Kingdom of Saudi Arabia
Ministry Higher Education
Sattam Bin Abdulaziz University
College of Science and
Humanitarian Studies
Al-Aflaj Female Center
Computer Sciences Department

المملكه العربيه السعوديه
وزاره التعليم
جامعه الامير سطام بن عبدالعزيز
كليه هندسه وعلوم الحاسب

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No	Student Name	Student Number
1	رغد مطلق خلف الدوسري	44350250
2	نوره تركي عبدالعزيز العجالين	443850349
3	شهد مبارك عبدالله الحبشان	443850233
4	نوره عبدالله مهدي المفرج	443850297

Supervised by:Dr. Muhammad Saad Asiri

Year:2023

1. Feasibility Study and Project Proposal:

1.1. Introduction:

The Facebook application is an application that provides social networking services over the Internet, Distinguished by its ease of use and availability for everyone, It facilitates the process of sharing photos, text messages, and video clips.

1.2. Problem:

It solves the problem of being able to communicate with distant family and friends, marketing as companies and business owners can use Facebook pages to promote their products or services, it has also faced challenges related to privacy and misinformation, which it seeks to address to maintain a safer and more reliable online environment.

1.3. Background:

Facebook is a social media platform founded by Mark Zuckerberg in 2004, now called Meta Platforms, Inc., is an American company with its headquarters located in Menlo Park, California, United States, in the state of California, Meta Company products Facebook, Instagram, WhatsApp, Messenger, Augmented Reality, Metaverse.

1.4. Proposed solution:

1. Enhanced Content Moderation:
    - Implement more robust artificial intelligence and human moderation to combat the spread of harmful content, including hate speech, misinformation, and incitement to violence.
2. Transparency Initiatives:
    - Provide greater transparency about advertising practices, content algorithms, and data usage to build trust among users and regulators.
3. Privacy Controls:
    - Enhance user privacy controls, giving users more granular control over their data and who can access it.

1.5. Work Plan:

- We use Incremental methodology

The incremental Model is a process of software development where requirements are divided into multiple standalone modules of the software development cycle. In this model, each module goes through the requirements, design, implementation, and testing phases. Every subsequent release of the module adds a function to the previous release. The process continues until the complete system is achieved.

1. **Requirement analysis:**

   In the first phase of the incremental model, the product analysis expertise identifies the requirements. The system's functional requirements are understood by the requirement analysis team. To develop the software under the incremental model, this phase performs a crucial role.

2. **Design & Development:**

   In this phase of the Incremental model of SDLC, the design of the system functionality and the development method are finished with success. When software develops new practicality, the incremental model uses style and development phase.

3. **Testing:**

   In the incremental model, the testing phase checks the performance of each existing function as well as additional functionality. In the testing phase, the various methods are used to test the behavior of each task.

4. **Implementation:**

   Implementation phase enables the coding phase of the development system. It involves the final coding that design in the designing and development phase and tests the functionality in the testing phase. After completion of this phase, the number of the product working is enhanced and upgraded up to the final system product.

