Project Report - "Red Thread"

Creation of a Mentorship Platform "Mentorini"

SPECIALTY :

Web Development Training
- Bootcamp Mode

Supervised by: SAAD ALILOU & ESSARAJ FOUAD

Realized by : Hussein Bouik

Training Year 2022/2023

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List of abbreviations

- UML : Unified Modeling Language
- MLD : Logical Data Model
- MCD : Conceptual Data Model
- 2TUP : Two-Track Unified Process
- OOP : Object-Oriented Programming

Acknowledgments

First and foremost, I would like to express my deepest gratitude to God, without whom I would not have had the strength, courage, and determination to complete this project. I would also like to thank myself for the hard work, dedication, and perseverance that I put into this project

I am extremely grateful for the unending love, support, and encouragement from my family. Their patience and understanding have been invaluable to me throughout this journey. I would not be where I am today without them.

I would also like to extend my heartfelt appreciation to my friends, who have been a constant source of inspiration and motivation. Their belief in me has kept me going even during the most difficult times. I feel incredibly lucky to have them in my life.

Finally, I would like to sincerely thank the administration and staff at SoliCode for their guidance, advice, and assistance. They have created an environment that fosters growth and development. Their contributions have been instrumental to the successful completion of this project.

In summary, I could not have accomplished this without the support of God, my family, friends, and the SoliCode administration. I am deeply indebted and grateful for each and every one of them. This project is a testament to the power of faith, love, and community. My faith gave me the strength to persevere when things were tough. My love for my family and friends gave me the motivation to keep going. And the community at SoliCode provided me with the support and resources that I needed to succeed.

Introduction

Mentorship is a powerful tool that can help people learn and grow. It can provide mentees with guidance, support, and motivation, and it can help mentors give back to their community and share their knowledge and expertise.

This report describes the development of a mentorship platform that will connect mentors and mentees in a virtual environment. The platform will provide a variety of features to support the mentorship relationship, including:

- A searchable database of mentors
- A messaging system for mentors and mentees to communicate with each other
- A forum for mentors and mentees to share ideas and resources
- A portfolio system for mentees to showcase their work

The platform will be used by students, professionals, and anyone else who is interested in finding a mentor or becoming a mentor. It is designed to be easy to use and accessible to everyone.

The development of the mentorship platform was a collaborative effort that involved a team of developers, designers, and mentors. The team worked closely with stakeholders to ensure that the platform met the needs of the users.

The mentorship platform is a valuable resource that can help people learn and grow. It is a testament to the power of collaboration and the importance of giving back to the community.

This is just an example, and you may need to adjust the content to fit the specific needs of your project. However, it should give you a good starting point for writing your introduction.

Project context

The mentorship platform is a web-based application that allows users to connect with mentors and mentees. The platform will be used by individuals and organizations to provide mentorship opportunities to their members.

The platform is designed to help users:

- Find mentors: The platform will allow users to search for mentors based on their interests, skills, and experience.
- Book sessions: Once users have found a mentor, they can book a session with them.
- Communicate with mentors: Users can communicate with their mentors through the platform's messaging system.

The platform is expected to benefit users by:

- Providing access to experienced mentors: The platform will give users access to experienced mentors who can share their knowledge and expertise.
- Providing personalized guidance: Mentors can provide users with personalized guidance and support.
- Creating networking opportunities: The platform can create networking opportunities for users.

Specifications Document

The specifications document for the mentorship platform will include the following:

- Functional requirements: The functional requirements of the platform include the ability to:
    - Search for mentors
    - Book sessions

    - Communicate with mentors
- Non-functional requirements: The non-functional requirements of the platform include the following:
    - Security: The platform must be secure to protect user data.
    - Performance: The platform must be able to handle a large number of users.
    - Scalability: The platform must be able to scale to meet the needs of a growing user base.
- Technical specifications: The technical architecture of the platform will include the following:
    - Programming languages: The platform will be developed using HTML, CSS,JavaScript, PHP and mySQL.
    - Frameworks: The platform will use the Bootstrap framework for web development.

Project requirements

Sure, here is an example of the Project Requirements section for a mentorship platform:

Project Requirements

The mentorship platform must meet the following requirements:

- Functional requirements: The platform must allow mentors and mentees to connect with each other, create and manage mentorship relationships, and communicate with each other.
- Non-functional requirements: The platform must be secure, reliable, and scalable. It must also be easy to use and accessible to a wide range of users.

Functional requirements:

- The platform must allow mentors and mentees to create profiles and search for each other.
- The platform must allow mentors and mentees to start and manage mentorship relationships.
- The platform must allow mentors and mentees to communicate with each other through a variety of channels, such as messaging, video chat, and file sharing.

