TimeDrop

TimeDrop
Use-Case-Realization Specification

Version <1.1>

Revision History

Date	Version	Description	Author
<10/22/2022>	<1.0>	First Draft	Sai Mittapalli, Mohamed Aql, Muhammad Momin Rahman, Abdalla Eltom
<10/30/2022>	<1.1>	Added more content to each use case	Sai Mittapalli

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Use-Case-Realization Specification

1. Introduction

1.1 Purpose

This document provides an overview of the system through the usage of a whole sequence diagram with multiple sections.

1.2 Scope

This Use-Case Realization Specification document gives an overview of all the use-cases present for this system. Our system allows users to organize different aspects of their lives into calendars and the calendar system provides the user with multiple organized views of their upcoming tasks.

1.3 Definitions, Acronyms, and Abbreviations

Refer to Glossary Document (upedu_gloss.dot)

1.4 References

1. TimeDrop – Use Case Specification
2. TimeDrop – Supplementary Specification
3. UPEDU Example Tempalte

1.5 Overview

This section of the document describes the system's use cases regarding their flow of events and all the objects that are involved.

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2. USE CASE <Create Account>

2.1 Brief Description

Allows user to create a new account to access the system.

2.2 Flow of Events - Design

After the user goes to the sign-up page of the system, the new user can create an account.

2.3 Interaction Diagrams

- User opens the application, and the user interface (UI) asks the user for credentials to create an account
- User enters credentials to UI and UI verifies credentials with the server

2.3.1 Sequence Diagrams

Figure 1: Sequence Diagram

Refer to Application Entrance Frame of Sequence Diagram

2.3.2   Participating objects

Object	Description
User Interface (Calendar System)	This object allows the new user to interact with the system server and create a new account

2.4   Class Diagrams

Figure 2: Class Diagram

2.5   Derived Requirements

- Security: the new user's credentials need to be kept in a secure location

- Availability: the new users must be able to always access the sign-up option

3.   USE CASE <Login>

3.1   Brief Description
Allows a returning user to login to their account to access the system.

3.2   Flow of Events - Design
The user enters their username and password to the UI and after submitting, the data is validated, and the user is allowed access.