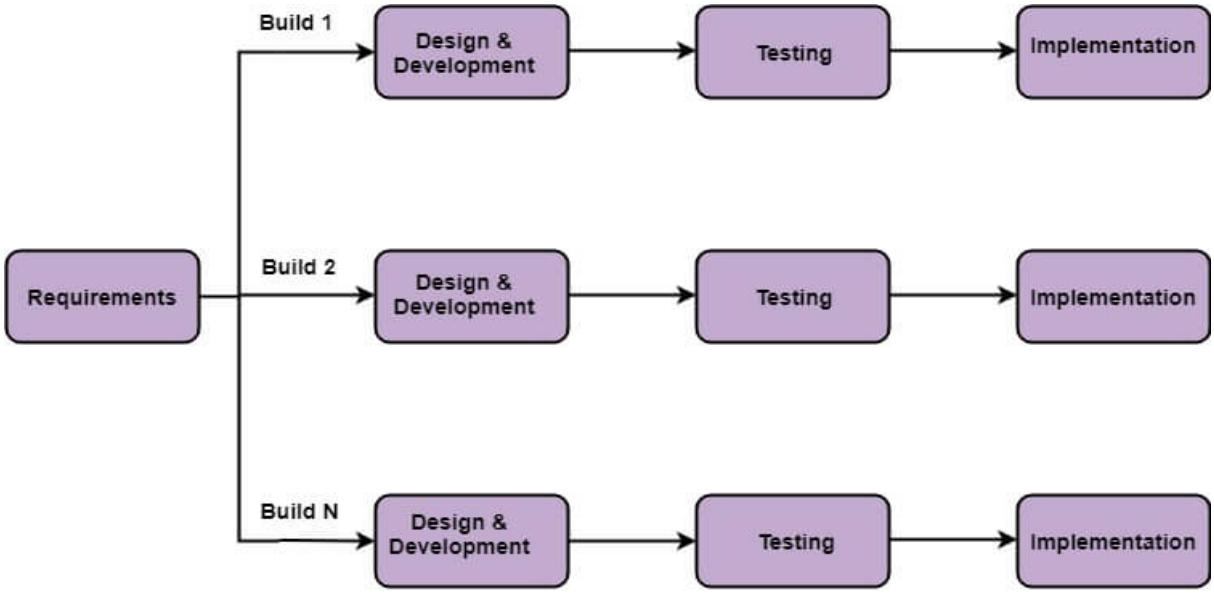


Fig: Incremental Model

2. Project Requirements:

2.1. Functional Requirements:

In this system the actor is:

- **User**

2.1.1. The system shall enable the User can register in the system by entering their personal data.

2.1.2. The system shall enable the User to log into the system to explore the system pages.

2.1.3. The system shall enable the User to view the profile and modify its personal information.

2.1.4. The system shall enable the User to send text messages to other users.

2.1.5. The system shall enable the User to audio call other users.

2.1.6. The system shall enable the User to add postings, edit, delete, and share posts.

2.1.7. The system shall enable the User to send requests to other users.

2.1.8. The system shall enable the User can log out of the system.

2.2. Non-Functional Requirements:

2.2.1. **Usability:** The system must be able to be easily used through simple user interfaces that the User can easily use.

Usability Measurement: Using a video explaining how to use it.

2.2.2. **Availability:** The system must be available 24/7.

Availability Measurement: The application is compatible with Android and IOS Devices.