Non-functional requirements:

- The platform must be secure. All personal information must be protected from unauthorized access.
- The platform must be reliable. The platform must be available 24/7 and must be able to handle a large volume of users.
- The platform must be scalable. The platform must be able to handle increased traffic as the number of users grows.
- The platform must be easy to use. The platform must be user-friendly and accessible to people of all skill levels.

Project Overview

Mentorini is a mentorship platform that will allow users to connect with mentors and mentees. The platform will be used by individuals and organizations to provide mentorship opportunities to their members.

Project Goals and Objectives

The project goals and objectives are to:

- Provide users with access to experienced mentors who can share their knowledge and expertise.
- Provide personalized guidance to users.

- Create networking opportunities for users.

Training objects

The object of this training is to realize a web application using HTML, CSS, JavaScript, PHP, MySQL, and OOP. The application will be a mentorship platform that allows users to connect with mentors in their field of interest.

The following are the specific tasks that need to be completed:

1. Create the user interface using HTML and CSS.
2. Add interactivity to the user interface using JavaScript.
3. Create the backend of the application using PHP.
4. Create a database using MySQL.
5. Implement OOP principles in the code.

Scope

- User management: The platform will provide users with the ability to:
    - Create profiles
    - Edit their profiles
    - View other users' profiles
- Mentorship session management: The platform will provide mentors and mentees with the ability to:
    - Book sessions
    - View upcoming sessions
    - Communicate with each other
- Reporting: The platform will provide administrators with the ability to generate reports on user activity, mentorship session activity, and other metrics.

Target Audience

The target audience for the mentorship platform includes:

- Individuals: Individuals who are looking for career guidance and support.
- Organizations: Organizations that want to provide mentorship opportunities to their members.

Partner Engagement

The mentorship platform will be open to partnerships with organizations that want to provide mentorship opportunities to their members. Partnerships will be on a case-by-case basis and will be subject to the approval of the platform's administrators.

Development process

2TUP

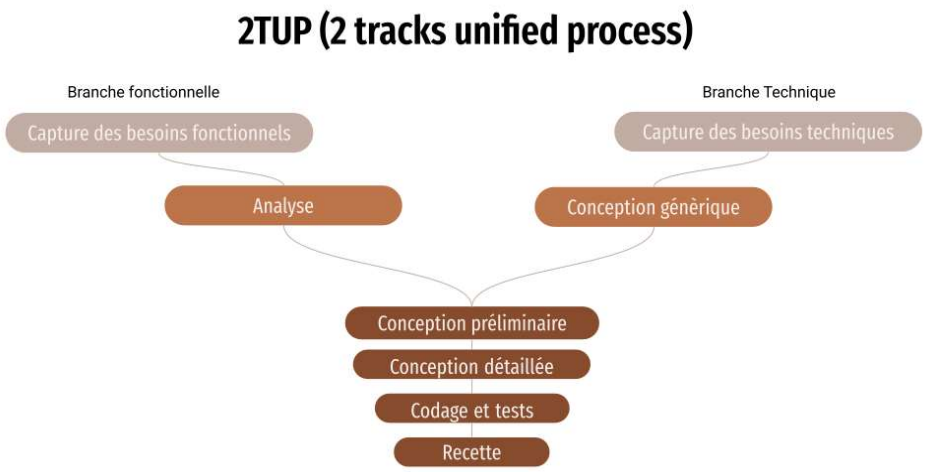

figure 1 : 2tup

The Two Tracks Unified Process (2TUP) is a software development methodology that is based on the Unified Process (UP). The 2TUP methodology is designed to be iterative and incremental, and it uses UML (Unified Modeling Language) to model the software system.

The 2TUP methodology is divided into two tracks: the functional track and the technical track. The functional track focuses on the requirements and functionality of the software

system, while the technical track focuses on the implementation and architecture of the software system.

The 2TUP methodology is a good choice for software development projects that require a high degree of flexibility and adaptability. The methodology's iterative and incremental nature allows for changes to be made to the software system throughout the development process.

Additionally, the use of UML helps to ensure that the software system is well-designed and easy to maintain.