3.3   Interaction Diagrams
- User opens the application, and the user interface (UI) asks the user for credentials to login to their account
- User enters credentials to UI and UI verifies credentials with the server
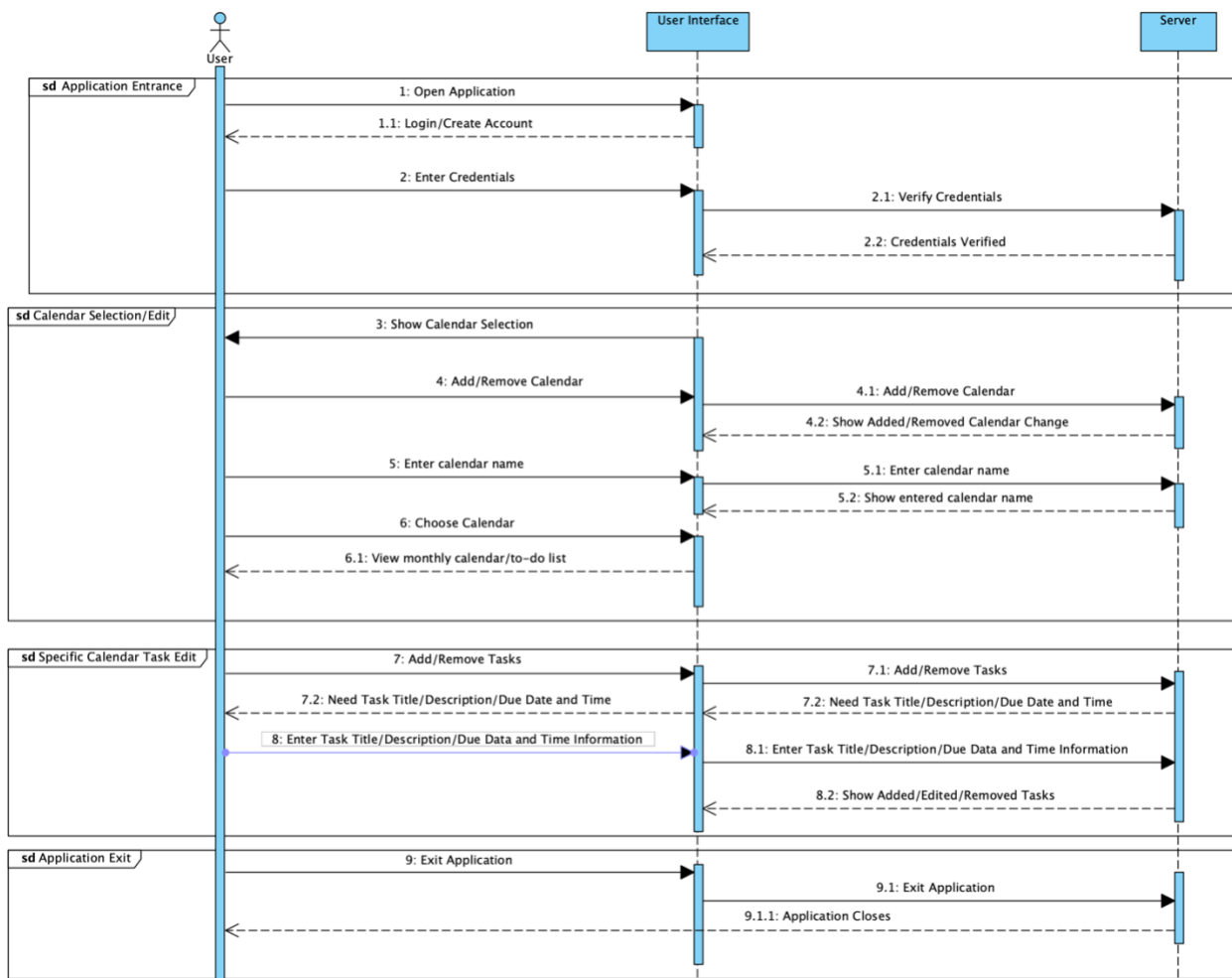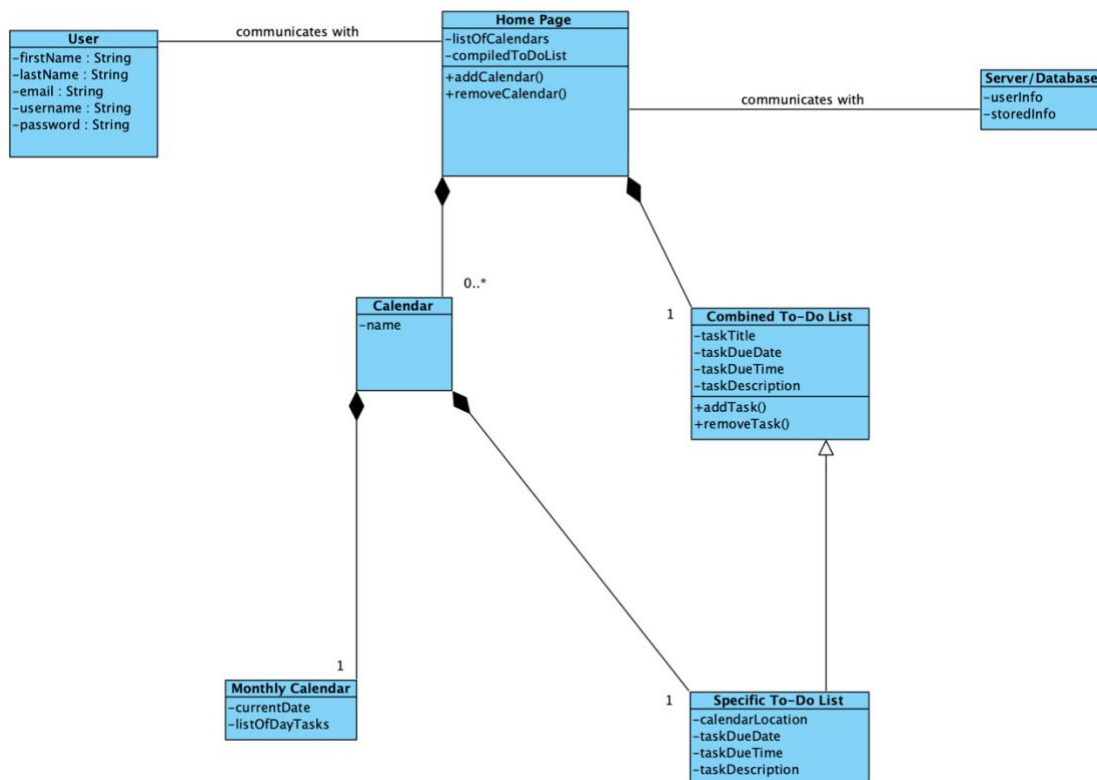
3.3.1   Sequence Diagrams
Refer to Application Entrance Frame of Sequence Diagram

3.3.2   Participating objects

Object	Description
User Interface (Calendar System)	This object allows the user to interact with the system server and login to their account

3.4   Class Diagrams
Refer to Class Diagram in Figure 2

3.5   Derived Requirements
- Security: the user's credentials need to be kept in a secure location

- Availability: the new users must be able to always access the sign-up option

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4.   USE CASE <Logout>

4.1   Brief Description

Allows user to log out of their account and stop access to the system.

