Documentation - “A4Task” project

Team

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Introduction

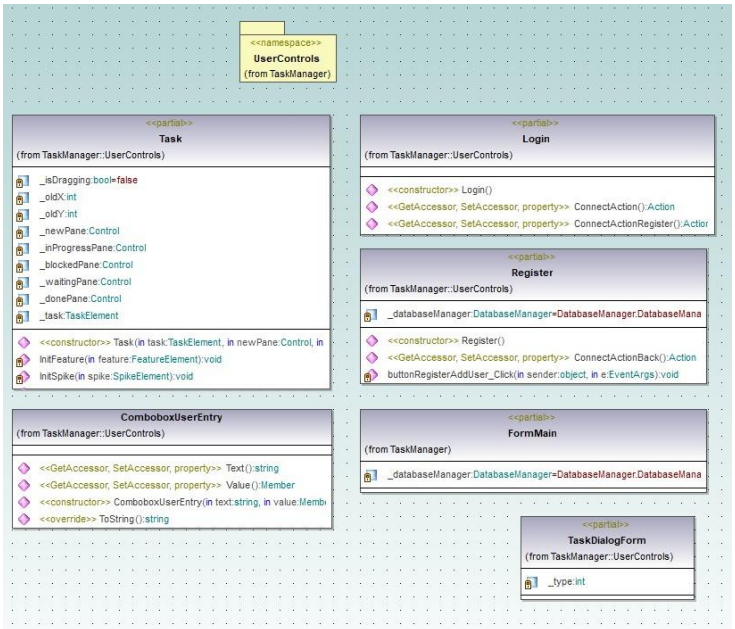
This document serves as a guide for the task manager app developed collaboratively by our team of four students. With a focus on utilizing our skills and respecting to best practices in app development, this documentation provides insights into the purpose, features, and functionalities of the “A4Task” task manager app.