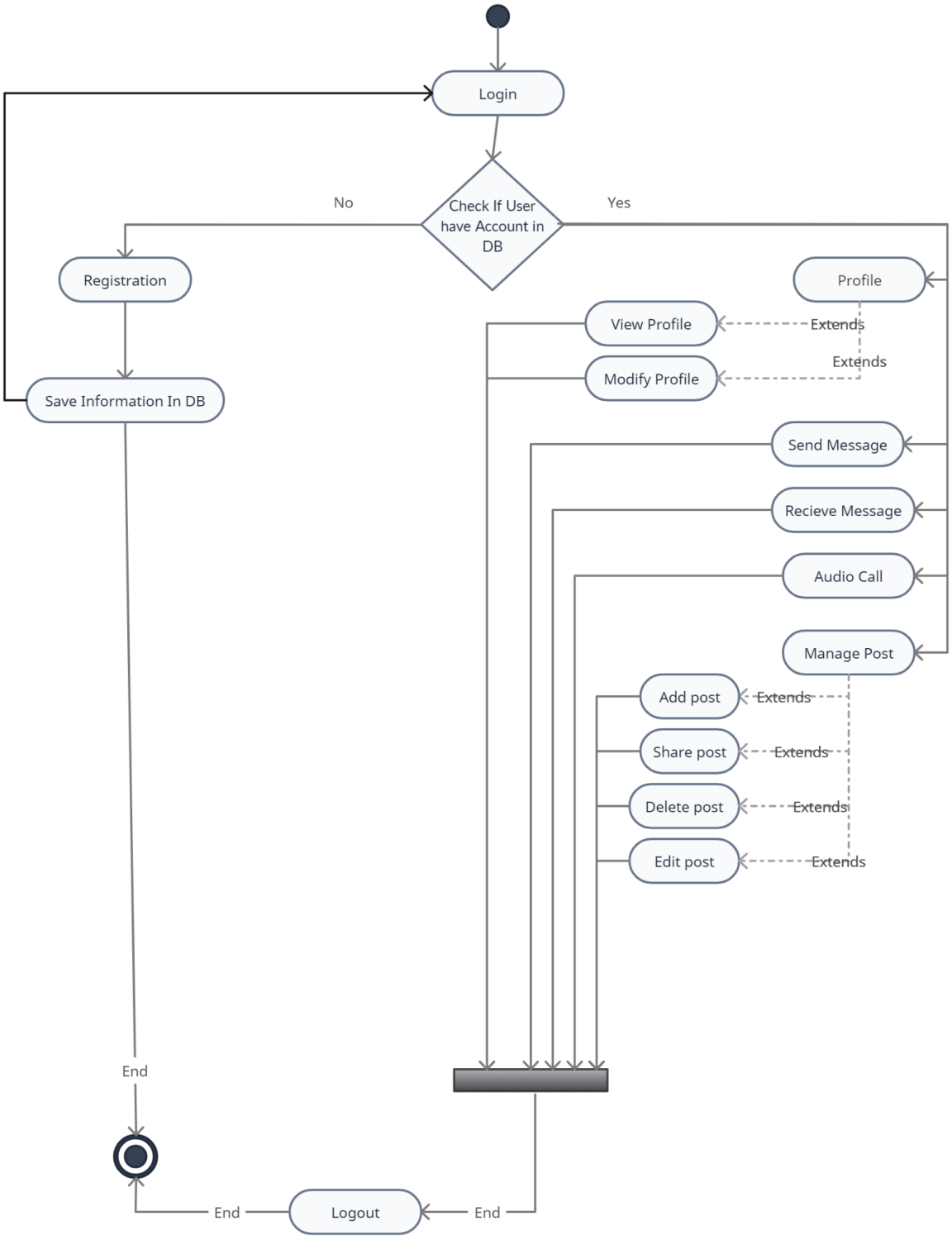
2.2.3. **Maintainability:** The system must be easy to maintain and change if any problems occur.

Maintainability Measurement: Write clean code, comment, name function & variable minable clear, follow Design Pattern.