Here are some of the key features of the 2TUP methodology:

- Iterative and incremental development
- Use of UML
- Two tracks: functional and technical
- Flexible and adaptable
- Well-designed and easy to maintain

Design Thinking

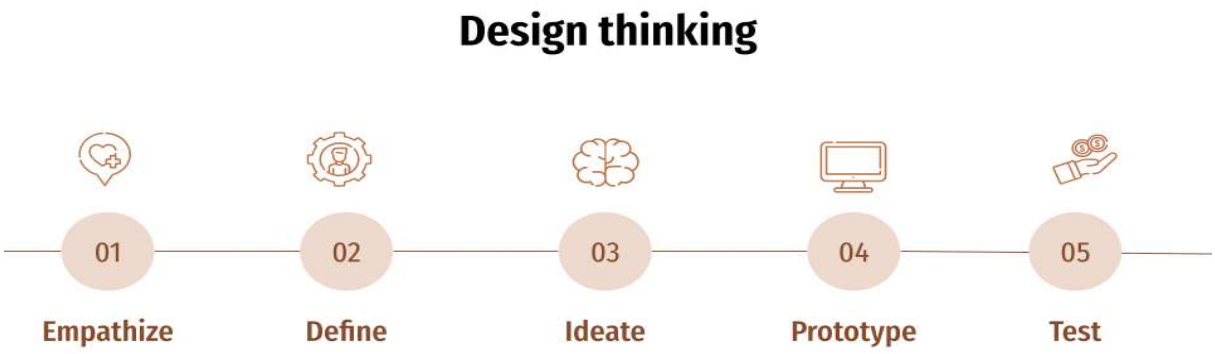

figure 2 : design thinking

Definition

Sure, here is a definition of design thinking that you can put in a report:

Design thinking is a human-centered approach to problem-solving that uses empathy, creativity, and prototyping to come up with innovative solutions. The design thinking process typically involves five phases:

1. Empathize: Understand the needs of the user or customer.
2. Define: Define the problem to be solved.
3. Ideate: Generate creative solutions to the problem.
4. Prototype: Build a prototype of the best solution.
5. Test: Test the prototype with users and get feedback.