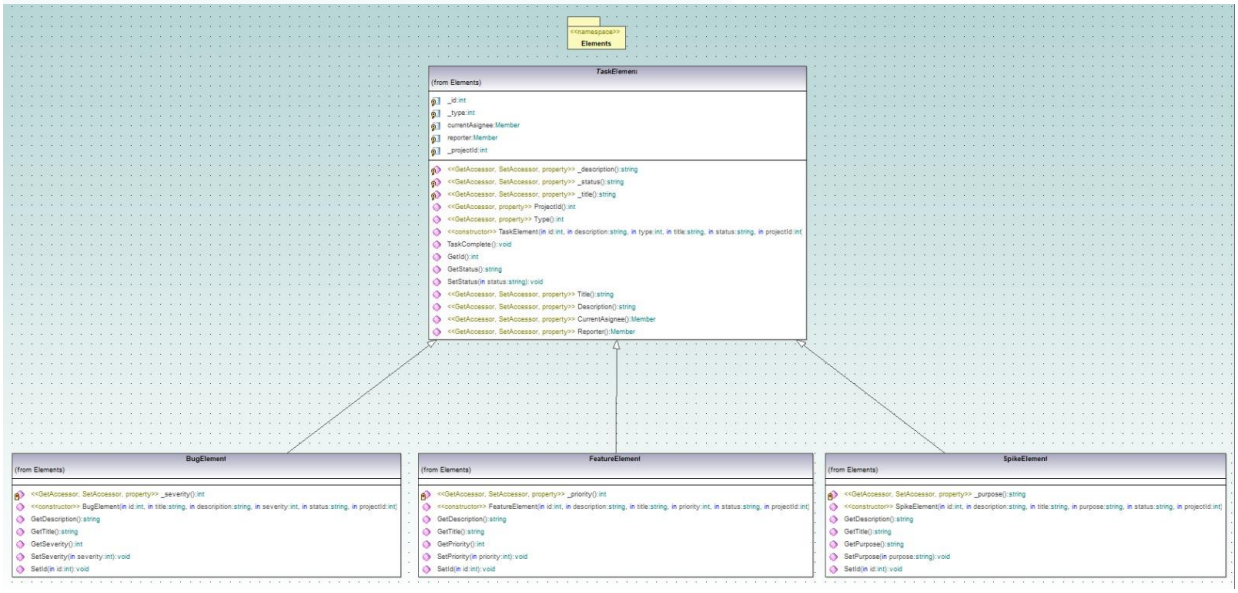
App Name

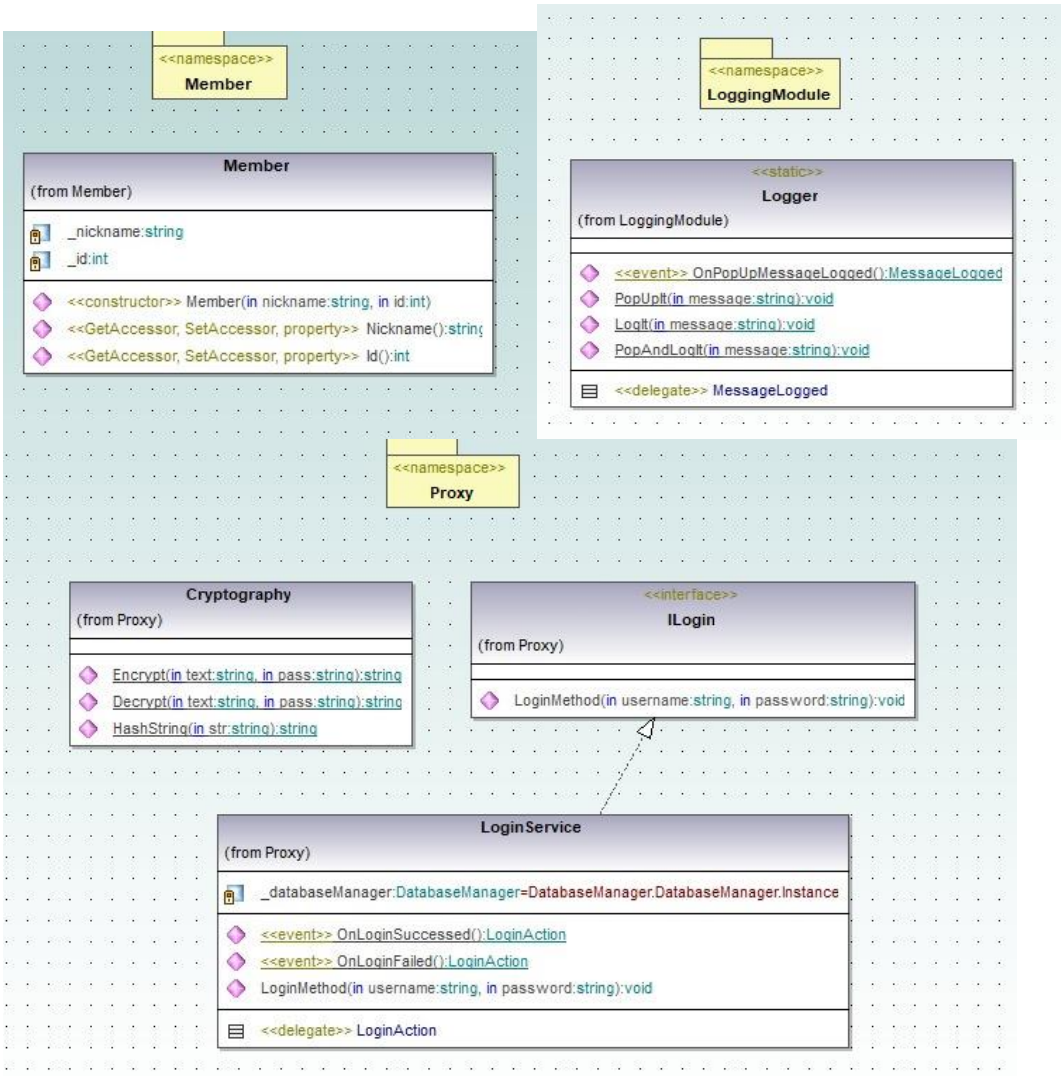
The name A4Task originates from the shared name Andrei among the four developers, emphasizing our collective collaboration and commitment in creating this task manager app.

