Dipartimento di Ingegneria Civile e Ingegneria Informatica

Ingegneria del software e progettazione web

Final Project Detailed Instructions

Professori:
Davide Falessi
Guglielmo De Angelis

Partecipanti:
Lorenzo Grande

A.A 2023-2024

Contents

Chapter 1

Software Requirement Specification

1.1 Introduction

1.1.1 Aim of document

The purpose of the document is to analyze the steps followed for the design and implementation of the GreenPear software, a project for the ISPW exam course (Ingegneria del software e progettazione Web)

1.1.2 Overview of the defined system

The application is designed for dietitians who want to sell food assistance services. A registered dietitian can choose to be available for requests and can enter their training and work experience details. This allows them to showcase their qualifications and build trust with potential clients. The application's main feature is to allow registered patients to request a personalized diet plan from one of the dietitians, selecting based on the dietitian's experience and expertise. The patient will provide the necessary information to the dietitian, such as dietary preferences, health goals, and lifestyle, and then proceed with the payment. Once a diet request is made, the dietitian will receive a notification, create the customized diet plan, and send it directly to the patient. This process ensures that patients receive tailored dietary advice from qualified professionals.

1.1.3 HW e SW requirements

- Software Requirements:
  - IntelliJ IDEA;
  - Scene Builder;
  - Visual Paradigm;
  - Java SDK SE 21;
  - JDBC installed;
  - DBMS;
- Hardware Requirements:

Minimum Requirements	**Recommended Requirements**
Operating System: Windows 7/8/10, macOS 10.12+, Linux (kernel 3.10+)	**Operating System:** Windows 10, macOS 11+, Linux (kernel 4.15+)
Processor: 1 GHz	**Processor:** 2 GHz
Memory: 2 GB RAM	**Memory:** 4 GB RAM
Graphics: Integrated graphics	**Graphics:** Integrated graphics
Storage: 2 GB available space	**Storage:** 4 GB available space

1.1.4 Related system, Pros and Cons

Some related systems are:

- **Sifa Dieta**: Sifa Dieta is one of the most used software in Italy for creating diet plans. One advantage of my application is that it allows dietitians to be found by new patients, increasing their client base. In contrast, Sifa Dieta only provides information exchange between a dietitian and a patient who already knows each other. However, a disadvantage of my application is that, unlike Sifa Dieta, it does not support the management of dietary supplements and does not include automatic daily calorie calculations.

- **Melarossa**: Melarossa is a popular application in Italy dedicated to diet and health management. The disadvantage of my application is that, unlike Melarossa, there is no possibility of participating in an active community where it is possible to share fit recipes and nutritional strategies. GreenPear's advantage lies in its focus on diet personalization, allowing users to request tailored meal plans based on their specific food preferences. This targeted approach allows users to fully tailor their dietary experience to their individual needs, including considerations such as allergies, culinary preferences, and unique dietary needs.

1.2 User Stories

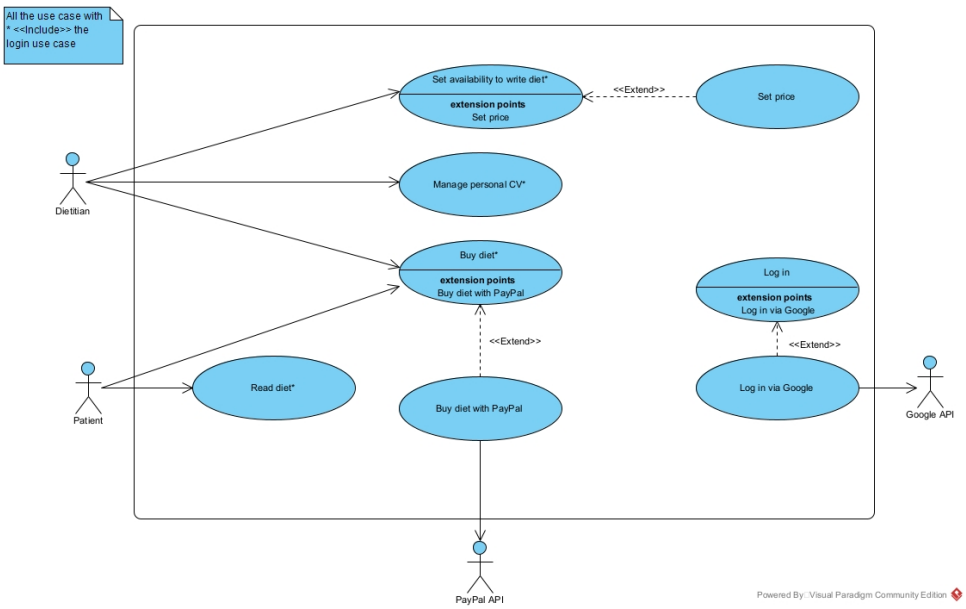
- As a patient, I want to request a diet, so that I can receive a healthy eating plan to follow.
- As a dietitian, I want to interact with my patients, so that I can give them nutritional advice.
- As a dietitian, I want to add my CV, so that I can share my professional journey and experiences.

1.3 Functional Requirements

- The system shall provide a login form.
- The system shall notify a patient when a dietitian handles a diet request.
- The system shall display all dietitians available to write diets.

1.4 Use Cases:

1.4.1 Overview Diagram



1.4.2 Internal Step

Name: Buy diet

1. The patient selects the option: Buy diet.
2. The system verifies that the patient is authorized for the operation.
3. The system loads the list of dietitians available to create a new diet.
4. The patient selects dietitians from the list.
5. The system prepares a blank form.
6. The patient enters the required fields.
7. The system verifies the fields entered.
8. The patient enters payment details.
9. The system verifies the payment information.
10. The system sends the request to the dietitian.
11. The system saves the patient's order.

Extension:

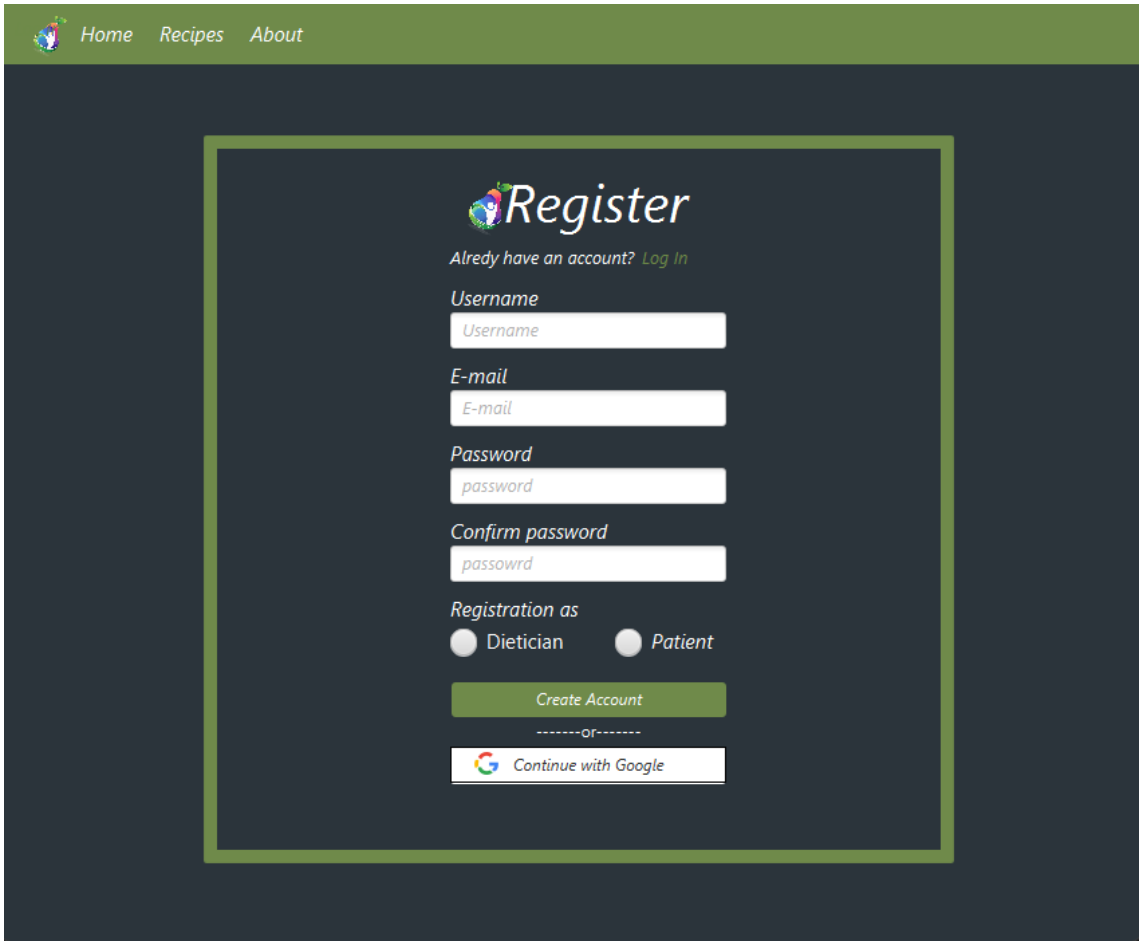
2a. The patient is not authorized: the system terminates the use case and notifies the patient.

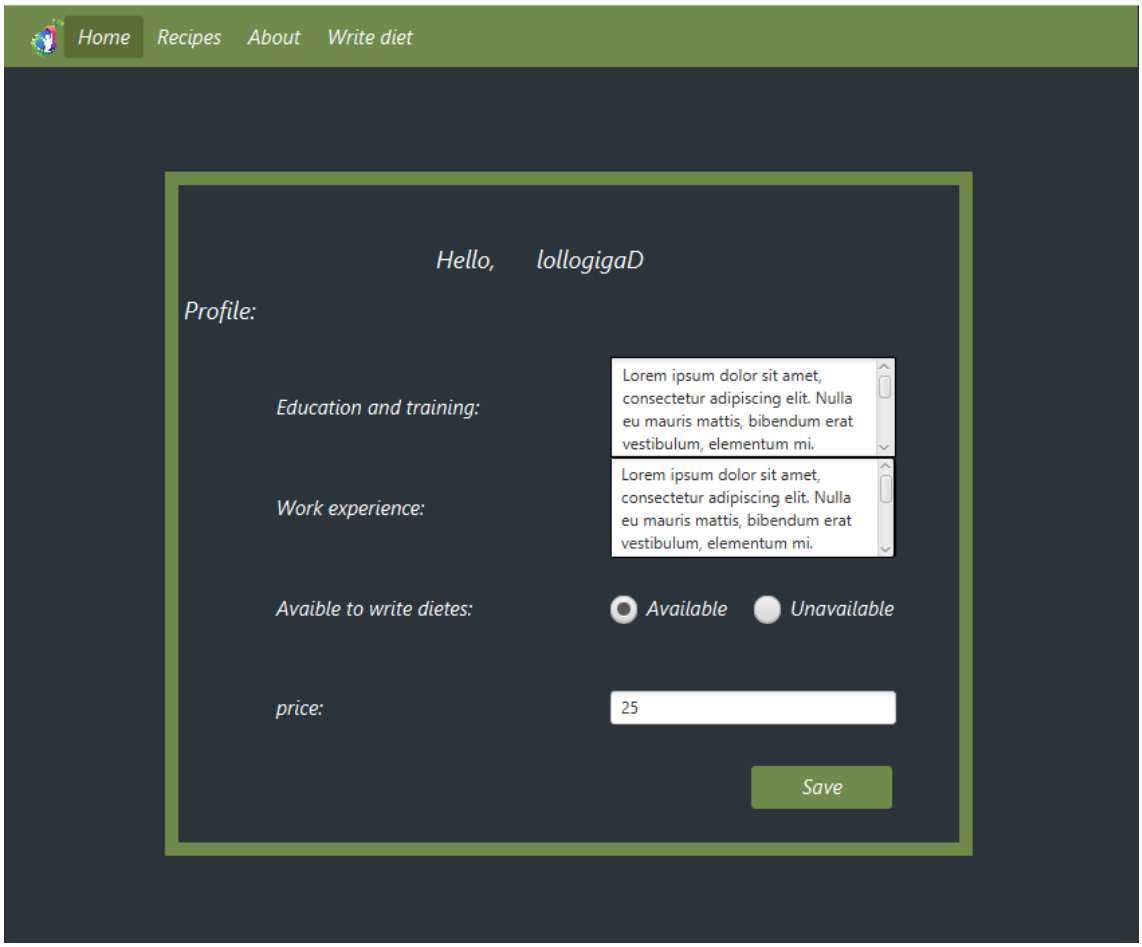
7a. The fields entered are incorrect: The system highlights the incorrect fields and indicates the reason.

9a. Payment information is incorrect: the system notifies the patient and terminates the use case.

Chapter 2

StoryBoard




Home
Recipes
About
Write diet
Hello, lollogigaD
Profile:
Education and training:
Lorem ipsum dolor sit amet, consectetur adipiscing elit. Nulla eu mauris mattis, bibendum erat vestibulum, elementum mi.
Work experience:
Lorem ipsum dolor sit amet, consectetur adipiscing elit. Nulla eu mauris mattis, bibendum erat vestibulum, elementum mi.
Avaible to write dietes:
Available
Unavailable
price:
25
Save

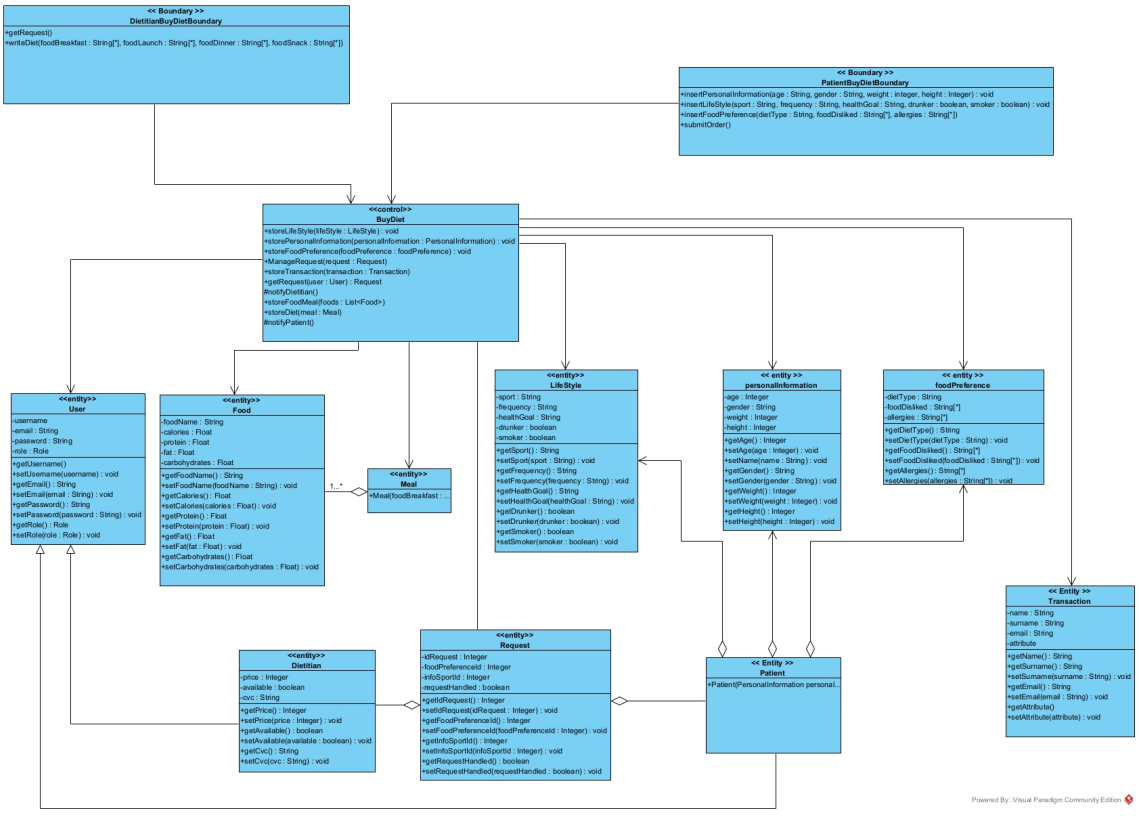
Chapter 3

Design

3.1 Class Diagram

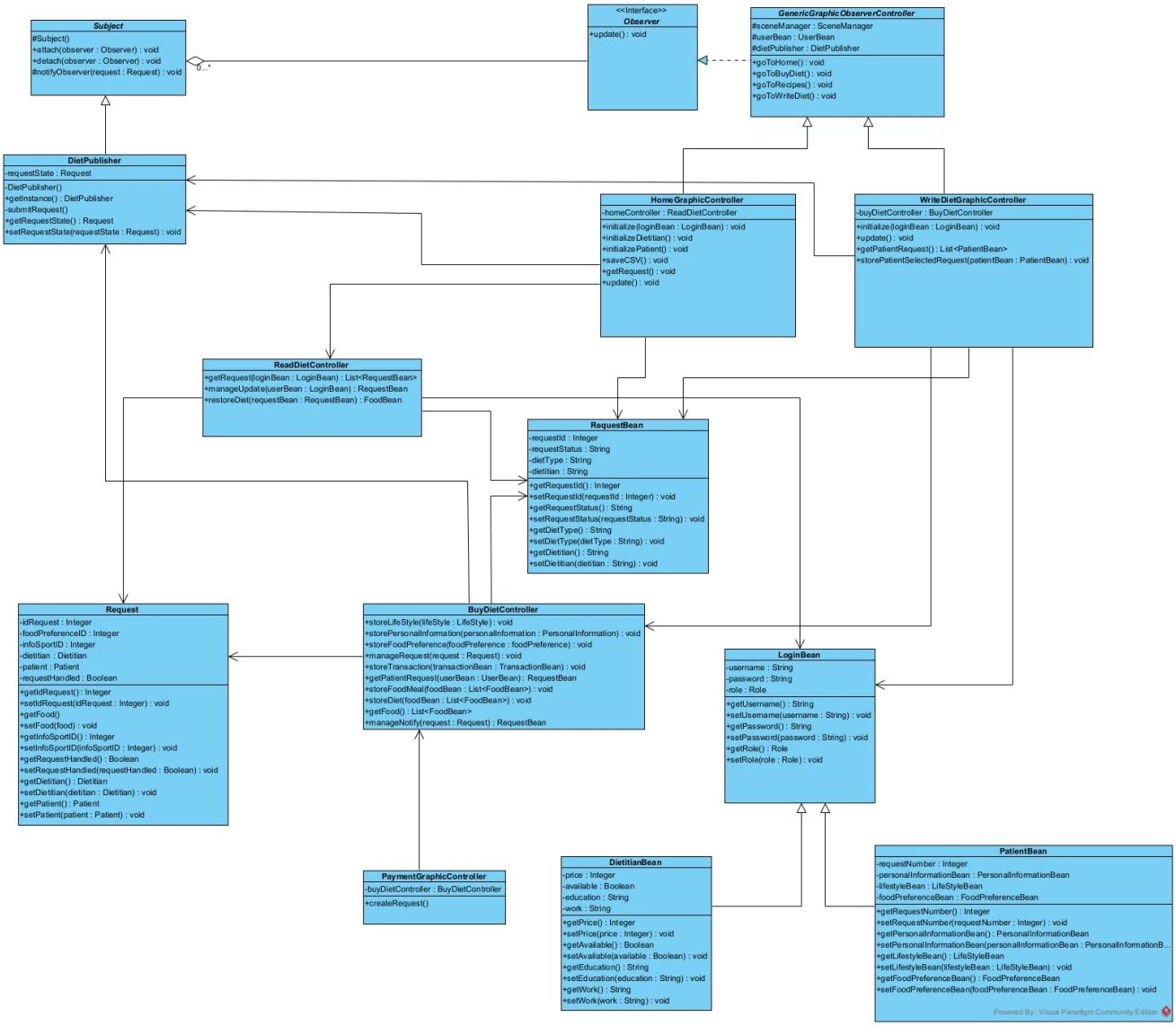
3.1.1 VOPC

VOPC related to the use case: Buy diet



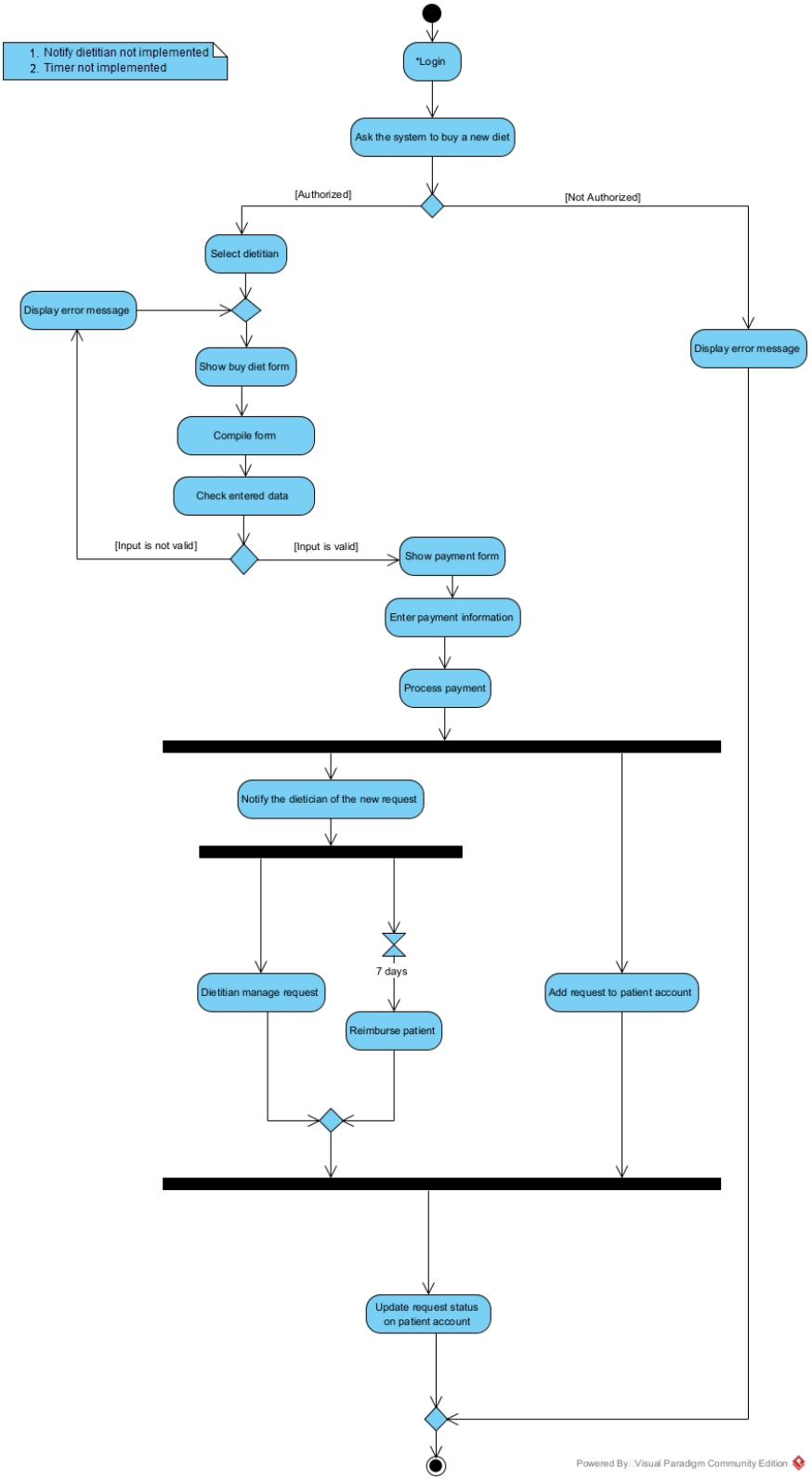
3.1.2 Design pattern

Design-Level Diagram related to the Pattern Observer.

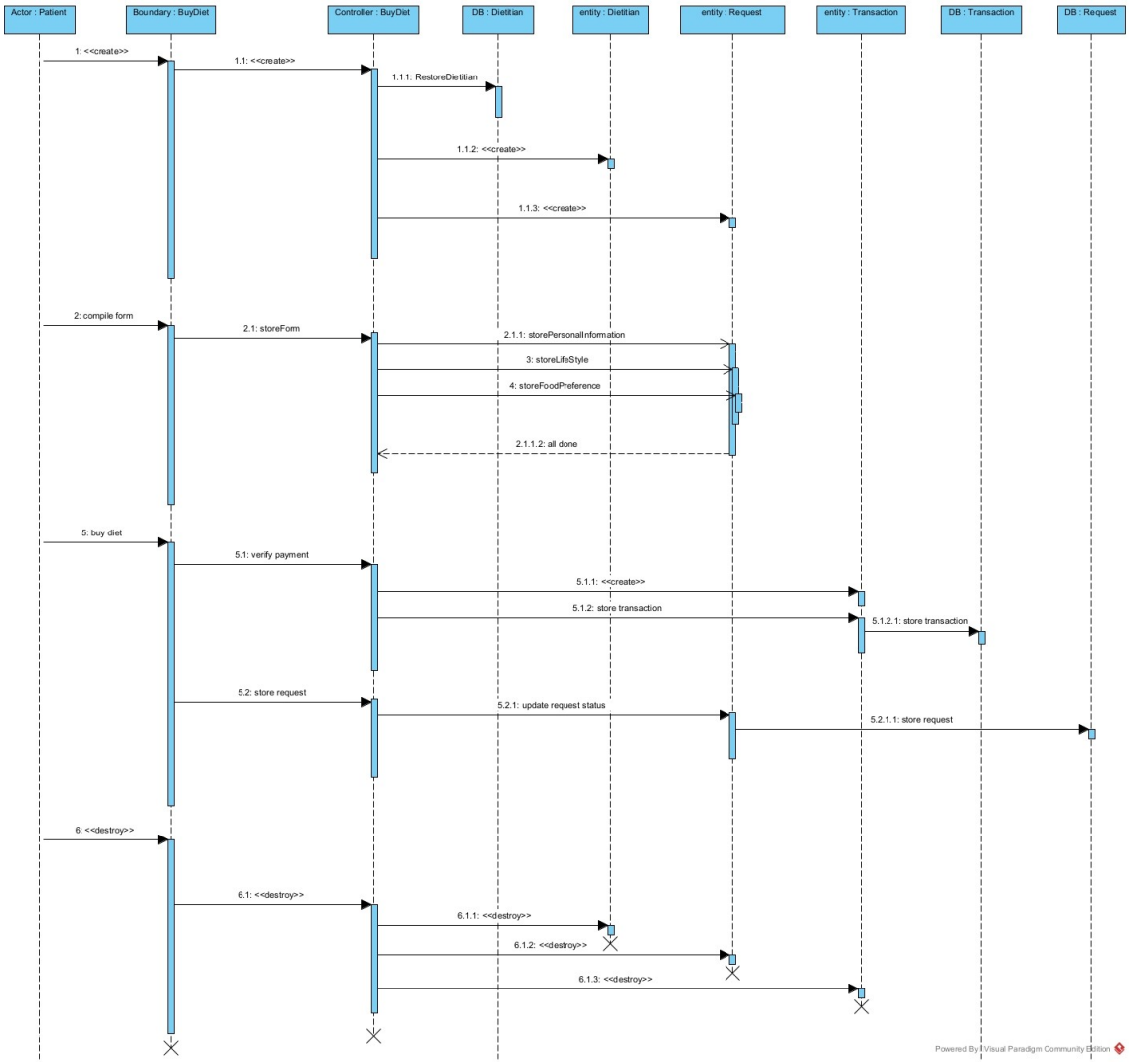


3.2 Activity Diagram

Sequence diagram relating to the use case: **Buy diet**

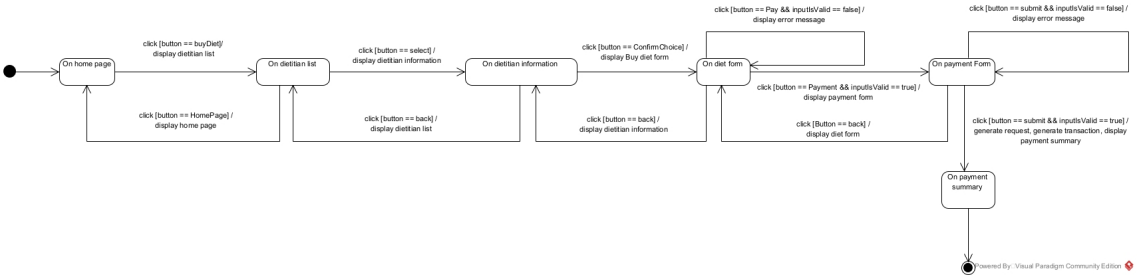


3.3 Sequence diagram



3.4 State diagram

Sequence diagram relating to the use case: **Buy diet**



Chapter 4

Testing

The tests carried out concern:

- Correct login of a registered user
- Correct handling of an exception if you try to register with a username that already exists in the system
- Correct registration in case you register with the correct credentials

Chapter 5

SonarCloud

The sonarcloud link associated with the project is:

$https://sonarcloud.io/project/overview?id = Lollogiga_Ispw$