Planning

Gantt chart

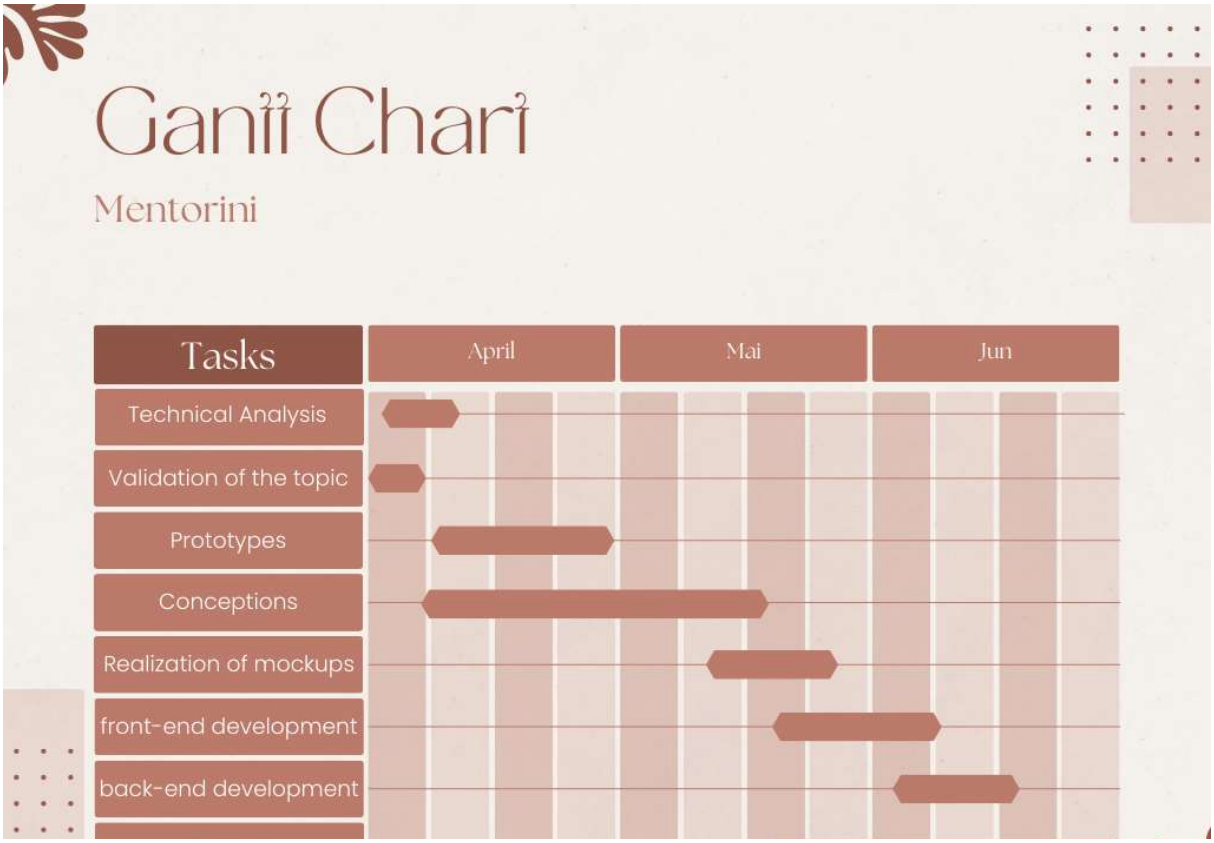

figure 3 : diagramme de gantt

Functional branch

Empathy

Empathy map

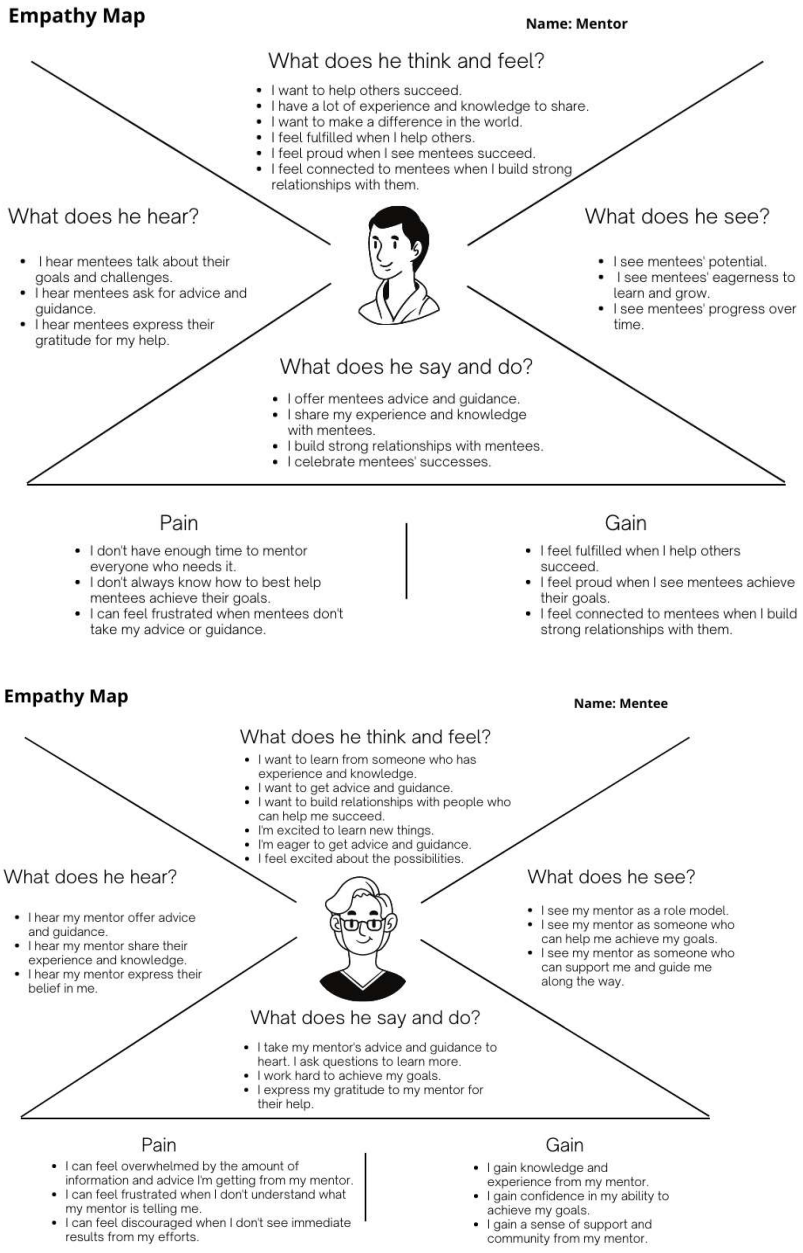

figure 4 : cart d'empathy

Defining the Problem

Mentorship is a powerful tool that can help people to learn, grow, and achieve their goals. However, not everyone has access to a mentor. This is especially true for people from underrepresented groups. My mentorship platform will address this problem by providing a platform where people from all backgrounds can connect with mentors who can help them to succeed.

Ideation

In order to design a mentorship platform that is both effective and user-friendly, it is important to consider the needs of both mentors and mentees. Mentors want to be able to share their knowledge and experience with others. Mentees want to be able to learn from experienced professionals and get advice and guidance.

Based on these needs, I have brainstormed a list of possible features and functionality for my mentorship platform. These features include :

A search function that allows mentors and mentees to find each other based on their interests, skills, and goals.
A messaging system that allows mentors and mentees to communicate with each other.
A calendar that allows mentors and mentees to schedule meetings.
A file sharing system that allows mentors and mentees to share documents and files with each other.
A rating and review system that allows mentors and mentees to provide feedback on each other.