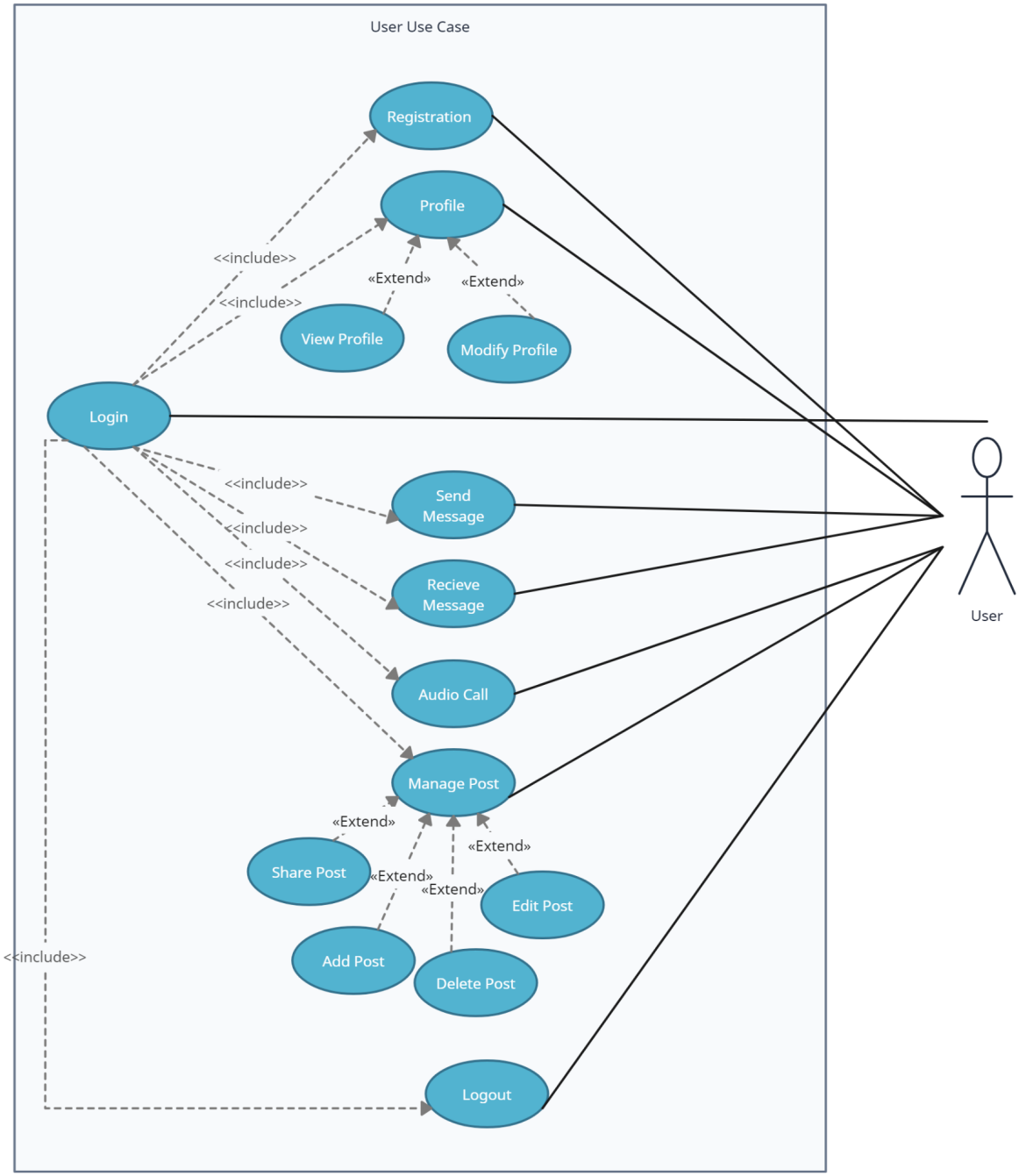
2.2.4. **Efficiency:** The system must make it easier for the User to send requests to other users, send messages, or share posts in an easy and simple way.

Efficiency Measurement: Giving users video record training duration 20 second after training can easily use the system, and maybe fall into error maximum total errors (one or two).