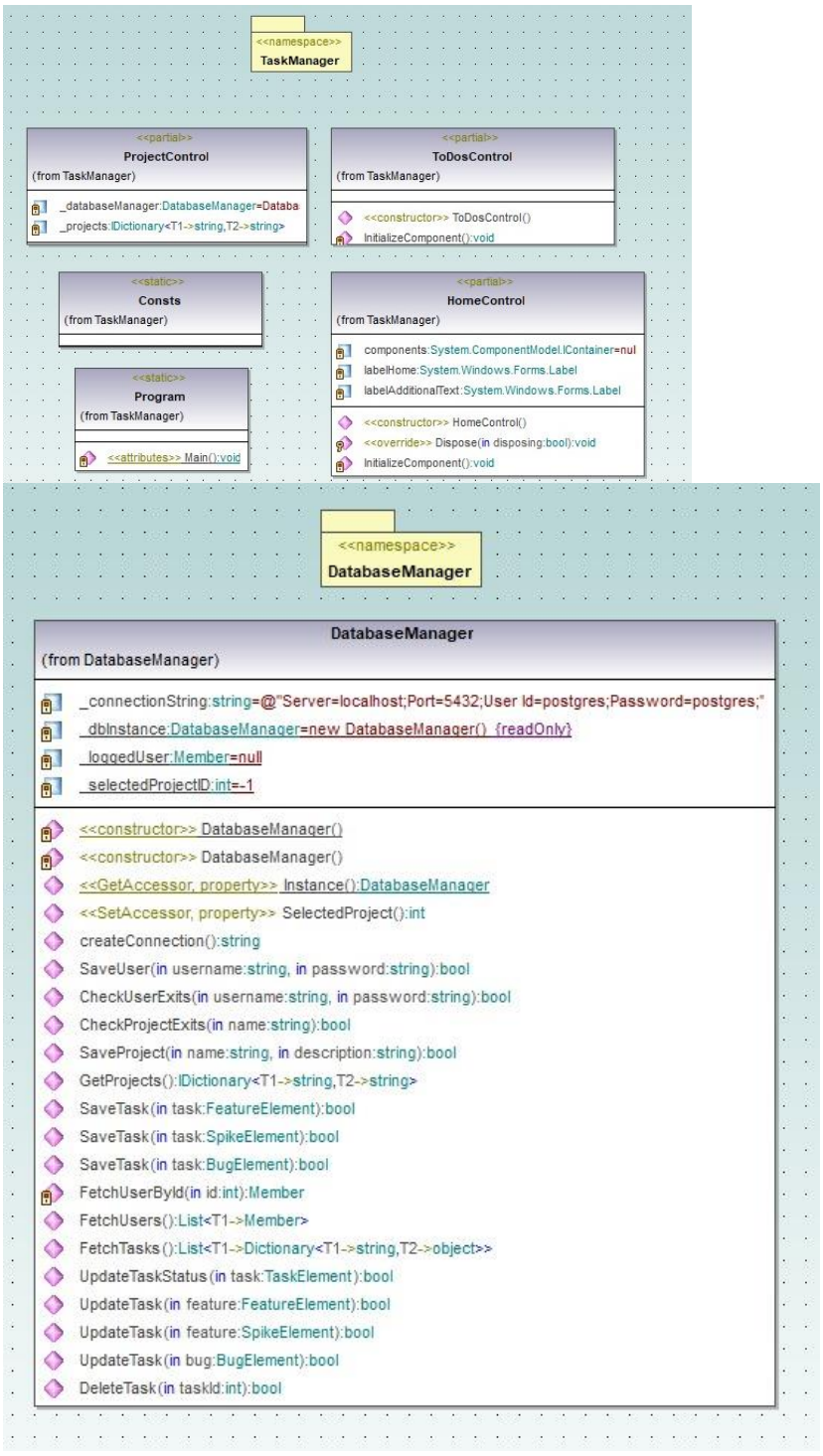
Modules

The code for the task manager app is divided into modules to ensure modularity, scalability, and ease of development and maintenance.

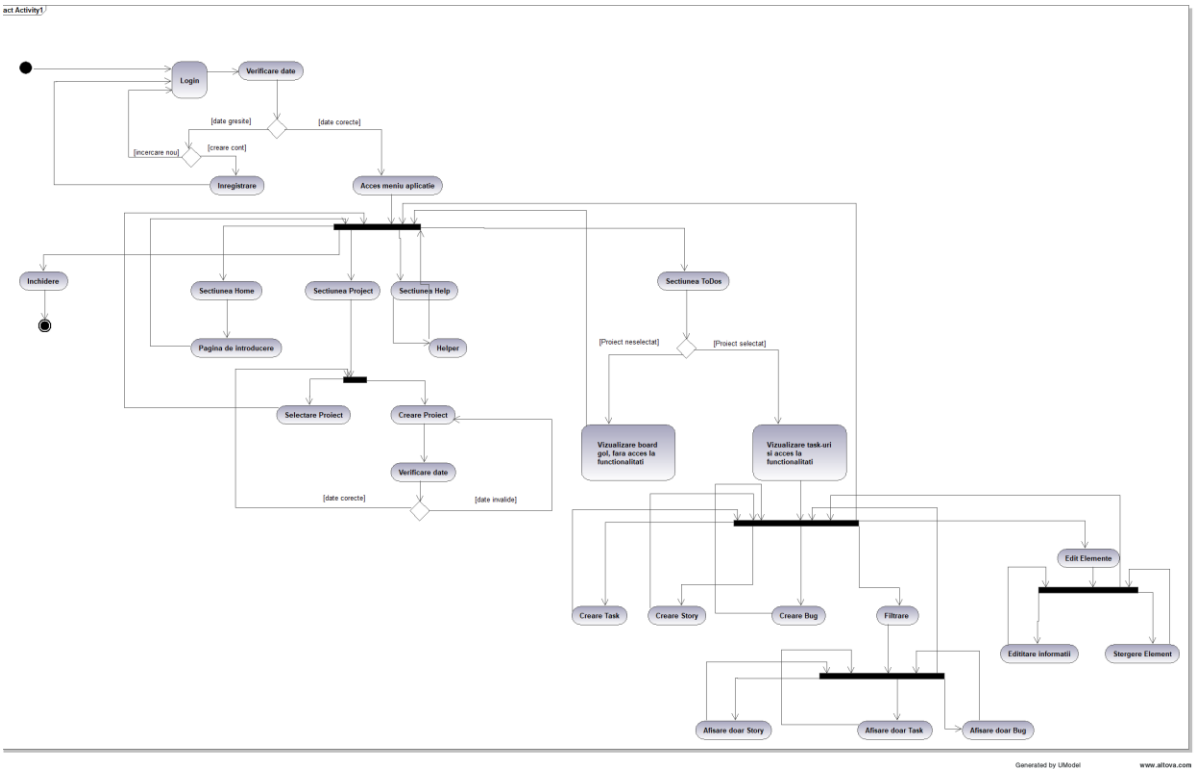




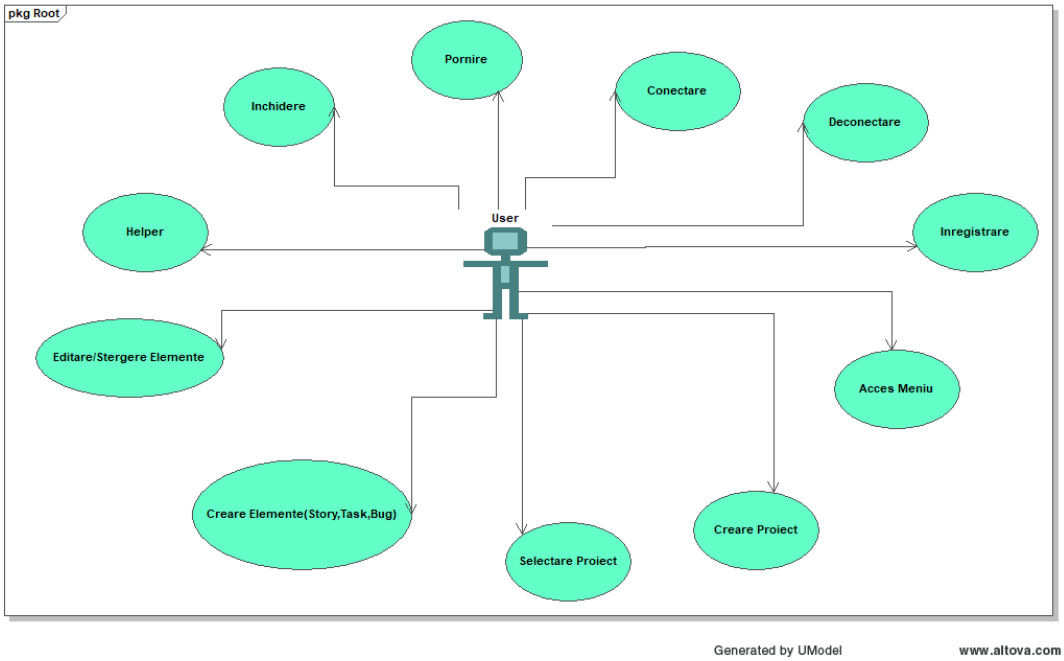




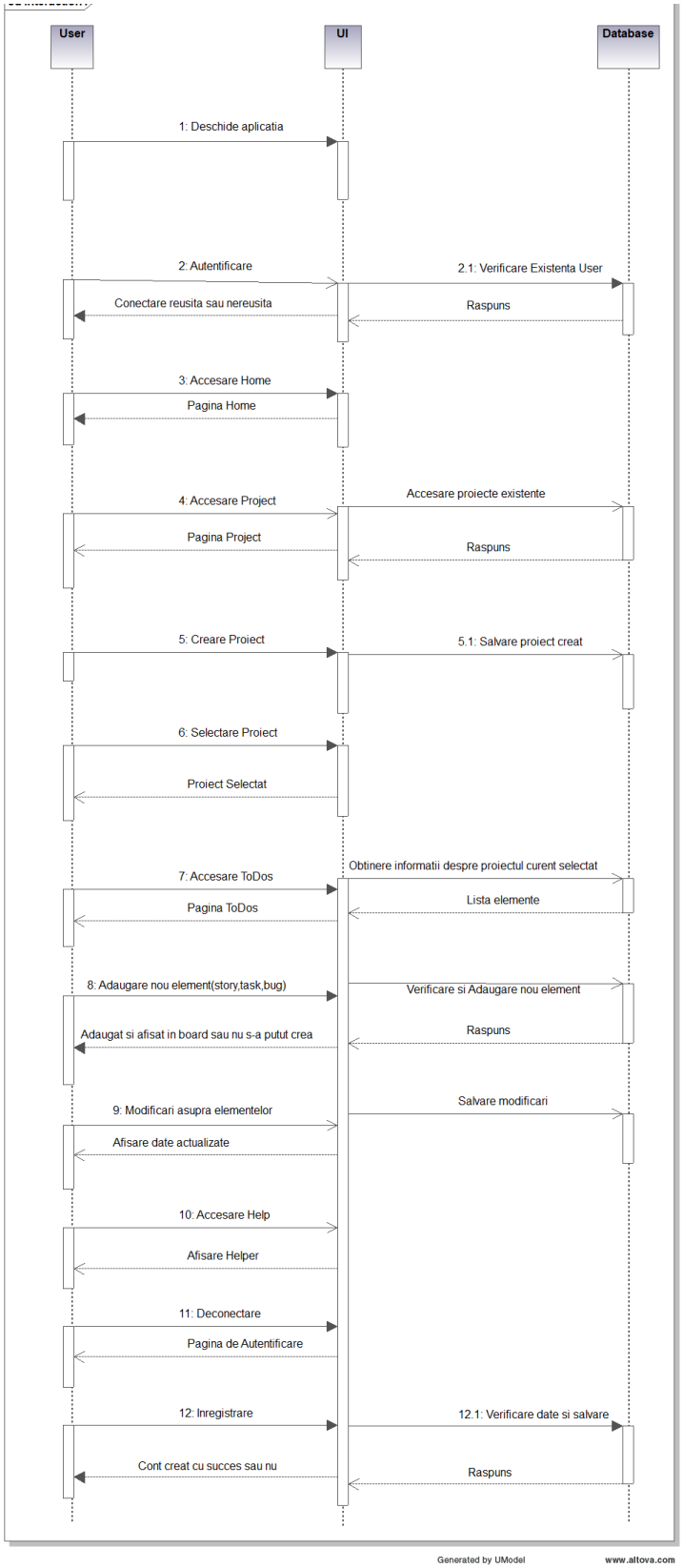
Activity diagram



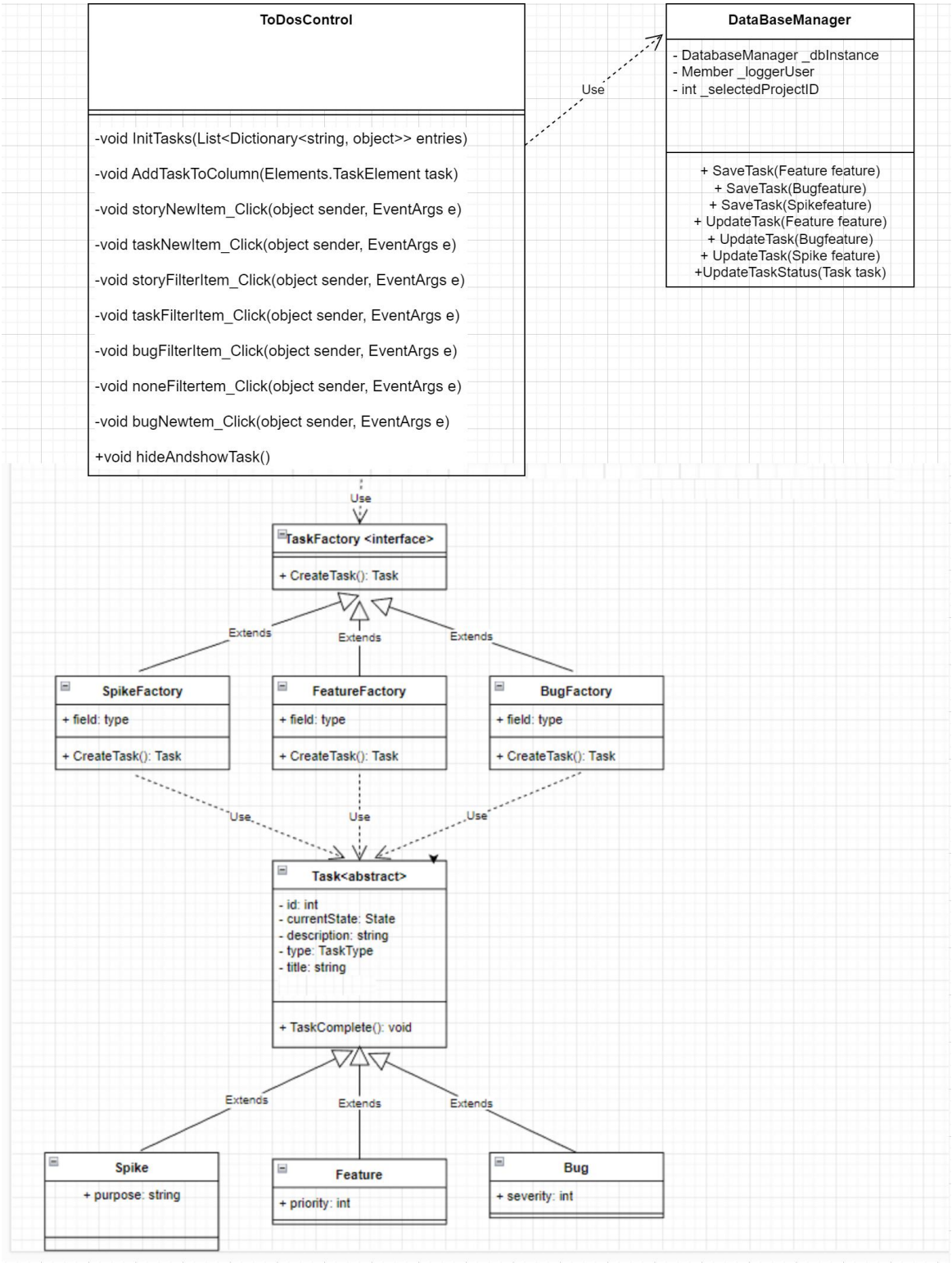
User diagram



Sequence diagram



Class Diagram



Software Requirements Specification

for

A4Task

Version 1.0 approved

Prepared by <Andrei Prigoreanu>

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<27/05/2023>

Table of Contents

Revision History

Name	Date	Reason For Changes	Version
Beta A4Task	28.05.2023	First version for testing	1.0

1. Introduction

1.1 Purpose

The A4Task App v1.0 is a project management app, it enhances collaboration and improves productivity for app development teams by providing a visual task board, facilitating communication, promoting accountability, and capturing data insights.

1.2 Document Conventions

This document follows the IEEE standard formatting for software development. The standard defines a regular formatting this document follows including writing to be done in third-person, passive voice as well as readable and grammatically correct text.

1.3 Intended Audience and Reading Suggestions

The intended audience for this Software Requirements Specification (SRS) document includes:

- *Developers*
- *Testers*
- *Project Managers*

To effectively understand this SRS document for the task manager app, the following reading suggestions based on the intended audience are provided:

- *Developers: Start by reviewing the Functional Requirements section to understand the specific features, modules, and system behaviors that need to be implemented. Pay attention to any technical specifications mentioned in the document.*
- *Testers: Focus on the Use Cases section to comprehend the expected user interactions, system responses, and test scenarios. Additionally, carefully review the Testing Requirements section to understand the planned testing approaches, test cases, and acceptance criteria.*
- *Project Managers: Begin with the Introduction to gain an overview of the project's purpose, goals, and intended outcomes. Then, thoroughly examine the Scope section to understand the app's boundaries and included functionalities. Consider the Non-Functional Requirements to ensure alignment with project objectives.*

1.4 Product Scope

The product scope for the A4Task app encompasses the development of user-friendly application that facilitates effective task management within app development teams. The app will provide features such as task creation, assignment, prioritization and progress tracking. It will support agile project management methodologies and offer visual representations of tasks and their statuses.

1.5 References

https://scrumguides.org/scrum-guide.html
https://learn.microsoft.com/en-us/dotnet/
https://learn.microsoft.com/en-us/dotnet/csharp/

2. Overall Description

2.1 Product Perspective

The task manager app is designed to operate as a standalone software application, providing a dedicated platform for managing tasks within app development teams. It acts as a central hub for organizing and tracking tasks and improving productivity.
The app requires access to a database to store task-related information securely.

2.2 Product Functions

User Registration and Login: App allows users to create an account by registering with their credentials and provides a secure login mechanism for authenticated access to the app's features and functionalities.

Task Creation and Assignment: Users can create new tasks by providing relevant details such as title, description, due dates, and priority levels. They can assign tasks to specific team members or themselves, ensuring clear ownership and responsibility.

Task Tracking: The app provides a dashboard or a visual representation of tasks, allowing users to track the progress of tasks at various stages.

Task Editing and Updating: Task details can be edited and updated by users, including modifying task descriptions, adjusting due dates, changing assigned users, or updating task status.

2.3 User Classes and Characteristics

- *Developers are the primary users responsible for implementing the app's functionalities and features.*
- *Testers play a critical role in ensuring the quality and functionality of the app. They possess knowledge of testing methodologies, bug tracking systems, and test case creation.*
- *Project managers oversee the app development project and are responsible for planning, coordinating, and monitoring progress. They have expertise in project management methodologies, resource allocation, and tracking. Project managers require an overview of the project's tasks, milestones, and team members' progress. They may need features for task assignment and resource allocation.*

2.4 Operating Environment

- *The app is intended to be deployed and used on Windows operating systems, such as Windows 10, Windows 8, or Windows 7. The app will be designed to run on standard x86 or x64 architecture processors.*

- *Minimum recommended memory requirement for smooth app performance is 4 GB.*
- *Minimum disk space requirement is 100 MB.*

2.5 Design and Implementation Constraints

The app will require the 4.7 .NET Framework version to be installed on the user's system for proper execution.
A database management system called X is also required, it provides robust data storage and retrieval capabilities, a minimum version of the X DBMS for proper functionality.

2.6 User Documentation

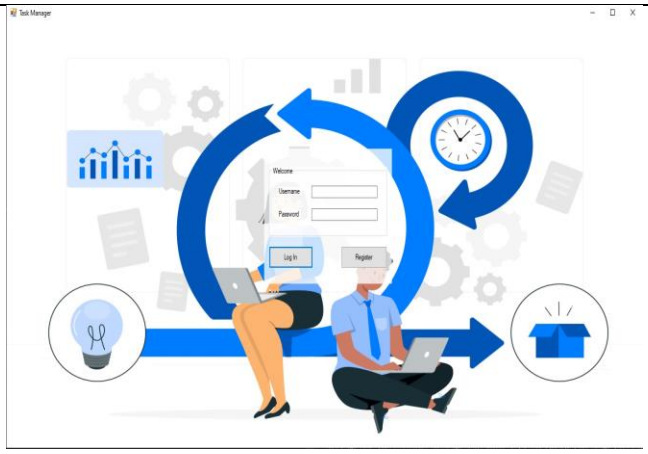
The task manager app will feature a built-in user manual to provide guidance and assistance to users. Users can access the manual by clicking on the "?" icon located on any screen within the app. By clicking the icon, relevant and context-specific information will be displayed, offering instructions, explanations, and tips to help users navigate through different features and functionalities.

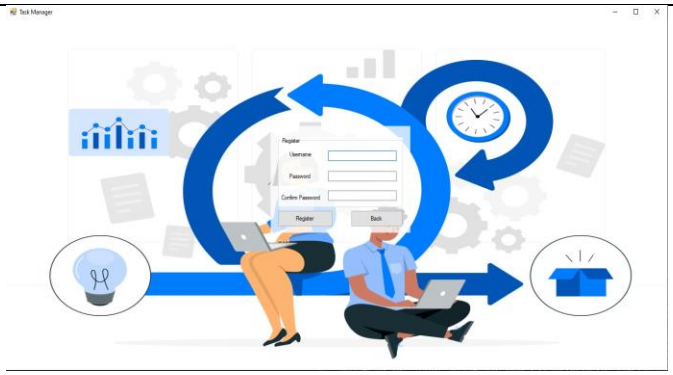
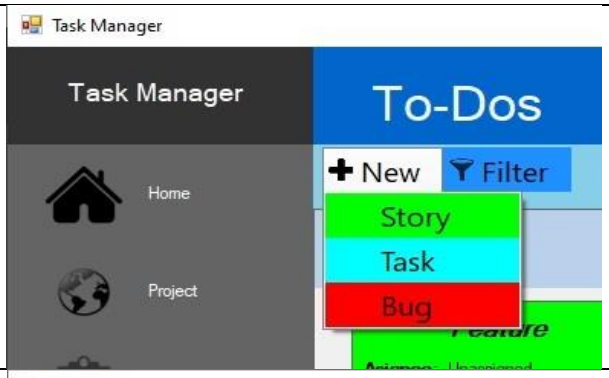
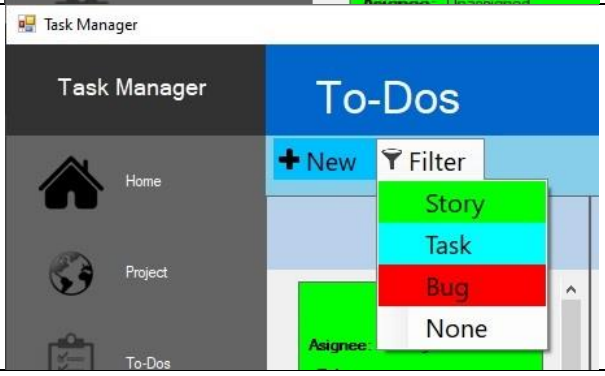
2.7 Assumptions and Dependencies

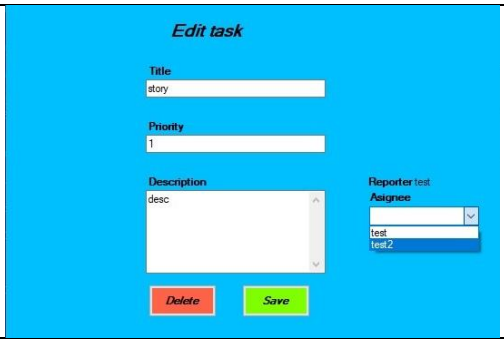
- *It is assumed that users of the task manager app have basic computer skills and familiarity with software applications.*
- *Users are assumed to have access to a Windows-based operating system, such as Windows 10, Windows 8, or Windows 7.*
- *It is assumed that users have a fundamental understanding of task management concepts and agile software development methodologies.*
- *Development is subject to the availability of resources, including time, budget, and human resources allocated to the project.*

3. External Interface Requirements

3.1 User Interfaces

Login Screen *The login screen allows users to securely authenticate and access the task manager app by entering their credentials.*	

Register Screen *The register screen enables new users to create an account by providing the necessary information and credentials to access the task manager app.*	
Board View *The task board provides users with a view of task statuses, allowing them to create, edit, and filter tasks or use the main menu.*	
"New" Button *The "New" button facilitates the creation of tasks, bugs, or stories.*	
"Filter" Button *The filter button allows users to refine the task view by selecting criteria such as story, bug, task, or none, displaying only the desired task types.*	

Create/Edit Box *The create box provides an area for users to input and add relevant information, such as details, descriptions, or specifications.*		

3.2 Hardware Interfaces

The A4Task application is designed to be operated using standard input devices, meaning a keyboard and mouse. Users can interact with the application's interface and perform tasks using keyboard inputs and mouse clicks. The application does not require any specialized hardware interfaces or peripherals beyond the standard keyboard and mouse commonly available on personal computers.

3.3 Software Interfaces

The task manager application interfaces with an external database, X, to store and retrieve data related to users, task details, and other relevant information. The X database serves as the repository for storing task-related data, user profiles, and associated metadata. The application utilizes standard database connectivity methods and protocols to establish a connection with the X database, enabling data interaction and ensuring data consistency and integrity.

3.4 Communications Interfaces

The task manager application operates solely on local storage and does not require any external communication interfaces or internet connectivity. All data storage and retrieval processes occur within the application's local storage environment.

4. System Features

4.1 Performance Requirements

The task manager app requires the following hardware specifications for optimal performance: a minimum processor (e.g., Intel Core i5) with a clock speed of 2.5 GHz or higher, a recommended minimum of 4 GB of RAM to accommodate tasks and concurrent users, and sufficient storage space for the app, database, and related files. Since it operates solely on local storage, network requirements are not applicable.

4.2 Safety Requirements

The task manager app adheres to industry-standard security practices, including secure data storage, encryption of sensitive information, and access controls to prevent unauthorized access.

4.3 Security Requirements

The task manager app prioritizes security by implementing authentication mechanisms to ensure user identity verification. User passwords are securely hashed and stored, and appropriate access controls are implemented to limit user privileges.

4.4 Software Quality Attributes

Usability: The task manager app prioritizes usability to ensure an intuitive and user-friendly interface. It incorporates clear navigation, consistent design patterns, and appropriate feedback to enhance user experience.

Reliability: The app emphasizes reliability, ensuring consistent and error-free performance, it is designed to handle unexpected scenarios gracefully, maintaining stability and providing a reliable platform for users to manage their tasks without disruptions.

Maintainability: The task manager app prioritizes maintainability, enabling easy updates, bug fixes, and enhancements. The codebase follows coding best practices, adheres to modular and well-documented structures, and utilizes meaningful variable and function naming conventions. This promotes code readability, simplifies maintenance tasks, and allows for efficient collaboration among developers.

4.5 Business Rules

It is the policy of the development team to follow all codes of conduct established by the University

5. Other Requirements

Appendix A: Glossary

N/A

Appendix B: Analysis Models

A class diagram is available in documentation.

Appendix C: To Be Determined List

N/A

Testing Raport

ID	Functionalitatea testata	Rezultat asteptat	Rezultat actual	Obs.
1	Conectarea la baza de date	Conexiune realizata cu succes	Conexiune realizata cu succes	✔
2	Inregistrarea utilizatorului	Credentialele utilizatorului sunt stocate in baza de date	Credentialele utilizatorului sunt stocate in baza de date	✔
3	Salvare task de tipul Feature	Inregistrarea este salvata iar campurile au valorile corecte	Inregistrarea este salvata iar campurile au valorile corecte	✔
4	Salvare task de tipul Spike	Inregistrarea este salvata iar campurile au valorile corecte	Inregistrarea este salvata iar campurile au valorile corecte	✔
5	Salvare task de tipul Bug	Inregistrarea este salvata iar campurile au valorile corecte	Inregistrarea este salvata iar campurile au valorile corecte	✔
6	Editare task de tipul Feature	Inregistrarea este actualizata iar campurile au valorile corecte	Inregistrarea este actualizata iar campurile au valorile corecte	✔
7	Editare task de tipul Spike	Inregistrarea este actualizata iar campurile au valorile corecte	Inregistrarea este actualizata iar campurile au valorile corecte	✔
8	Editare task de tipul Bug	Inregistrarea este actualizata iar campurile au valorile corecte	Inregistrarea este actualizata iar campurile au valorile corecte	✔
9	Stergerea	Entitatea este	Entitatea este	✔

	utilizatorului atribuit pentru task de tipul Feature	**actualizata, ramane fara utilizator atribuit**	**actualizata, ramane fara utilizator atribuit**	
10	**Stergerea utilizatorului atribuit pentru task de tipul Spike**	**Entitatea este actualizata, ramane fara utilizator atribuit**	**Entitatea este actualizata, ramane fara utilizator atribuit**	✔
11	**Stergerea utilizatorului atribuit pentru task de tipul Bug**	**Entitatea este actualizata, ramane fara utilizator atribuit**	**Entitatea este actualizata, ramane fara utilizator atribuit**	✔
12	**Editare status pentru task de tipul Feature**	**Inregistrarea este actualizata iar campul status are valoarea corecta**	**Inregistrarea este actualizata iar campul status are valoarea corecta**	✔
13	**Editare status pentru task de tipul Spike**	**Inregistrarea este actualizata iar campul status are valoarea corecta**	**Inregistrarea este actualizata iar campul status are valoarea corecta**	✔
14	**Editare status pentru task de tipul Bug**	**Inregistrarea este actualizata iar campul status are valoarea corecta**	**Inregistrarea este actualizata iar campul status are valoarea corecta**	✔
15	**Apasarea butonului Login determina actualizarea interfetei pentru un user existent**	**Apasarea butonului Login permite accesul la interfata pentru un utilizator existent**	**Apasarea butonului Login permite accesul la interfata pentru un utilizator existent**	✔
16	**Apasarea**	**Apasarea**	**Apasarea**	✔

	butonului Register determina inregistrarea utilizatorului	**butonului Login permite inregistrarea unui utilizator**	**butonului Login permite inregistrarea unui utilizator**	
17	**Creare obiect de tipul Feature**	**Obiectul este creat cu proprietatile corecte**	**Obiectul este creat cu proprietatile corecte**	✔
18	**Creare obiect de tipul Spike**	**Obiectul este creat cu proprietatile corecte**	**Obiectul este creat cu proprietatile corecte**	✔
19	**Creare obiect de tipul Bug**	**Obiectul este creat cu proprietatile corecte**	**Obiectul este creat cu proprietatile corecte**	✔
20	**Salvare proiect**	**Entitatea este salvata, iar campurile au valori corecte**	**Entitatea este salvata, iar campurile au valori corecte**	✔
21	**Stergere proiect**	**Entitatea este stearsa cand id-ul este existent**	**Entitatea este stearsa cand id-ul este existent**	✔
22	**Existenta unui proiect**	**Adevarat, pentru un nume existent, Fals altfel**	**Adevarat, pentru un nume existent, Fals altfel**	✔