Use case diagram

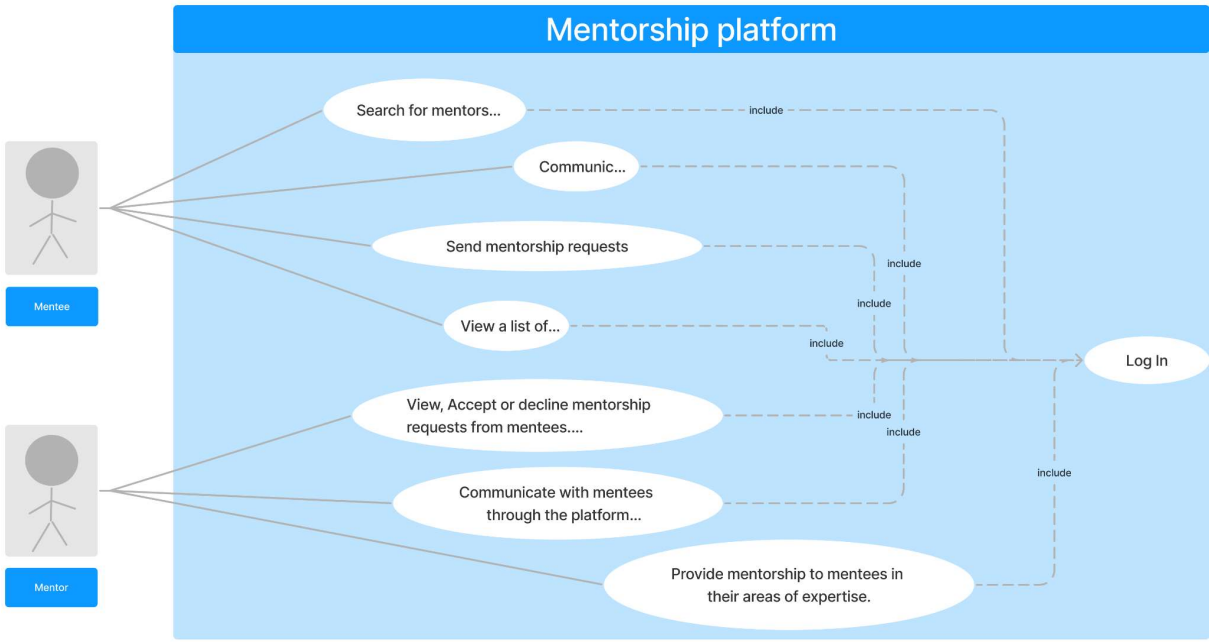

figure 5 : Use case diagram

Technical branch

Technical Analysis

PHP-OOP

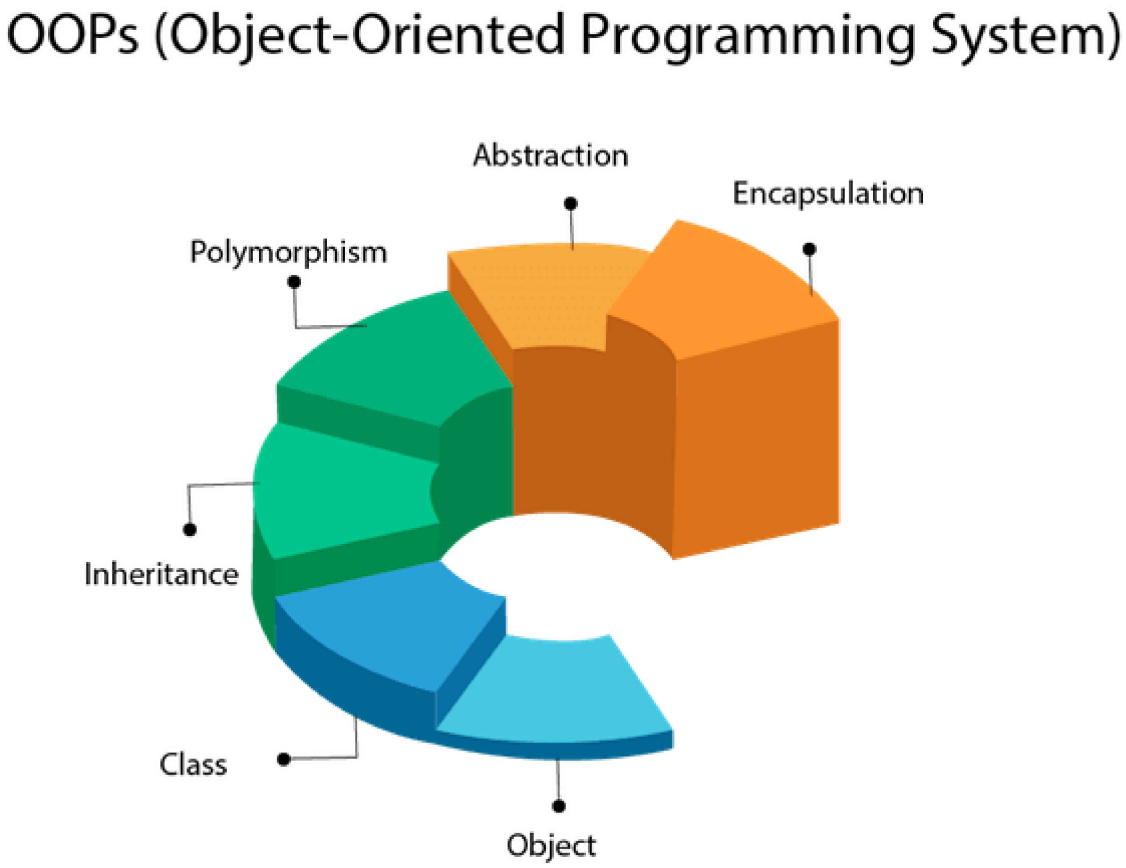

figure 6 : OOP (Object-Oriented Programming System)

Prototype

I created three prototypes for a mentorship platform. Prototype 1 included only the CRUD operations for mentors. Prototype 2 included both the CRUD operations for mentors and their credentials. Prototype 3 is realized using the Admin LTE template and includes both the CRUD operations for mentors and their credentials, as well as pagination.

I self-learned OOP PHP and the MVC method to develop these prototypes. I used OOP PHP to create objects that represent mentors and their credentials. I