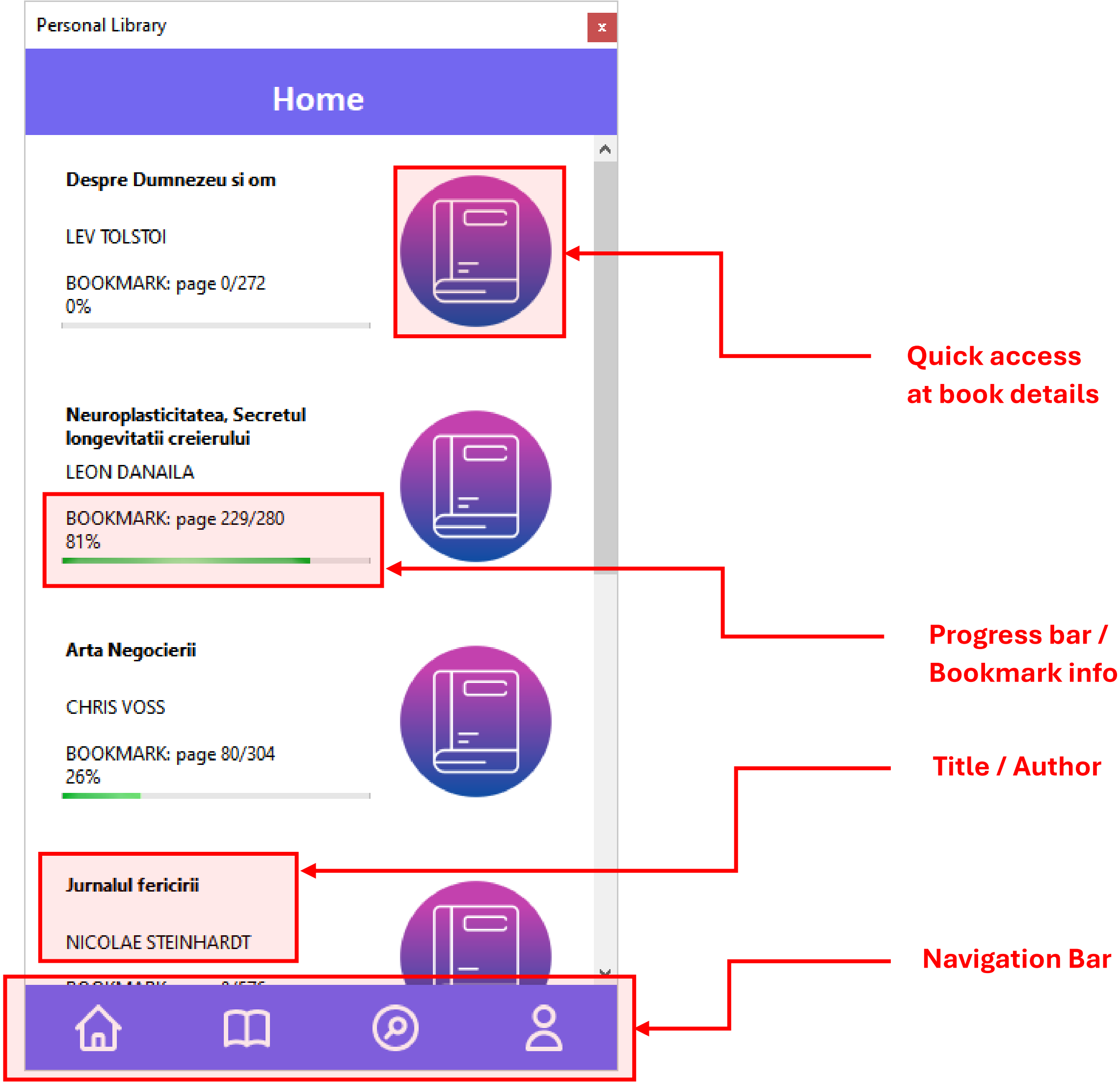
4. FEATURES AND USAGE

This section provides an in-depth look at the main features of the **Personal Library** application, explaining how to navigate and utilize its functionalities efficiently.