4.2   Flow of Events - Design

The user must have access to the system and from within, when they click the logout button, the system will proceed to log them out.

4.3   Interaction Diagrams

- User exits the application using the UI and UI sends the message to the server, and server closes the application at the user end

4.3.1   *Sequence Diagrams*

Refer to Application Exit Frame of Sequence Diagram

4.3.2   *Participating objects*

Object	Description
User Interface (Calendar System)	This object allows the user to interact with the system server and logout of their account

4.4   Class Diagrams

Refer to Class Diagram in Figure 2

4.5   Derived Requirements

- Security: the user's credentials need to be kept in a secure location

- Availability: the users must be able to always access the sign-up option

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5.   USE CASE <View Calendar Selection and Combined To-Do List>

5.1   Brief Description

Allows user to view the calendars they have and their combined to-do list in the main page.

5.2   Flow of Events - Design

After the user logs into their account, they will be shown the main page that contains these two features.

5.3   Interaction Diagrams

- User logs into their account using the proper credentials
- The UI (Calendar System) shows the user the main page containing their calendars and combined to-do list

5.3.1   *Sequence Diagrams*

Refer to Calendar Selection/Edit Frame of Sequence Diagram

5.3.2   *Participating objects*

Object	Description
User Interface (Calendar System)	This object allows the user to interact with the system server and view the main page of the system

5.4   Class Diagrams

Refer to Class Diagram in Figure 2

5.5   Derived Requirements

- Scalability: the user will be shown however many calendars they have ranging from one to four

- Availability: the users must be able to always access the sign-up option

- Useability: the user can do the functions they desire to the calendars in an effortless way

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6.   USE CASE <Create Calendar>

6.1   Brief Description

The user can create a calendar by filling out the necessary information in the main page.

6.2   Flow of Events - Design

After the user goes to the sign-up page of the system, the new user can create an account.

6.3   Interaction Diagrams

- UI shows user the home page
- User can add calendar using the UI and UI sends the message to the server, and server applies changes
- User can change the name, color, and background of the calendar using the UI and the UI sends the message to the server, and server applies changes

6.3.1   Sequence Diagrams

Refer to Calendar Selection/Edit Frame of Sequence Diagram

6.3.2   Participating objects

Object	Description
User Interface (Calendar System)	This object allows the user to interact with the system server and create a new calendar

6.4   Class Diagrams

Refer to Class Diagram in Figure 2

6.5   Derived Requirements

- Security: the information regarding the newly created calendar needs to be secured

- Availability: the calendar must be accessible to the user at any time

7.   USE CASE <View Specific Calendar's Monthly View and To-Do List>

7.1   Brief Description

The user can access the monthly calendar view and to-do list by entering an existing calendar type

7.2   Flow of Events - Design

The user needs to create a calendar or enter an existing calendar, and upon doing so, the user can view the three features.

7.3   Interaction Diagrams

- User must create a calendar if there isn't an existing one
- User can choose calendar to go into using the UI and the UI opens the calendar and show monthly calendar and to-do list

7.3.1   *Sequence Diagrams*

Refer to Calendar Selection/Edit Frame of Sequence Diagram

7.3.2   *Participating objects*

Object	Description
User Interface (Calendar System)	This object allows the user to interact with the system server and view the specific calendar features

7.4   Class Diagrams

Refer to Class Diagram in Figure 2

7.5   Derived Requirements

- Security: the user's information in the specific calendars must be kept secure

- Availability: the user must be able to access their information in their calendars at any time

8.   USE CASE <Add Task Inside Calendar>

8.1   Brief Description
Allows user to add a task or event inside their calendar.

8.2   Flow of Events - Design
After the user enters a specific calendar, they can use the UI system to create a new task or event with the necessary information.

8.3   Interaction Diagrams
- User can add or remove tasks using the UI and UI sends the message to the server, and server asks UI to enter needed information for task and UI asks the user
- User then enters information to create the task using the UI and UI sends message to the server, and server applies changes

8.3.1   Sequence Diagrams
Refer to Specific Calendar Task Edit Frame of Sequence Diagram

8.3.2   Participating objects

Object	Description
User Interface (Calendar System)	This object allows the user to interact with the system server and create a task or event

8.4   Class Diagrams
Refer to Class Diagram in Figure 2

8.5   Derived Requirements
- Security: the user's task or event information must be kept secure

- Availability: the user must always have access to their information