used the MVC method to separate the code into three layers: the model, the view, and the controller. The model layer contains the data, the view layer displays the data, and the controller layer handles the user input.

The prototypes are a proof of concept for the mentorship platform. They demonstrate that the platform is feasible and that it can be developed using OOP PHP and the MVC method. The next steps are to complete the development of the platform, launch the platform, and market the platform to potential users.

Conceptual Modeling (MCD)

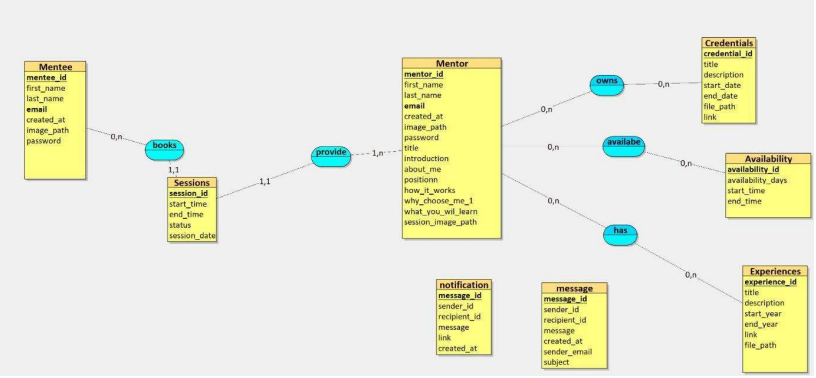

figure 7 : MCD (Conceptual Modeling)

Logical Modeling (MLD)

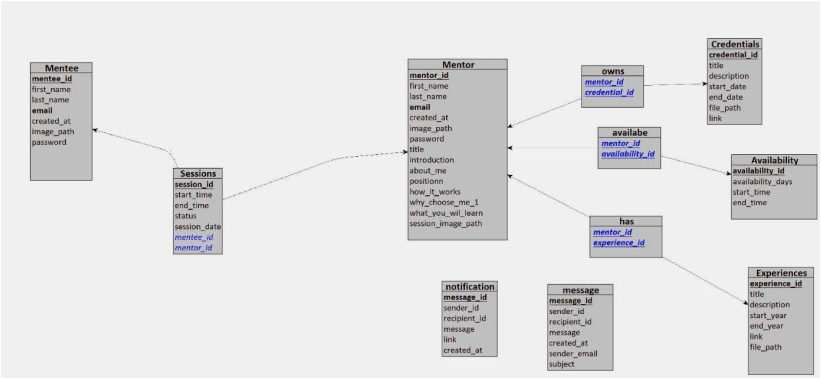

figure 8 : MlD (Logical Modeling)