4.1. Home Page Overview

The **Home Page** serves as a dashboard of the application, offering a quick view at your book collection with status “**reading**” and “**unread**”. Key elements include:

- **Books Display:** Shows books categorized as *Reading* or *Unread* for quick access
- **Navigation Menu:** Provides access to other sections, such as all books, find a book, and account (not developed yet).
- **Quick Actions:** Allows users to acces details of a book by clicking on the pictogram of each book.



Personal Library

Home

Despre Dumnezeu si om

LEV TOLSTOI

BOOKMARK: page 0/272
0%

Neuroplasticitatea, Secretul longevitatii creierului

LEON DANAILA

BOOKMARK: page 229/280
81%

Arta Negocierii

CHRIS VOSS

BOOKMARK: page 80/304
26%

Jurnalul fericirii

NICOLAE STEINHARDT

Quick access at book details

Progress bar / Bookmark info

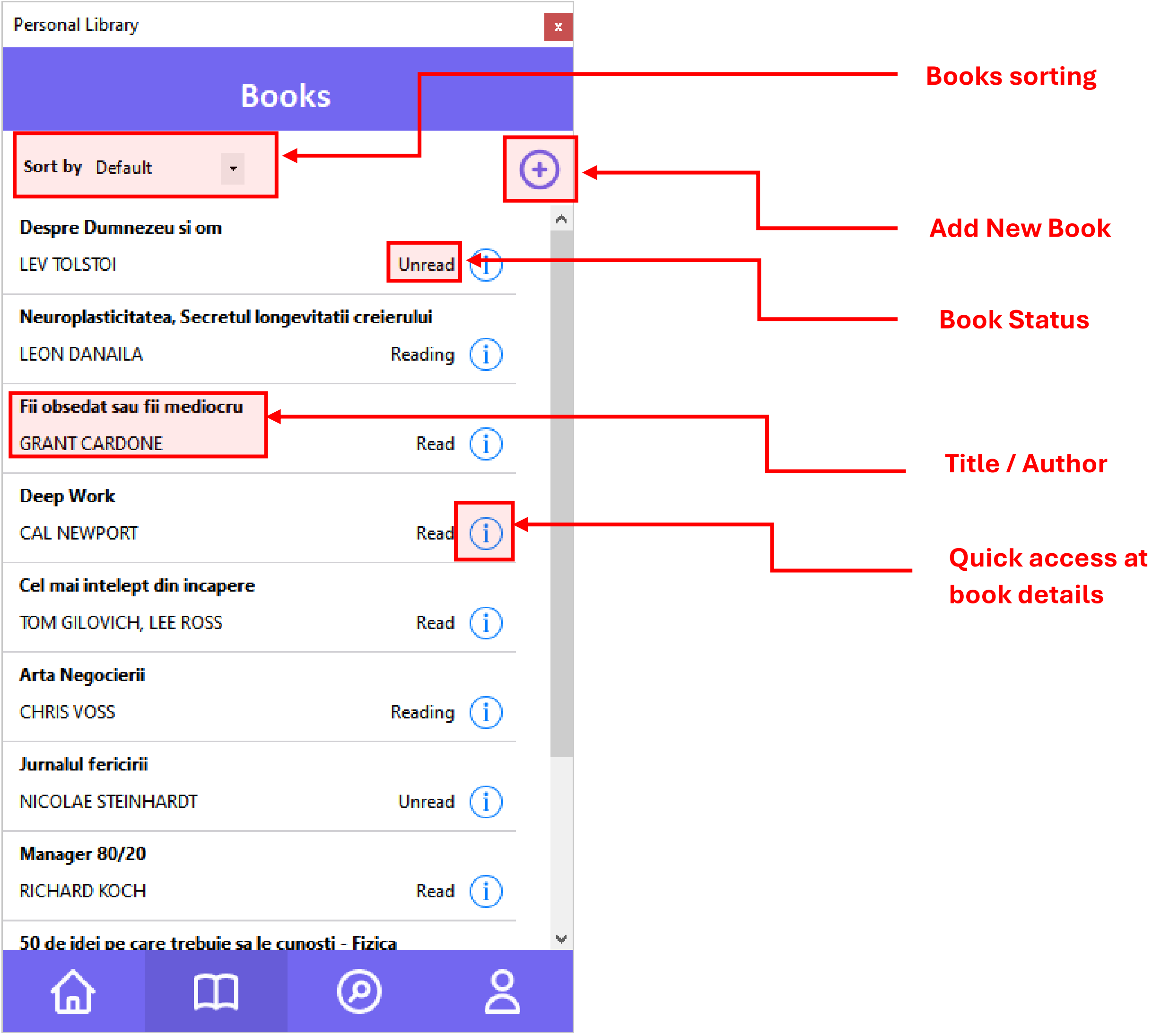
Title / Author

Navigation Bar

4.2. Adding and Managing Books

Users can add new books to their library and manage existing entries:

- **Adding a New Book:**
  - Click on the **"Add Book"** button.
- **Sort books by: Default / Title / Author / Status**
- **View Book details**



Personal Library

Books

Sort by Default

Despre Dumnezeu si om
LEV TOLSTOI Unread

Neuroplasticitatea, Secretul longevitatii creierului
LEON DANAILA Reading

Fii obsedat sau fii mediocru
GRANT CARDONE Read

Deep Work
CAL NEWPORT Read

Cel mai intelept din incapere
TOM GILOVICH, LEE ROSS Read

Arta Negocierii
CHRIS VOSS Reading

Jurnalul fericirii
NICOLAE STEINHARDT Unread

Manager 80/20
RICHARD KOCH Read

50 de idei pe care trebuie sa le cunosti - Fizica

Books sorting

Add New Book

Book Status

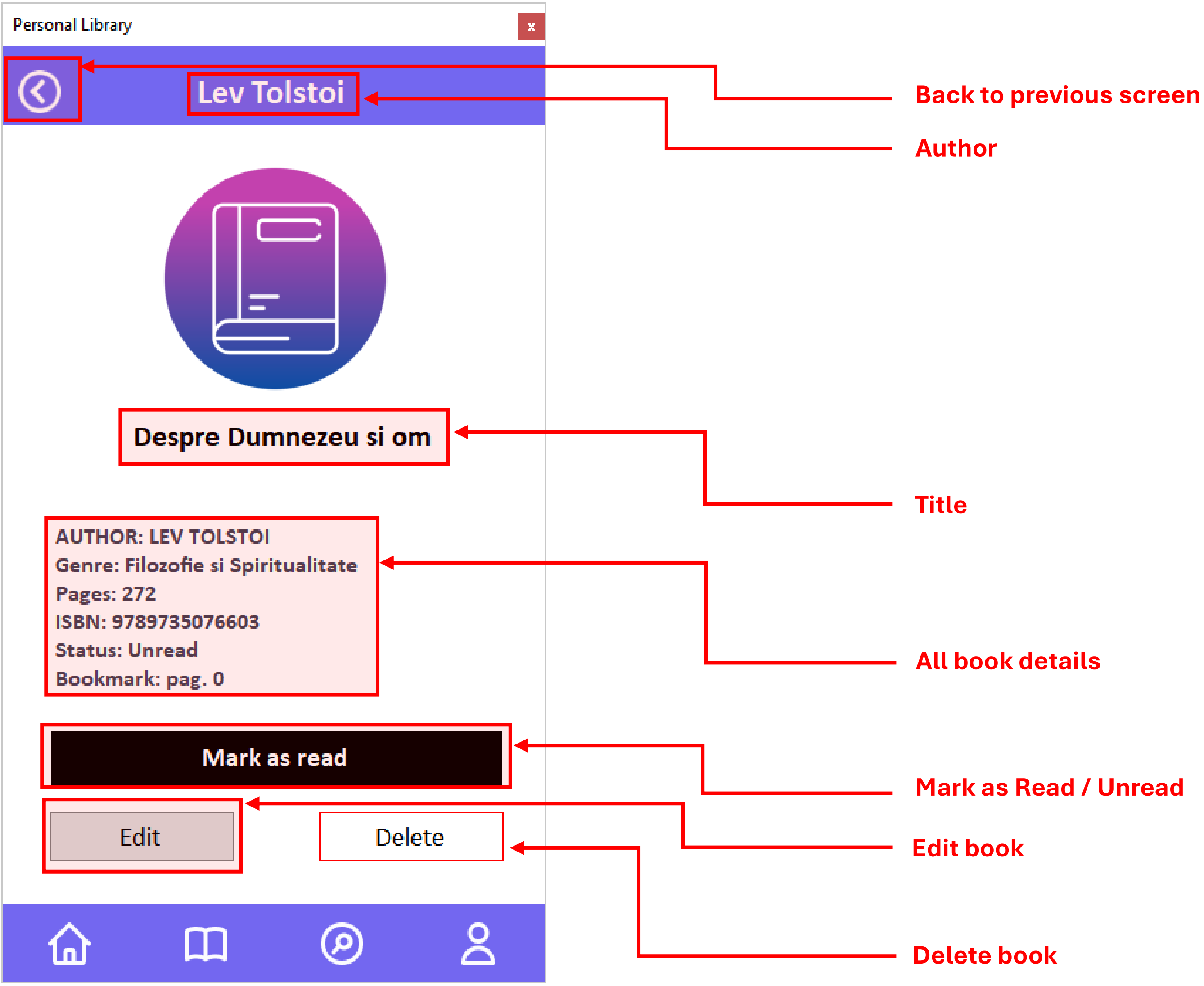
Title / Author

Quick access at book details

4.3. Viewing and Editing Book Details

Each book has a detailed view that includes:

- **Book Information:** Title, Author, Genre, and Status.
- **Change Book Status:** Read / Unread
- **Edit book:** Users can update book details anytime.
- **Delete Book:** user can delete a book



Lev Tolstoi

Despre Dumnezeu si om

AUTHOR: LEV TOLSTOI
Genre: Filozofie si Spiritualitate
Pages: 272
ISBN: 9789735076603
Status: Unread
Bookmark: pag. 0

4.4. Adding and Editing Books

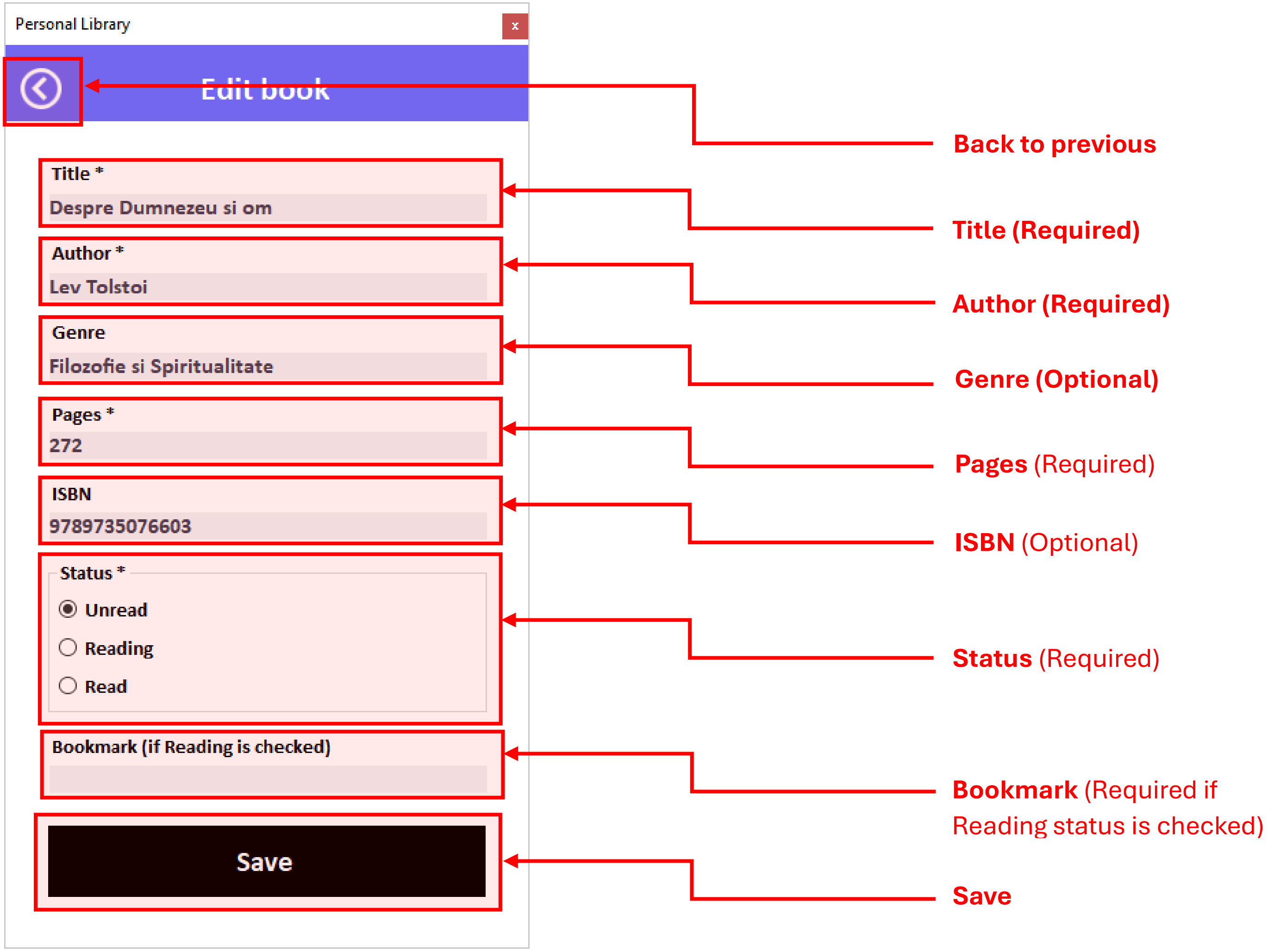
The **Personal Library** application allows users to efficiently add new books and edit existing ones through a structured form interface.