3. Activity diagram:

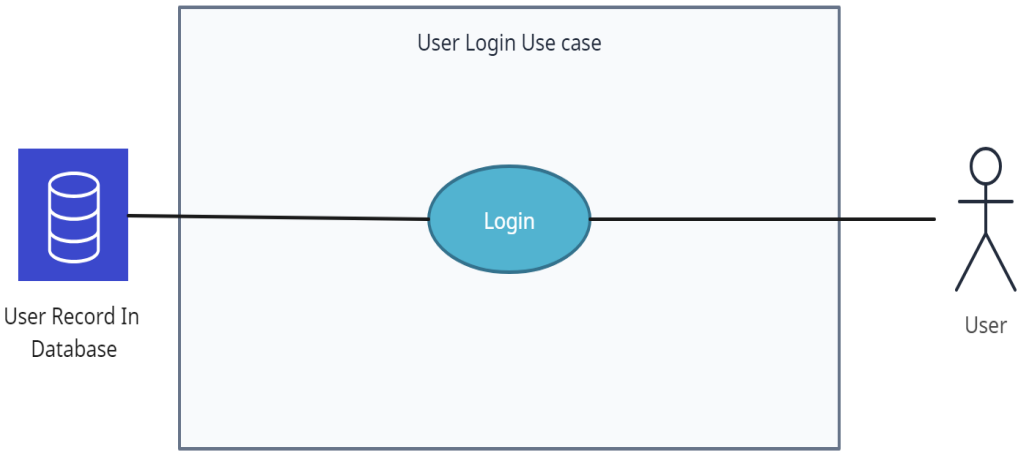


4. Use Case Modelling:

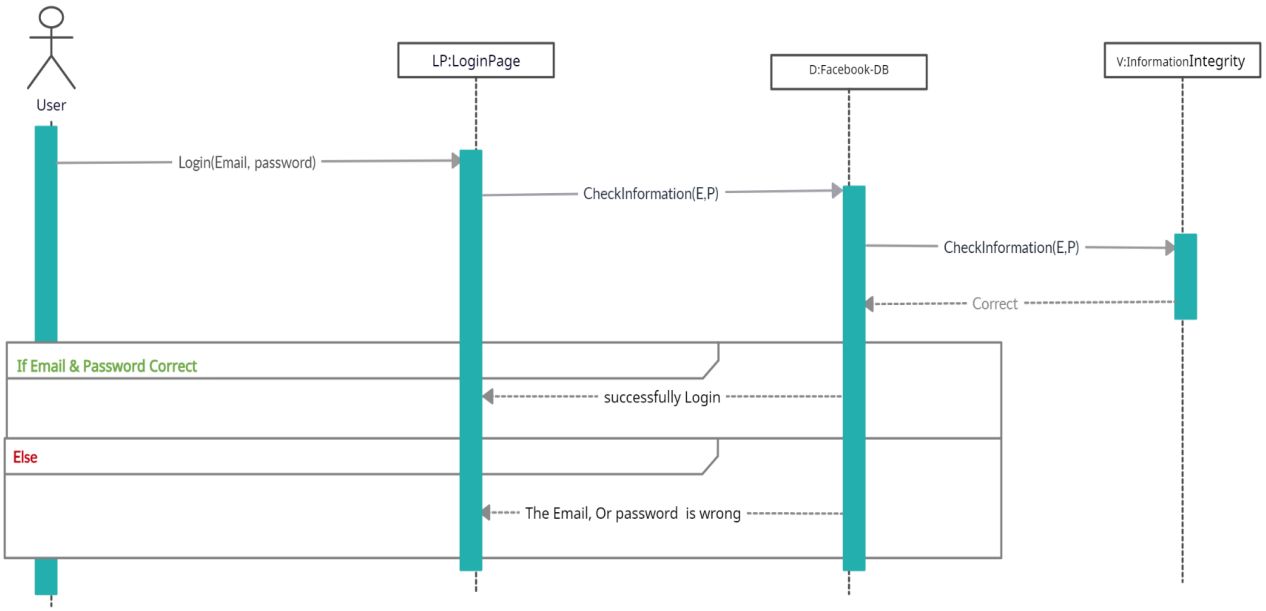


- **Login**

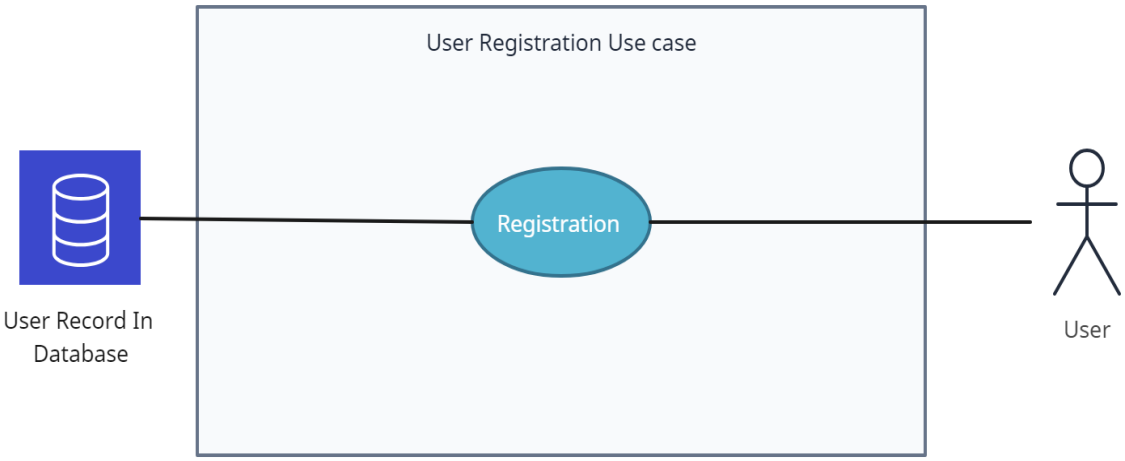
  The system shall enable the User to log into the system to explore the system pages.



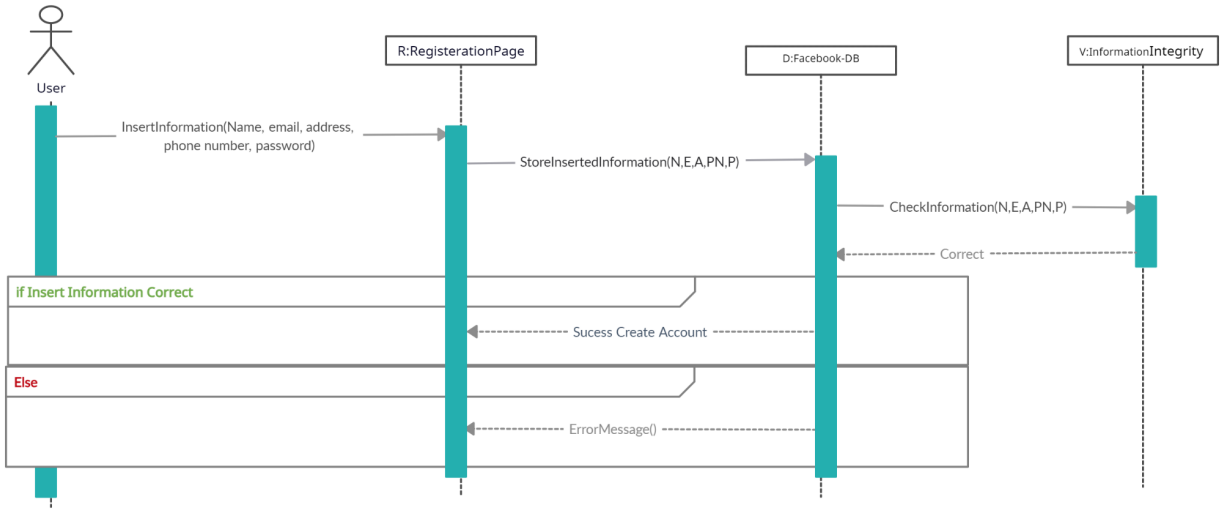
Interaction Models: Login	
Actor	User , User record database.
Description	A User inserts personal information (email, password) to the Facebook application, this information is inserted into the User record database.
Data	email, password.
Stimulus	The User wants to login .
Response	Confirmation message: "successfully Login." Or Error message: "The Email, Or password is wrong".
Comments	Any User can Login on the Facebook Application.