Class Diagram

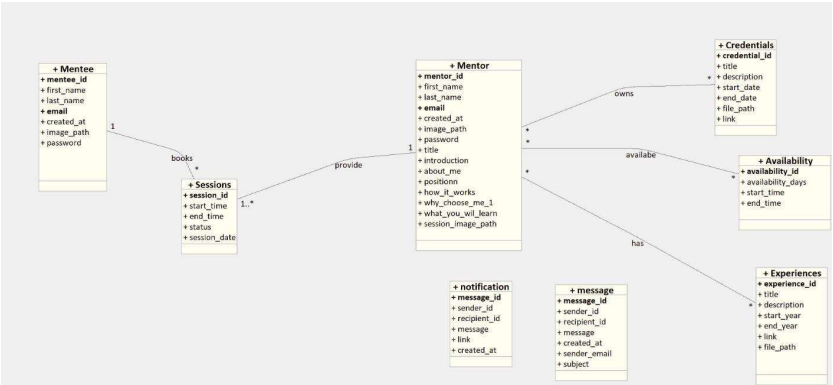

figure 9 : Class Diagram

Web mockups

Mentee's side :

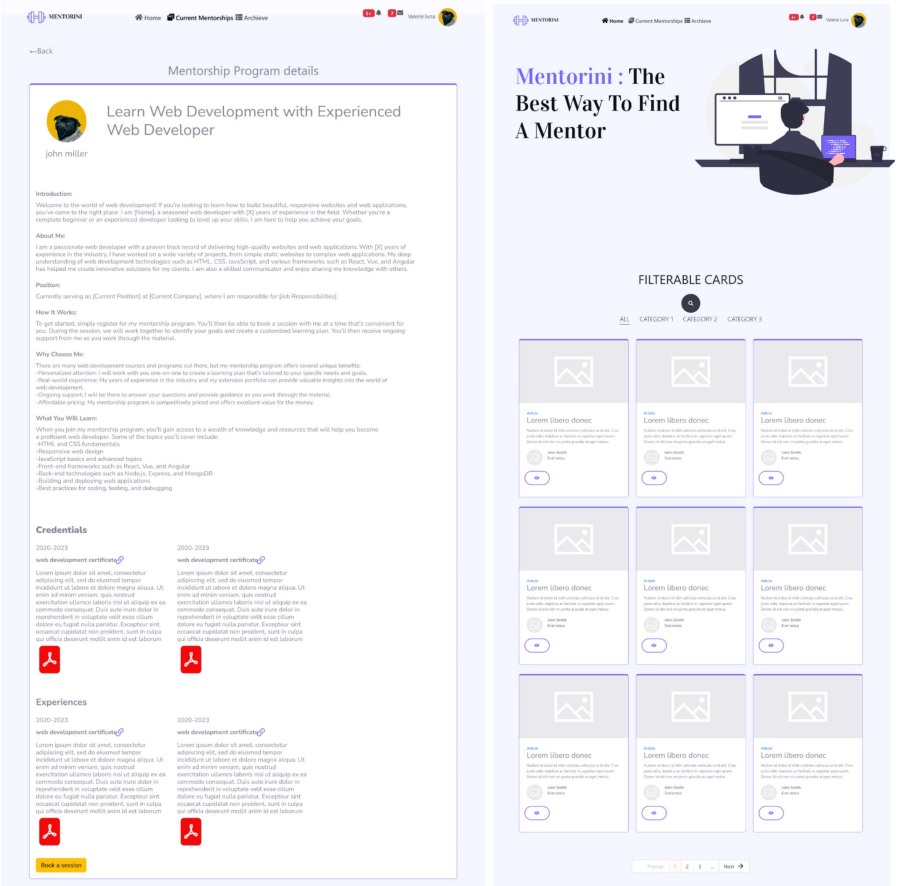

figure 10 : Mentor's Mockups

Mentor’s side :

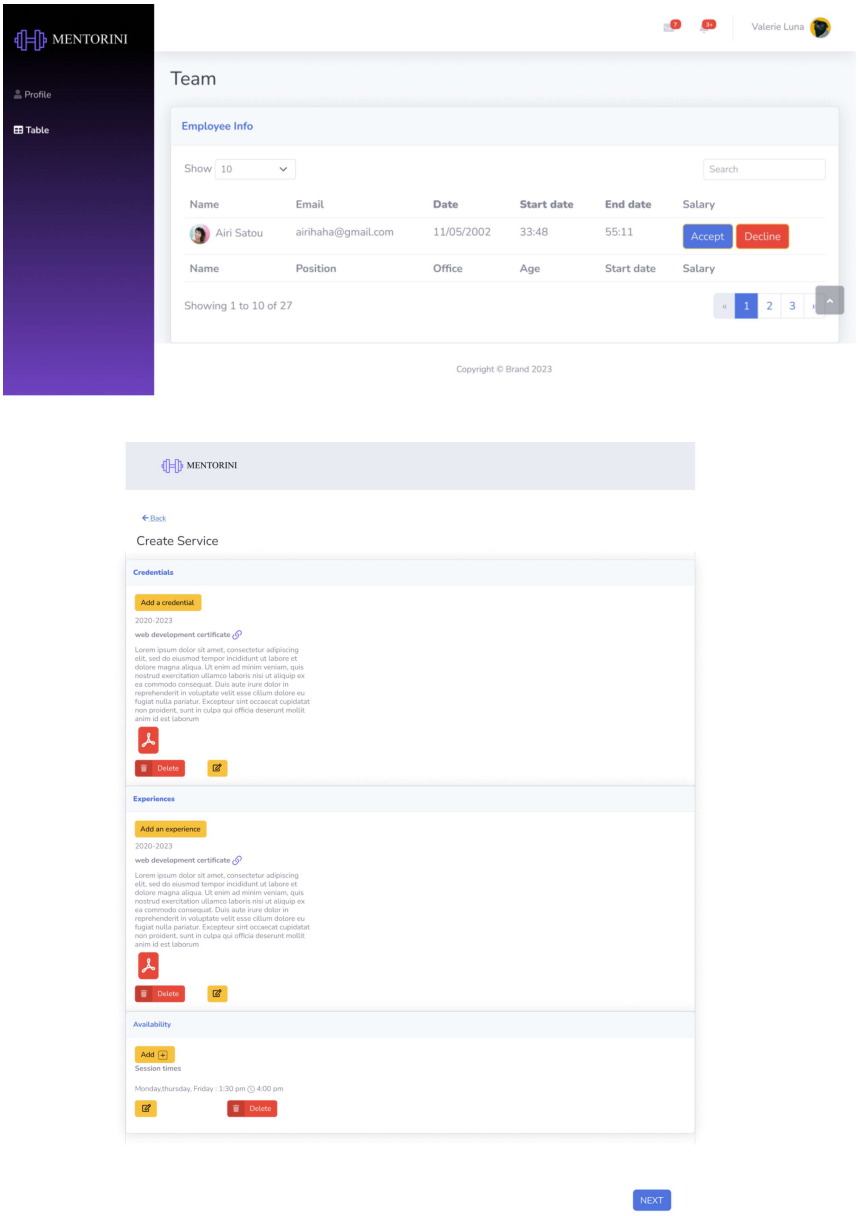

figure 11 : Mentee’s Mockups

Implementation

Technologies Used

	**HTML** "HyperText Markup Language" can be translated to "a markup language for hypertext," which is used to create and represent the content and structure of a web page.
	**CSS** "Cascading Style Sheets," commonly abbreviated as "CSS," is a computer language used on the internet to style and format HTML files and web pages. It is translated to "feuilles de style en cascade" in French.
	**JS** (JavaScript) is a programming language used to add interactivity and dynamic behavior to web pages. It is a scripting language that is typically executed in a web browser, allowing developers to create interactive user interfaces, manipulate the content of a web page, and respond to user actions.
	**Bootstrap** It is a collection of tools that are useful for creating the design of websites and web applications.
	**jQuery** is a free and cross-platform JavaScript library created to facilitate the writing of client-side scripts in the HTML code of web pages.

	**L'UML** (Unified Modeling which stands for Langage de Modélisation Unifié in French, is a graphical language for computer modeling.
	**MySQL** It is a relational database management system. It is distributed under a dual GPL and proprietary license.
	**SQL** (Structured Query Language) is a standardized computer language used to operate on relational databases. The data manipulation language part of SQL allows users to search, add, modify or delete data in relational databases.
	**PHP**, Hypertext Preprocessor, or PHP, refers to a computer language or scripting language primarily used for designing dynamic websites. It is a free and open-source programming language that can be used by anyone completely free of charge.

Tools used

	**Git** is a decentralized version control software. It is a free and open-source software created by Linus Torvalds, the author of the Linux kernel, and distributed under the terms of the GNU General Public License version 2.
	**Github** GitHub is a software development and services company based in the United States. It develops various software tools including the GitHub platform, the Atom text editor, and the Electron framework.

	**Visual Studio Code** is an extensible code editor developed by Microsoft for Windows, Linux and macOS.

Conclusion

In conclusion, I have successfully developed a mentorship platform using Bootstrap, HTML, CSS, JS, jQuery, PHP, and OOP. The platform is a proof of concept and demonstrates that it is feasible to develop a mentorship platform using these technologies. The next steps are to complete the development of the platform, launch the platform, and market the platform to potential users.

I am confident that the mentorship platform will be a valuable resource for both mentors and mentees. The platform will provide a convenient way for mentors to connect with mentees and share their knowledge and expertise. The platform will also provide a safe and supportive environment for mentees to learn and grow.

I am grateful for the opportunity to have developed this mentorship platform. It has been a challenging but rewarding experience. I have learned a great deal about web development and mentorship. I am excited to see how the platform is used to help people and make a positive impact on the world.

Annex