Open the Book Form:

- Click **"Add New Book"** to create a new entry (section 4.2).
- To edit an existing book, select it from the list and click **"Edit"** (section 4.3).

Enter or Modify Book Details:

- **Title** *(Required)* – Enter or update the book's title.
- **Author** *(Required)* – Provide or change the author's name.
- **Genre** *(Optional)* – Provide or change the genre of the book.
- **Pages** *(Required)* – Enter or change the number of pages.
- **ISBN** *(Optional)* – Provide or change the ISBN unique code of the book.
- **Status** – Select one of the reading statuses: *Unread / Reading / Read*
- **Bookmark (Required if Reading status is checked)** – Specify or update the last page read.
- **Save button**: This will save your new book or updated details.



Personal Library

Edit book

Title *
Despre Dumnezeu si om

Author *
Lev Tolstoi

Genre
Filozofie si Spiritualitate

Pages *
272

ISBN
9789735076603

Status *
● Unread
○ Reading
○ Read

Bookmark (if Reading is checked)

Back to previous

Title (Required)

Author (Required)

Genre (Optional)

Pages (Required)

ISBN (Optional)

Status (Required)

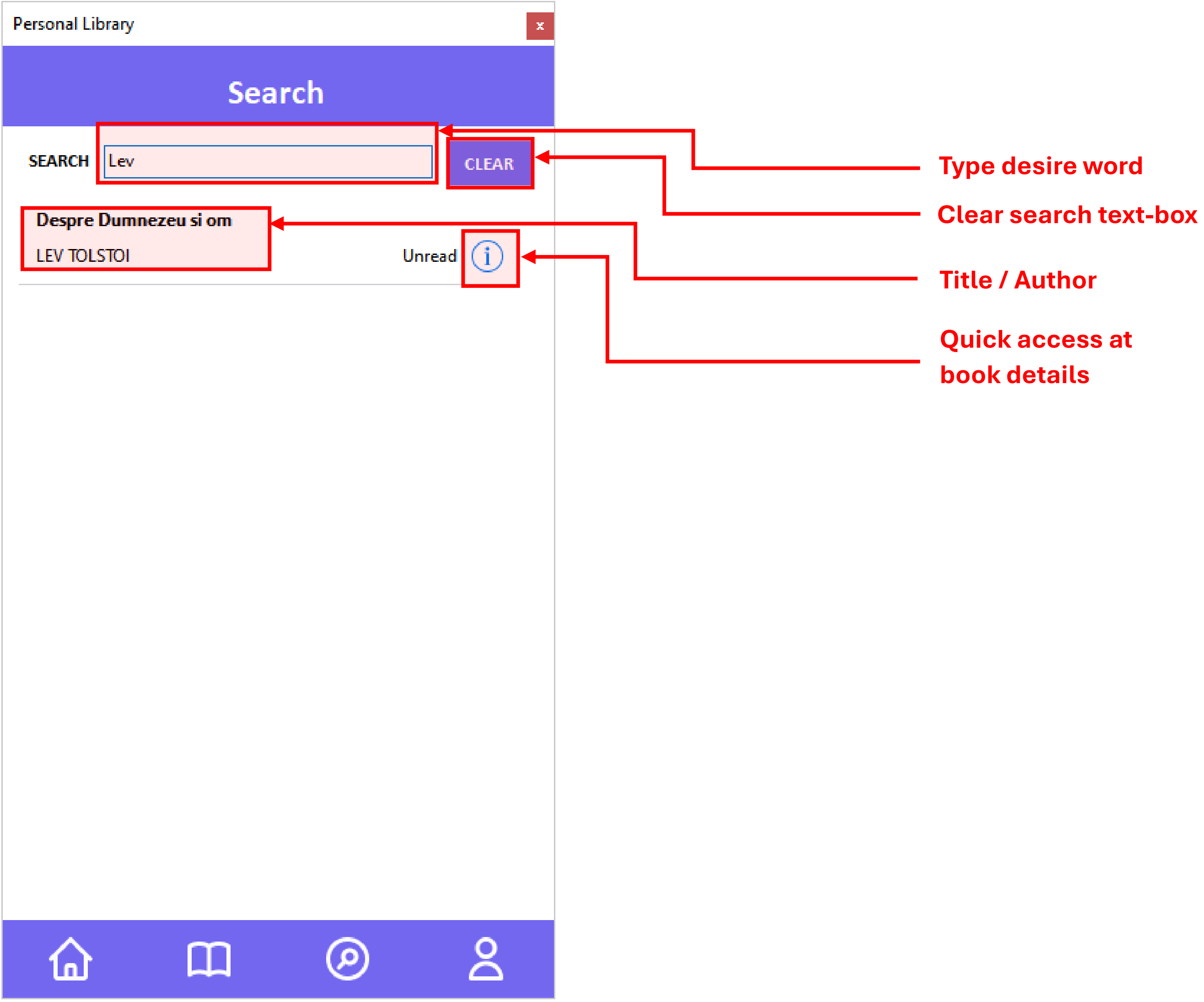
Bookmark (Required if Reading status is checked)

Save

4.5. Search Function

The application provides a **Search section**:

- **Search Functionality:**
  - Users can search for books by *Title* or *Author* using the search bar.
- **Clear button:**
  - User can clear the words typed in the text box by pressing clear button



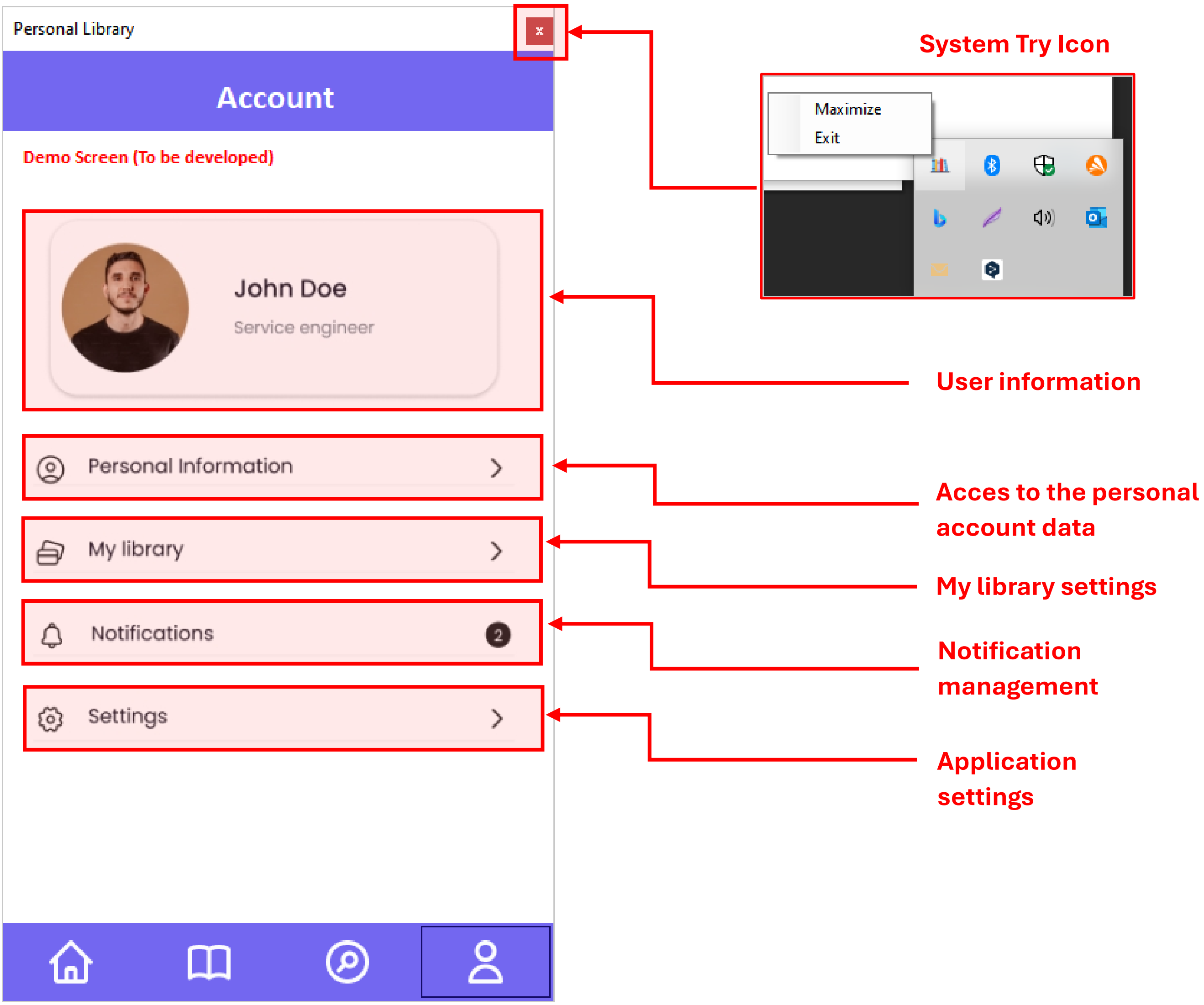
4.6. Account Section and System Tray Functionality

In the future the application will be upgraded with authentication and data synchronization.

In this phase of the **Account** section is only a Demo Screen with an example picture.

Also the **Personal Library** application supports **System Tray Mode** for minimal disruption while working:

- When minimized, the application remains active in the **Windows System Tray**. For the first minimization will appear a pop-up notification in the bottom-right corner of the screen.
- Users can reopen the application by double clicking the **tray icon**.
- Right-clicking the tray icon provides quick actions such as **Maximize** and **Exit.**



System Try Icon

User information

Acces to the personal account data

My library settings

Notification management

Application settings

5. FUTURE DEVELOPMENT & ENHANCEMENTS

As the **Personal Library** application evolves, I aim to leverage the knowledge from the **IT School** course of **C#** to implement planned improvements and expansions that will enhance its functionality and user experience.

5.1. Potential Features and Upgrades

I have in plan future updates to introduce additional functionality that will improve usability and expand the application's capabilities.

Feature Expansion Ideas:

- **Dark Mode & Custom Themes:** Users could personalize the interface with different themes for a better visual experience.
- **Advanced Filtering & Tagging:** Additional options to categorize books using custom tags, multi-level filtering, and reading history tracking.
- **Integration with Online Libraries:** Connecting to services such as **Google Books API** for automatic book information update by the unique code ISBN.
- **User Accounts & Profiles:** Implementing login functionality that will allow users to manage their personal book collections and to borrow books between friends.
- **Reminders & Notifications:** Setting reading goals with reminders for unfinished books or upcoming releases from favorite authors.

5.2. Mobile Application Plans

Although the initial design was intended for mobile, the current implementation is optimized for windows using **Windows Forms**. Future versions may revisit mobile development with modern frameworks such as **.NET MAUI**.

Planned Mobile Features:

- **Cross-Platform Compatibility:** The application could be developed for both **iOS** and **Android**, providing seamless access across devices.
- **Cloud Synchronization:** Users could sync their book collection across multiple devices using **cloud storage** or **a dedicated database**.
- **Offline Mode:** The mobile version would allow users to add, edit, and manage books without an internet connection, with data synchronization upon reconnection.
- **Mobile-Friendly UI:** A redesigned interface optimized for touchscreens, including swipe gestures for book navigation and quick actions.