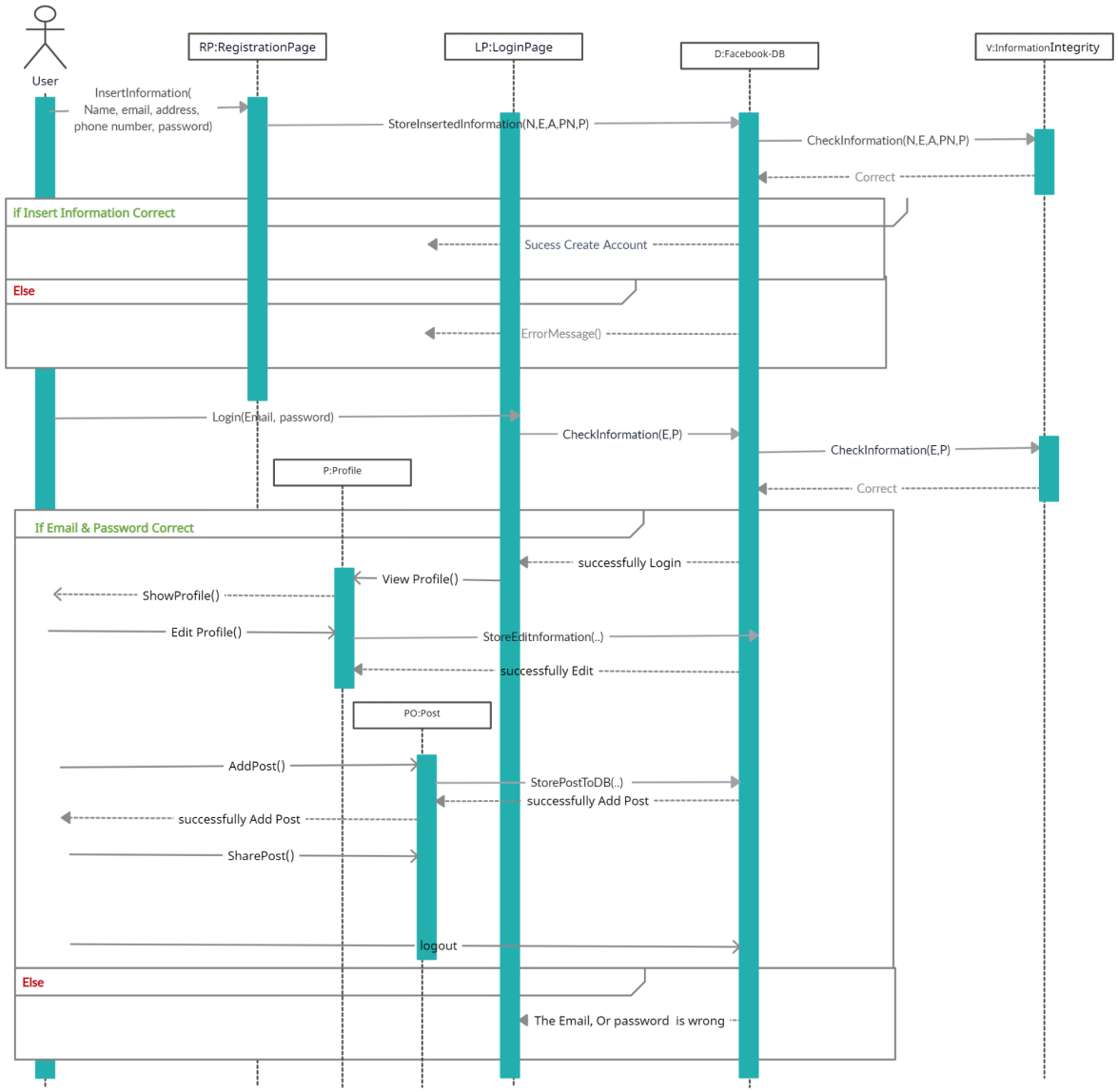
- **Registration**
  The system shall enable the User to register in the system by entering their personal data.



Interaction Models: Registration	
Actor	User, User record database.
Description	A User inserts personal information (name, email, address, phone number, password) to the Facebook application, this information is inserted into the User record database.
Data	name, email, address, phone number, password.
Stimulus	The User wants to register.
Response	Confirmation message: "successfully create an account." Or Error message: "The user is already registered, Or The inserted information is incorrect".
Comments	Any User can register on the Facebook Application.



5. Sequence Diagrams:



6. Class Diagram: