

A
PROJECT REPORT ON
PHOTO STUDIO WEB APPLICATION

SUBMITTED BY
Ms. Manasavi Manohar Phadtare

SUBMITTED TO
SAVITRIBAI PHULE PUNE UNIVERSITY, PUNE
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MASTER OF COMPUTER APPLICATION(SEM-I)

UNDER THE GUIDANCE OF
Ms. Samiksha Yeola

THROUGH,



**Sadhu Vaswani Institute of Management Studies for Girls,
Koregaon Park, Pune-411001**

2024-25

DECLARATION BY STUDENT

To,

The Director. SVIMS, Koregaon Park, Pune

I undersigned hereby declare that this project titled, "**PHOTO STUDIO WEB APPLICATION**" written and submitted by me to SPPU, Pune, in partial fulfilment of the requirement of the award of the degree of **MASTER OF COMPUTER APPLICATION (MCA-I)** under the guidance of Miss. Samiksha Yeola is my original work.

I further declare that to the best of my knowledge and belief, this project has not been submitted to this or any other University or Institution for the award of any Degree.

Place: Pune

Date:

(Manasavi Manohar Phadtare)

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Place: Pune

Date:

(Manasavi Manohar Phadtare)

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CHAPTER 1

INTRODUCTION

1.1 Client Profile

Name: Rushi Khandagale photography

Location: Pune

Industry: Photography

About client:

Rushi Kandagale Photo Studio specializes in a wide range of photography services, including event photography for weddings, parties, and corporate events, as well as portrait photography tailored for individuals, families, and professionals. The studio also excels in commercial photography, offering high-quality product shoots, branding visuals, and advertisement campaigns. Its target audience includes individuals seeking exceptional photography for personal occasions and portraits, as well as businesses in need of professional images for marketing, branding, and commercial purposes.

With a commitment to excellence and creativity, Rushi Kandagale Photo Studio aims to provide a seamless and personalized experience for every client. The studio leverages advanced equipment and innovative techniques to ensure that every photograph reflects professionalism and artistic flair. Known for its attention to detail and customer-centric approach, the studio has built a reputation for delivering stunning visuals that not only meet but exceed client expectations. Whether it's capturing the vibrance of an event, the essence of a portrait, or the precision required for commercial shoots, the studio ensures every moment is transformed into a timeless masterpiece.

1.2 Need for System

In today's digital age, establishing a strong online presence is essential for businesses to thrive. For Rushi Kandagale Photo Studio, having a dedicated website is a critical step towards achieving their business goals. The website will serve as a platform to:

- **Showcase Portfolio:** Display their diverse range of photography services, including event photography, portraits, and commercial shoots, to attract potential clients.
- **Enhance Client Interaction:** Provide a functional contact form to streamline communication and make it easier for clients to inquire about services or request bookings.
- **Expand Online Reach:** Increase visibility by showcasing their work to a wider audience online, ultimately driving more business opportunities.

- **Build Trust and Credibility:** A well-designed website will create a professional online presence, instilling confidence in potential clients. Displaying client testimonials, case studies, and detailed information about services will further reinforce trust.
- **Marketing and Promotion:** The website can integrate with social media channels, helping the studio promote special offers, events, or new work. Additionally, a blog or news section can be used to share photography tips, updates, and showcase recent projects, engaging both current and potential clients.

A professionally designed website will enable the studio to effectively highlight their expertise, engage with clients, and build a robust online presence in the competitive photography industry. A website for Rushi Kandagale Photo Studio will not only elevate its online presence but will also serve as an all-in-one solution for attracting clients, managing bookings, and growing the business in an increasingly digital world.

1.3 Scope & Feasibility of Work

Scope:

The project involves creating a responsive, user-friendly website for Rushi Kandagale Photo Studio, designed to effectively showcase their photography services and engage potential clients. The website will feature:

- A categorized gallery to display various types of photography, including event, portrait, and commercial shoots.
- A contact form to streamline client communication and enable inquiries or bookings.
- An intuitive navigation system for easy access to different sections, such as the portfolio, contact details, and service offerings.
- Mobile responsiveness to ensure the website is optimized for all devices, providing a seamless experience across desktop, tablet, and mobile platforms.

Feasibility:

- **Technical Feasibility:** The project will be developed using widely supported and well-documented technologies including HTML, CSS, JavaScript, Flask for the backend, and SQLite as the database. These technologies are reliable, with ample resources available for troubleshooting and development, ensuring the smooth execution of the project.
- **Economic Feasibility:** Development costs are kept minimal as the website will leverage open-source tools and frameworks. Both Flask and SQLite are free to use, and the front-end technologies (HTML, CSS, JavaScript) are universally supported,

minimizing any additional software or licensing fees. The primary cost will be for hosting and domain registration, which remains affordable.

- **Operational Feasibility:** The system will be easy to use, with a user-friendly interface designed for simplicity. The admin team at Rushi Kandagale Photo Studio will be able to easily update the website's content, including uploading new photographs, managing inquiries, and maintaining the contact form. Regular updates and changes to the gallery or service information will be manageable without requiring advanced technical knowledge. This ensures the website remains functional and relevant without the need for ongoing external support.

Overall, the project is both feasible and aligned with the studio's goals, ensuring the successful development and long-term usability of the website.

1.4 Operating Environment – Hardware & Software

Hardware Component	Minimum Requirements	Recommended Requirements
Host Machine		
Processor	Intel i3 or above	Intel i5 or above
RAM	4 GB	8 GB
Storage	500 GB Hard Disk	250 GB SSD
Graphics	Integrated Graphics	Integrated Graphics
Network	Ethernet or Wi-Fi adapter	Ethernet adapter
Display	1366x768 resolution	1366x768 resolution
Client Device (Mobiles, Computers)		
Processor	1.8 GHz dual-core processor	2.5 GHz quad-core processor
Ram	2 GB	4 GB
Network	Ethernet or Wi-Fi adapter	Ethernet adapter

Software Requirements	Recommended Requirements
Operating System	Windows 10 / macOS / Linux
Development Tools	Visual Studio Code, SQLite Database Browser
Database	SQLite
Backend	Flask
Frontend	HTML5, CSS3, JavaScript, Bootstrap
Browser	Chrome, Firefox, Edge
Testing Tools	Postman (API Testing), Browser Developer Tools
Other Tools	Git (Version Control), Python 3.x

1.5 Architecture of System

The system follows a three-tier architecture, ensuring modularity and efficient data management:

- **Presentation Layer:**
 - Technologies: HTML, CSS, JavaScript, and Bootstrap.
 - Purpose: Provides the user interface for clients to interact with the system, such as browsing the portfolio and submitting inquiries.
- **Application Layer:**
 - Technology: Flask (Python-based web framework).
 - Purpose: Handles routing, business logic, and processing requests from the presentation layer. It serves the frontend content dynamically and manages data communication with the database.
- **Database Layer:**
 - Technology: SQLite (lightweight and serverless relational database).
 - Purpose: Stores image metadata, categorized photo details, and client inquiry data. SQLite is chosen for its simplicity and ease of integration with Flask.

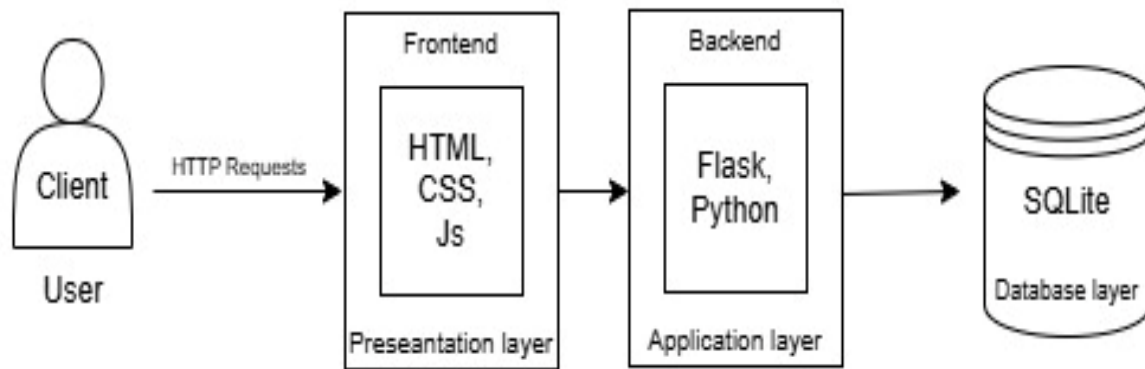


Fig. 1: Architecture Diagram

1.6 Detailed Description of Technology Used

- **HTML5 (Hypertext Markup Language 5)**

HTML5 is the latest version of the HTML standard used to structure the content of web pages. It provides a solid foundation for web development by allowing developers to define the layout, structure, and semantic meaning of various page elements, such as headings, paragraphs, links, images, forms, and tables.

Key Features:

- **Semantic Markup:** HTML5 introduces semantic elements that define parts of a webpage like `<nav>`, `<header>`, and `<footer>`, improving accessibility and SEO.
- **Multimedia Support:** Native support for embedding audio and video content using `<audio>` and `<video>` tags, reducing the need for external plugins like Flash.
- **Forms:** Enhanced form controls, including input types such as date, range, email, etc., improve user experience and validation.
- **Local Storage:** Provides a mechanism to store data locally on a user's device using the `localStorage` and `sessionStorage` APIs.

Use in Project: HTML5 will be used to structure the entire content of the website, defining the page layout and integrating various interactive and multimedia features.

- **CSS3 (Cascading Style Sheets 3)**

CSS3 is the latest version of CSS, the stylesheet language used to define the presentation of web pages. CSS3 brings advanced styling capabilities, enabling developers to create modern, visually attractive, and responsive web designs. It allows the separation of content (HTML) from design (CSS), leading to cleaner code and easier maintenance.

Key Features:

- **Responsive Design:** Media queries and flexible layouts enable websites to adjust their appearance based on the device's screen size (mobile, tablet, desktop).
- **Transitions and Animations:** CSS3 supports smooth transitions and animations, allowing for dynamic effects like hover animations, fading in/out, and sliding elements.
- **Flexbox and Grid Layouts:** New layout techniques like Flexbox and CSS Grid provide more control over element alignment and distribution within a container.
- **Custom Fonts:** @font-face and Google Fonts allow the use of custom fonts beyond system defaults, enhancing design aesthetics.

Use in Project: CSS3 will be used to style the website, making it visually appealing, consistent, and responsive across different devices.

- **JavaScript**

JavaScript is a powerful programming language used to add interactivity and dynamic behavior to web pages. It runs on the client side, enabling features like form validation, animations, AJAX requests, and interactive galleries. JavaScript enhances the user experience by providing real-time updates without the need to reload the page.

Key Features:

- **DOM Manipulation:** JavaScript allows interaction with the Document Object Model (DOM), enabling the dynamic modification of page content and structure based on user actions.
- **Event Handling:** JavaScript can capture and respond to user events such as clicks, form submissions, and mouse movements.
- **Asynchronous Operations:** Using techniques like AJAX (Asynchronous JavaScript and XML), JavaScript can fetch data from the server without refreshing the page, allowing for smoother user interactions.
- **Libraries and Frameworks:** JavaScript has numerous libraries (e.g., jQuery) and frameworks (e.g., React, Angular, Vue.js) that simplify common tasks and speed up development.

Use in Project: JavaScript will be used to implement dynamic elements such as interactive image galleries, form validations, and AJAX-based client-server communication for a seamless user experience.

- **Bootstrap**

Bootstrap is a widely-used front-end framework that simplifies the development of responsive and mobile-first websites. It provides pre-designed components like navigation bars, buttons, forms, and grids, making it easier to create visually appealing layouts without having to start from scratch.

Key Features:

- **Grid System:** Bootstrap's 12-column grid system allows for fluid and flexible layout design, which automatically adjusts based on screen size.
- **Prebuilt Components:** Components such as carousels, modals, alerts, buttons, and navigation bars are included, reducing the need for custom design.
- **Responsive Design:** Bootstrap's responsive utilities enable the design to adapt to various screen sizes, ensuring the website looks great on mobile devices, tablets, and desktops.
- **Customizable Themes:** Developers can customize Bootstrap themes to fit the specific branding and style of the project.

Use in Project: Bootstrap will be used to ensure the website is responsive, user-friendly, and visually consistent across devices, while speeding up development with prebuilt components and layout tools.

- **Flask**

Flask is a lightweight and flexible web framework written in Python. It is widely used for developing web applications that require minimal complexity and can be easily extended with additional tools. Flask follows a microservice architecture, giving developers the freedom to add only the components they need.

Key Features:

- **Routing:** Flask allows for the easy definition of routes that map URLs to functions. This makes it simple to create different pages and features for the website.
- **Templating:** Flask uses Jinja2 templating, which allows for dynamic generation of HTML pages on the server side, based on the data passed to the templates.
- **Lightweight:** Flask is minimal and doesn't impose a lot of structure, making it easy to integrate with various libraries, databases, and front-end frameworks.
- **Extensibility:** Flask supports extensions for adding additional features such as authentication, database management, and API integration.

Use in Project: Flask will handle the back-end logic of the website, managing routes, processing user requests, rendering dynamic pages, and interacting with the database for storing and retrieving client inquiries and image metadata.

- **SQLite**

SQLite is a serverless, self-contained, and zero-configuration database engine. It is lightweight and ideal for applications that do not require the complexity of a full-fledged relational database system like MySQL or PostgreSQL. SQLite is used to store and retrieve structured data.

Key Features:

- **Serverless:** Unlike traditional databases, SQLite does not require a separate server process or system to operate. It stores data in a single file on the system.
- **Lightweight:** SQLite is efficient and has a small memory footprint, making it ideal for small to medium-scale web applications.
- **ACID Compliance:** SQLite supports transactions and ensures data integrity through its ACID (Atomicity, Consistency, Isolation, Durability) compliance.
- **Simple Integration:** SQLite integrates easily with Python through libraries like sqlite3, making it simple to work with in Flask applications.

Use in Project: SQLite will be used to store the metadata of the images in the portfolio, as well as client inquiries submitted via the contact form. It provides a simple yet efficient way to manage this data within the Flask application.

CHAPTER 2

PROPOSED SYSTEM

2.1 Proposed System

The proposed system is a dynamic, user-friendly, and interactive website designed to help Rushi Kandagale Photo Studio showcase its extensive portfolio and provide a seamless way for potential clients to engage with the studio. The website will feature a visually appealing layout with organized galleries of the studio's work, including event photography, portraits, and commercial photo shoots.

Key features of the proposed system include:

- **Portfolio Display:** A categorized gallery where visitors can view high-quality images, organized by type of photography (e.g., events, portraits, commercial shoots).
- **Contact Form:** A functional contact form that allows clients to submit inquiries and schedule appointments directly through the website.
- **Responsive Design:** The website will be fully responsive, ensuring it is optimized for viewing on desktops, tablets, and mobile devices, providing an excellent user experience across all screen sizes.
- **Interactive Elements:** JavaScript will be used to add interactive elements like image galleries, sliders, and form validation, enhancing user engagement.
- **Backend Integration:** The Flask framework will handle the backend logic, managing form submissions, displaying portfolio data, and interacting with the database to store and retrieve client inquiries.
- **Simple Navigation:** Easy-to-use navigation to allow visitors to seamlessly explore different sections of the website, such as the portfolio, services, and contact page.

2.2 Objectives of the System

- **Showcase the Studio's Portfolio:**

To provide a digital platform where Rushi Kandagale Photo Studio can effectively display its diverse portfolio of high-quality photographs, organized by categories such as event photography, portraits, and commercial shoots, allowing potential clients to easily explore the studio's work.
- **Simplify Client Inquiries:**

To streamline the process of client communication by integrating a user-friendly contact form that allows clients to submit inquiries, request quotes, and schedule appointments, directly through the website.

- **Increase Reach and Brand Visibility:**

To expand the studio's online presence, making it more accessible to a wider audience, including individuals and businesses looking for professional photography services. The website will serve as a marketing tool to enhance the studio's brand visibility and attract more clients.

- **Provide a Seamless User Experience:**

To create a responsive, interactive, and easy-to-navigate website that offers a smooth experience across all devices, ensuring visitors can easily browse the gallery, access information, and interact with the studio.

- **Enable Easy Maintenance and Updates:**

To ensure that the studio's website can be easily maintained and updated by the admin team, allowing for the addition of new work, updating client information, and keeping the content fresh and relevant.

2.3 User Requirements

- **View Categorized Portfolio:** Clients should be able to browse through different categories of photographs (e.g., event photography, portraits, commercial shoots) in a well-organized and visually appealing gallery.
- **Submit Inquiries:** Clients should have access to a simple and functional contact form where they can submit inquiries, request quotes, or schedule appointments with the photo studio.
- **Responsive Design:** Clients should be able to view the website seamlessly across various devices (desktop, tablet, mobile) with a responsive and user-friendly interface.
- **Engage with Interactive Elements:** Clients should be able to interact with dynamic features such as image sliders, lightboxes, and hover effects for an engaging browsing experience.

CHAPTER 3

ANALYSIS AND DESIGN

3.1 DFD

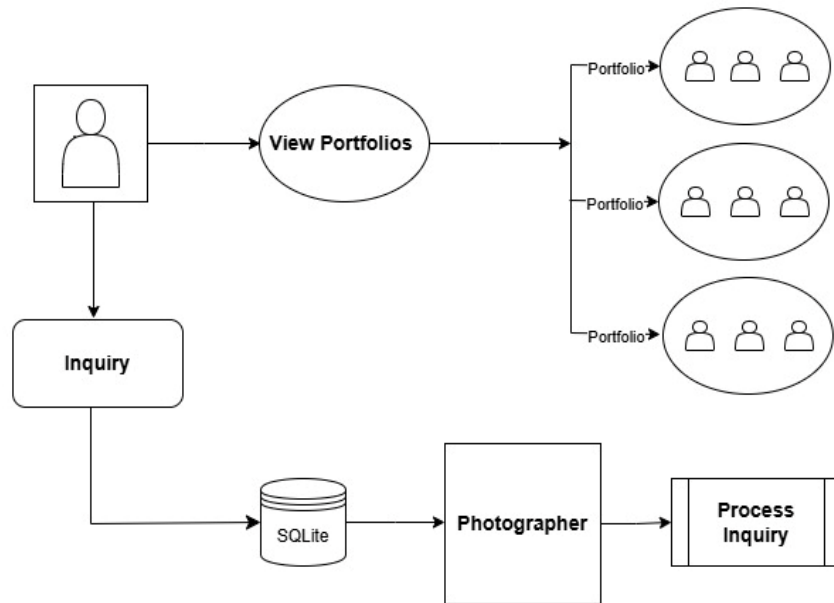


Fig. 2: DFD

3.2 Table Specification

Table name	Column Name	Data Type	Constraints	Description
Studio	Id	INTEGER	PRIMARY KEY, AUTOINCREMENT	Unique identifier for each client.
	Name	TEXT	NOT NULL	Name of the client submitting an inquiry.
	Email	TEXT	NOT NULL	Email address of the client
	Phone	INTEGER	NOT NULL	Phone number of the client
	Message	TEXT	NOT NULL(At least 10 character)	Message of client for what reason he made inquiry.
	Date_Created	DATETIME	DEFAULT CURRENT_TIMESTAMP	Date and time when the client submitted the inquiry

3.3 ERD

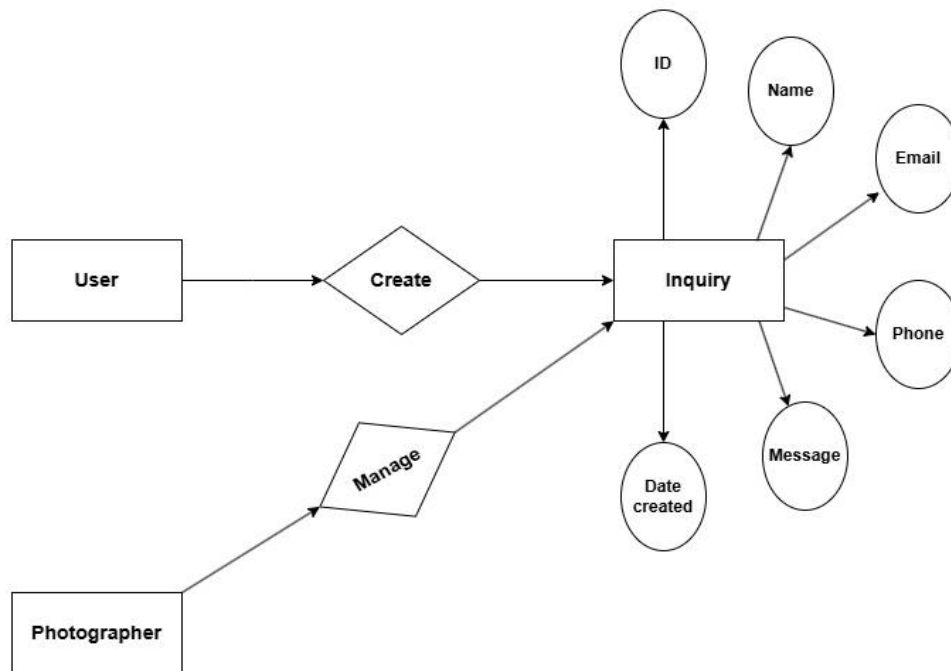


Fig. 3: ERD

3.4 Object Diagram

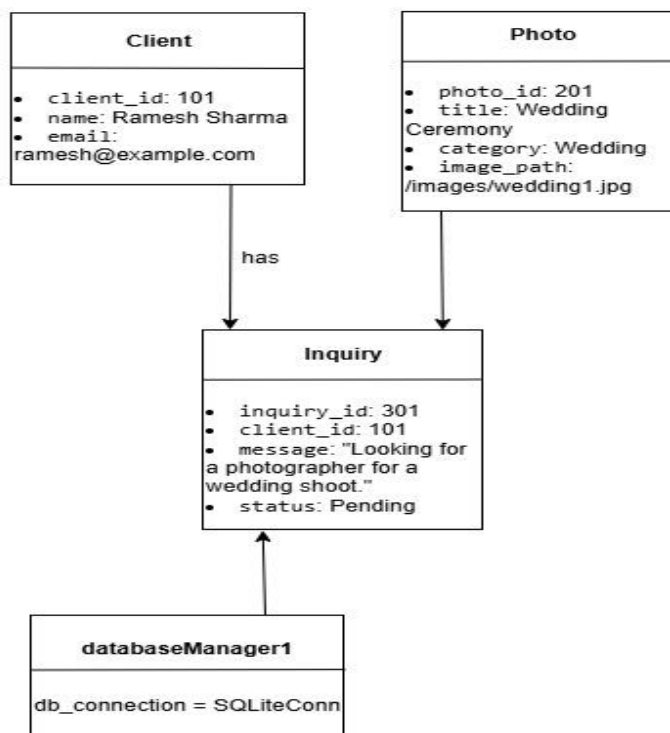


Fig. 4: Object Diagram

3.5 Class Diagram

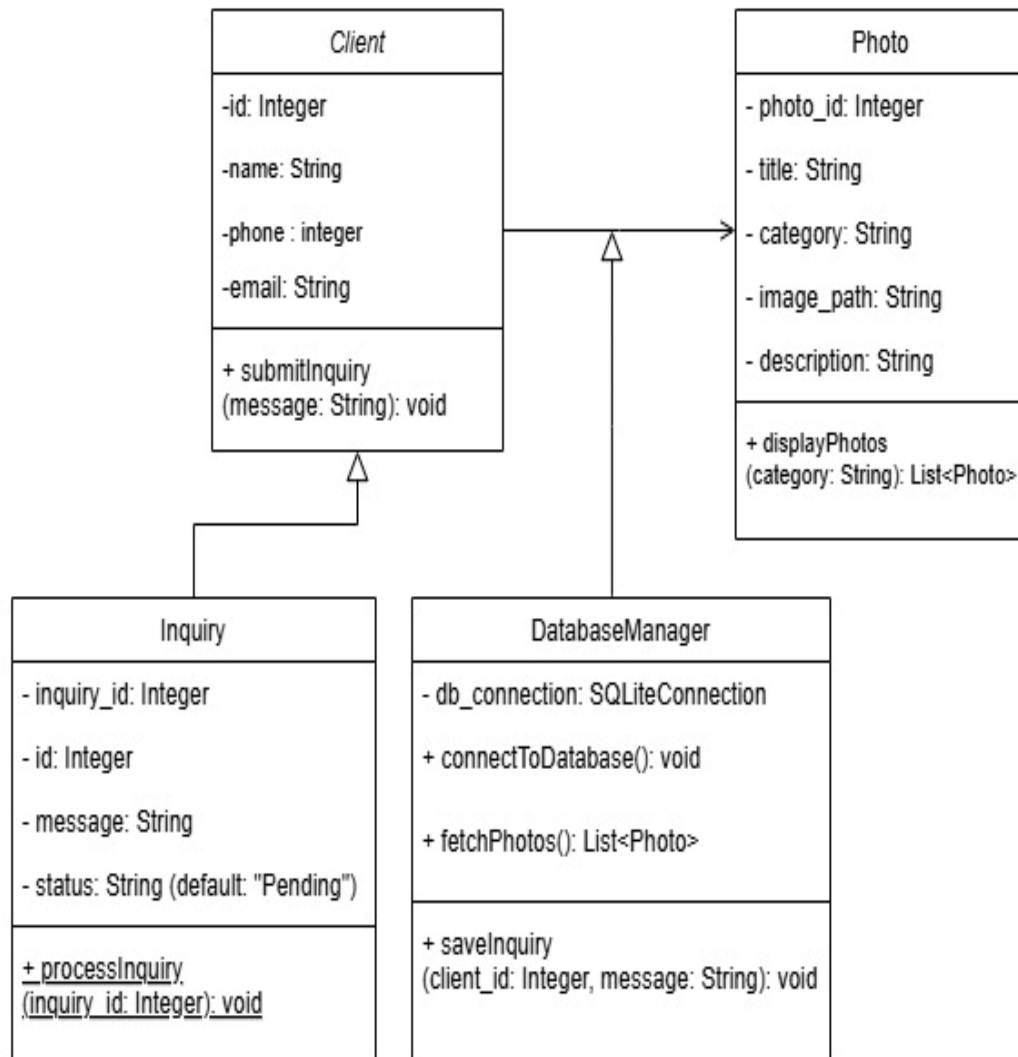


Fig. 5: Class Diagram

3.6 Use Case Diagrams

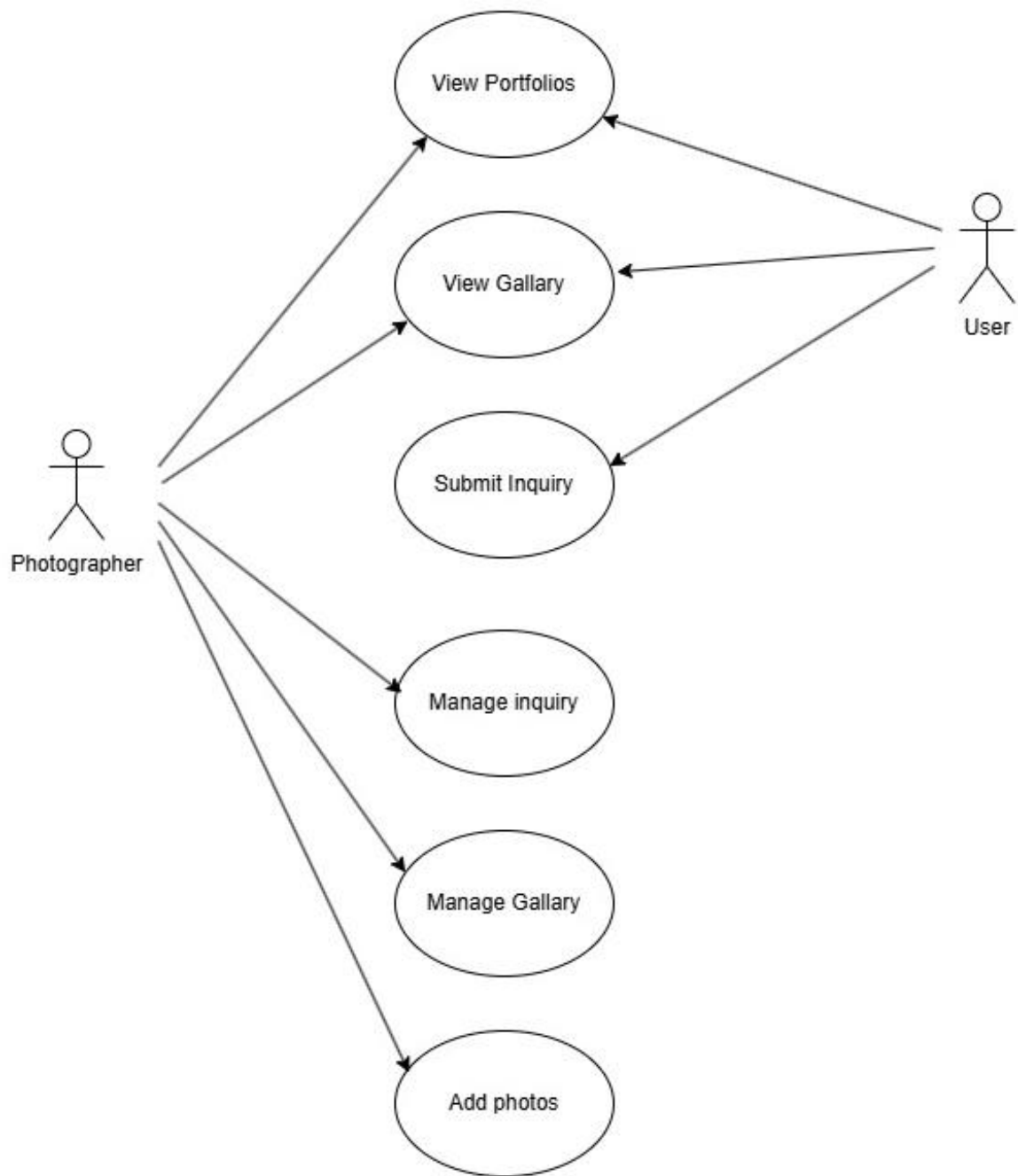
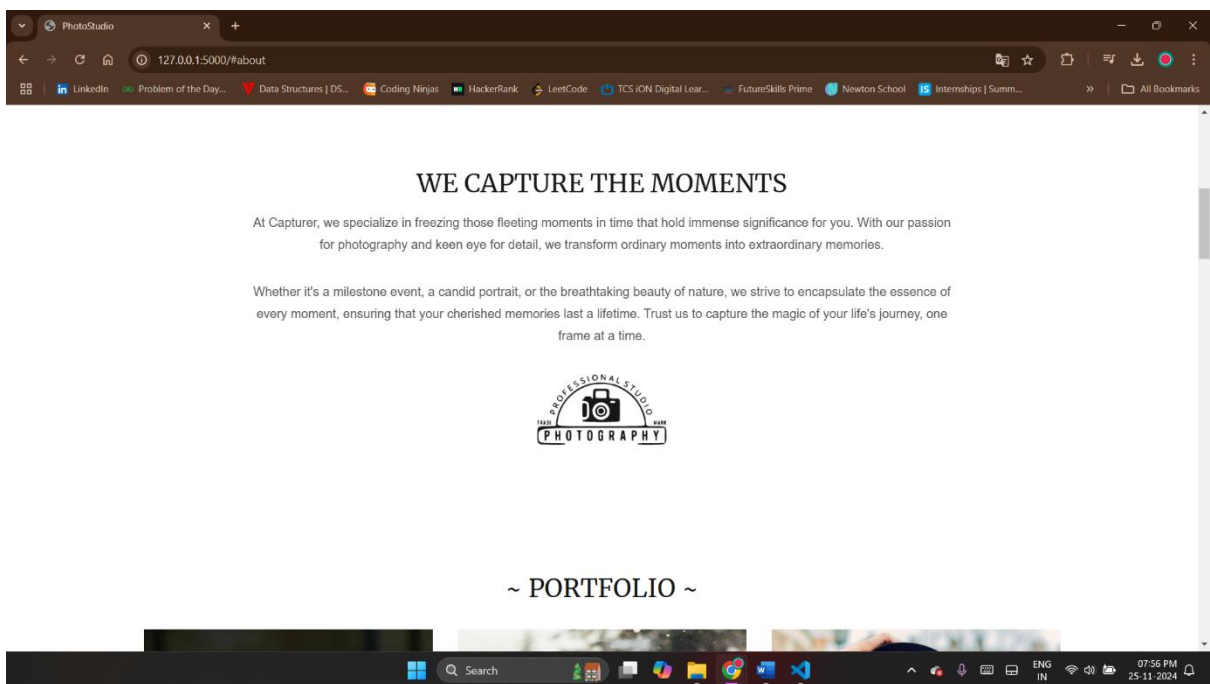


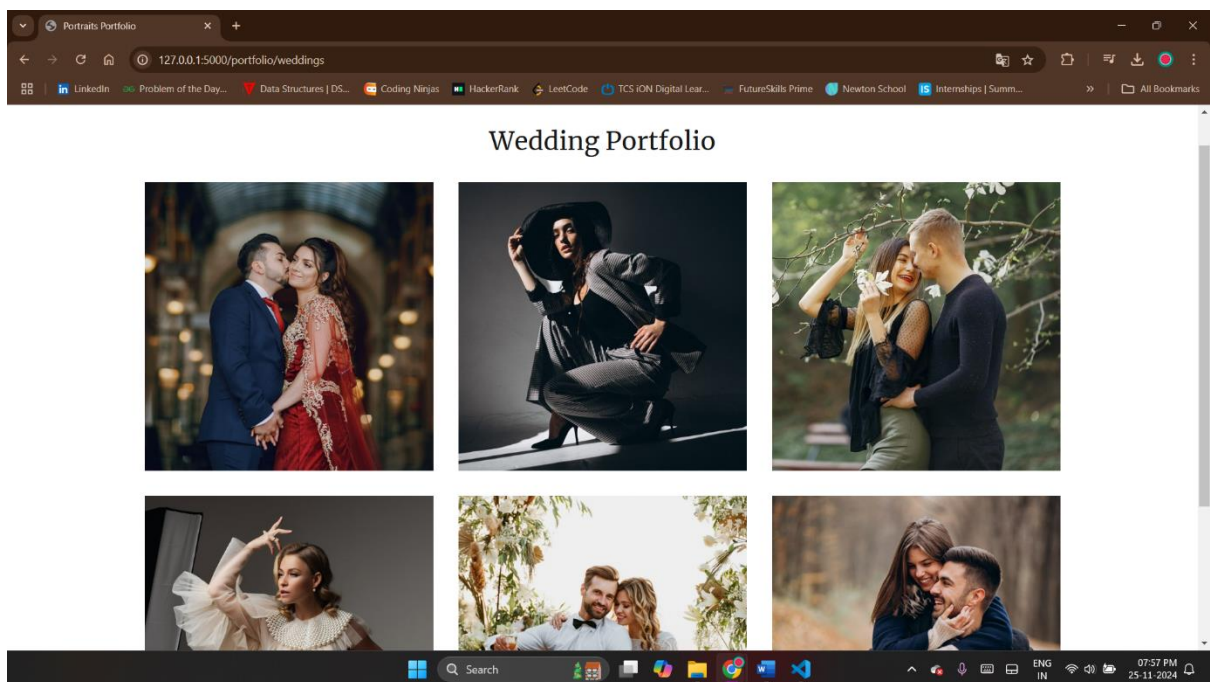
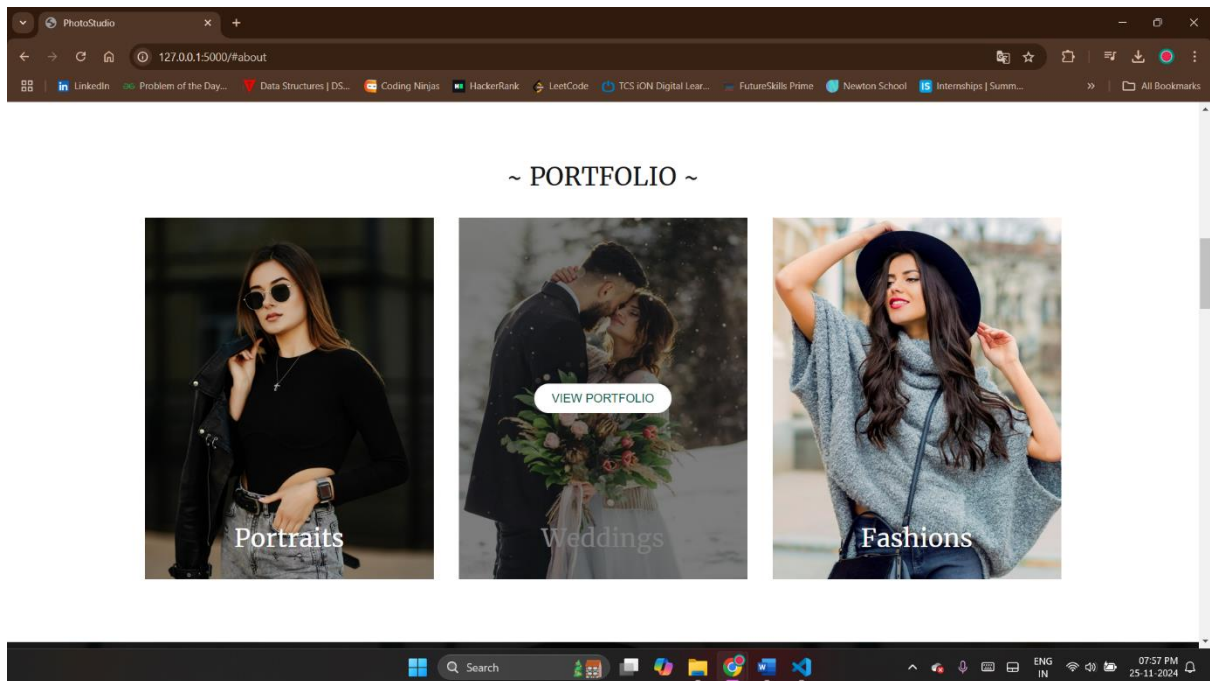
Fig. 6: Use Case Diagram

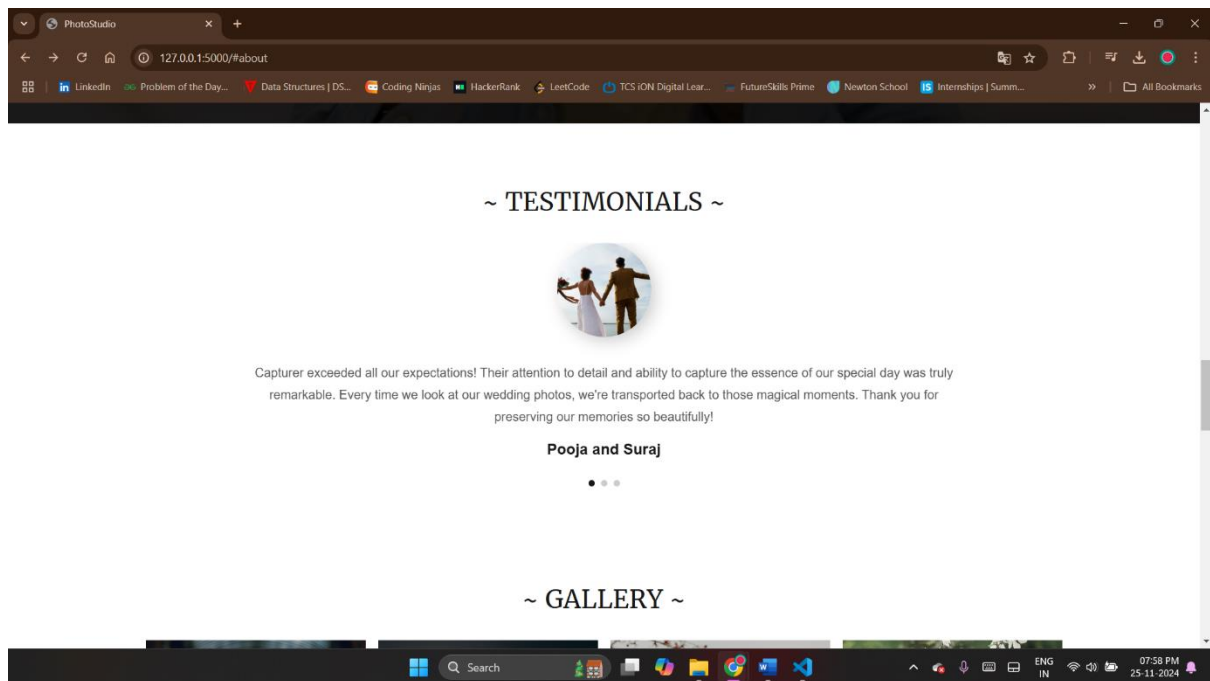
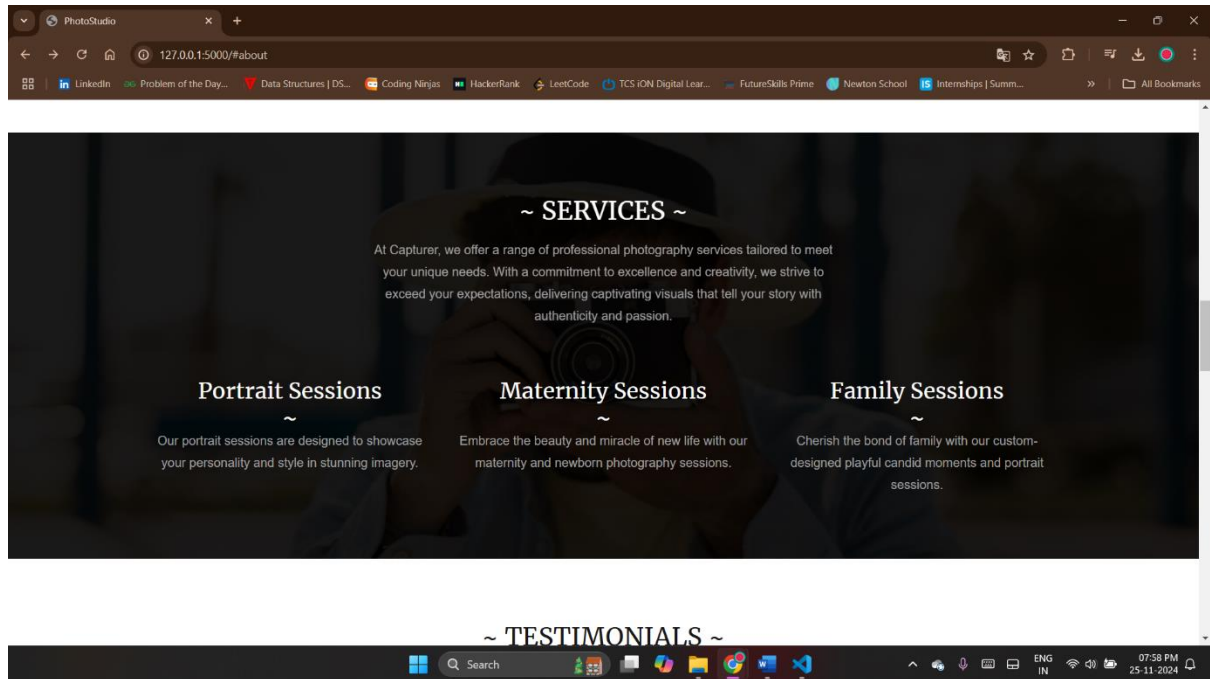
CHAPTER 4

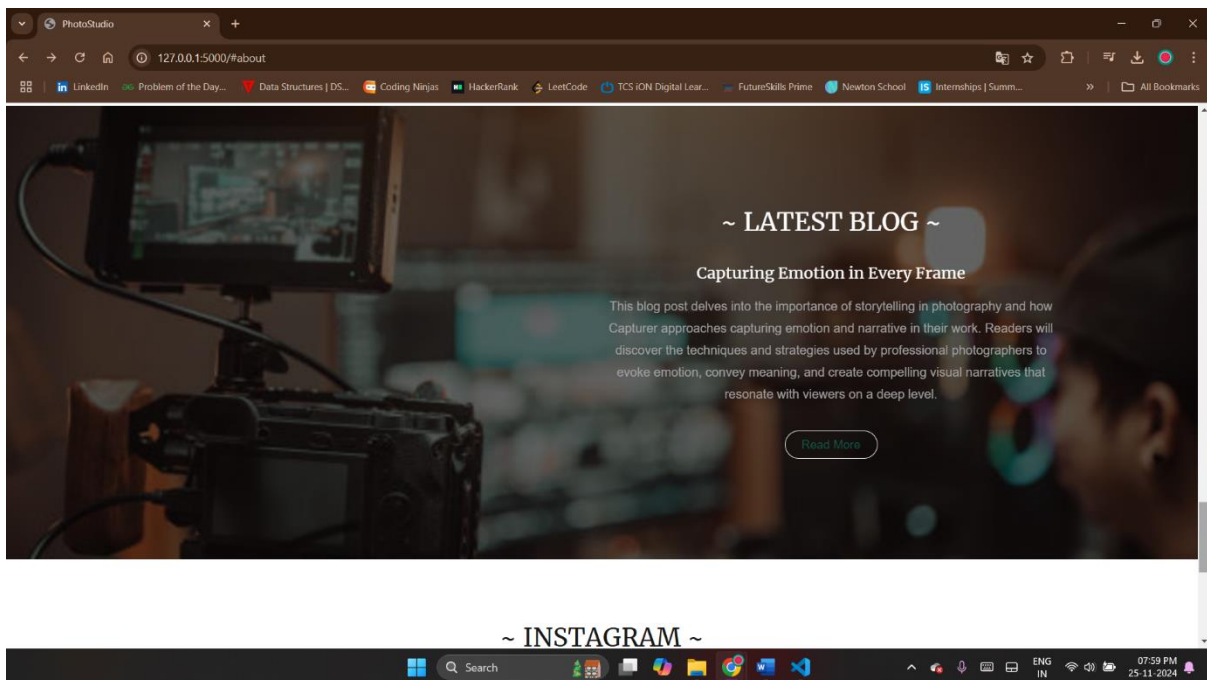
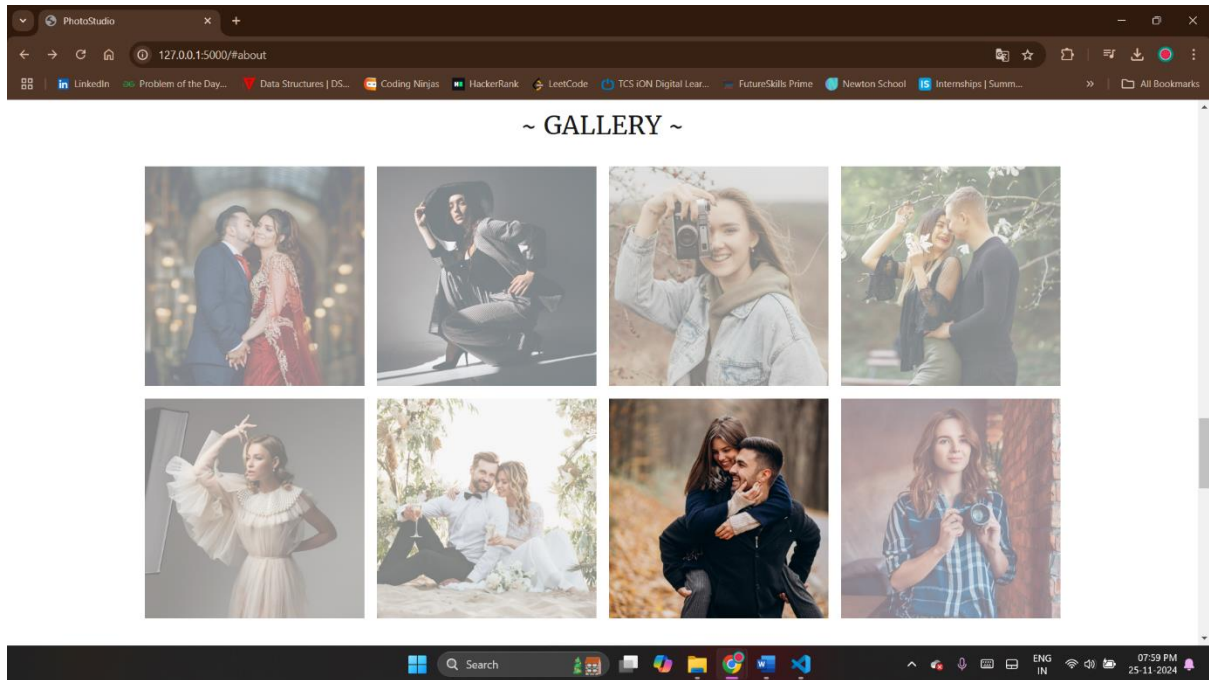
USER MANUAL

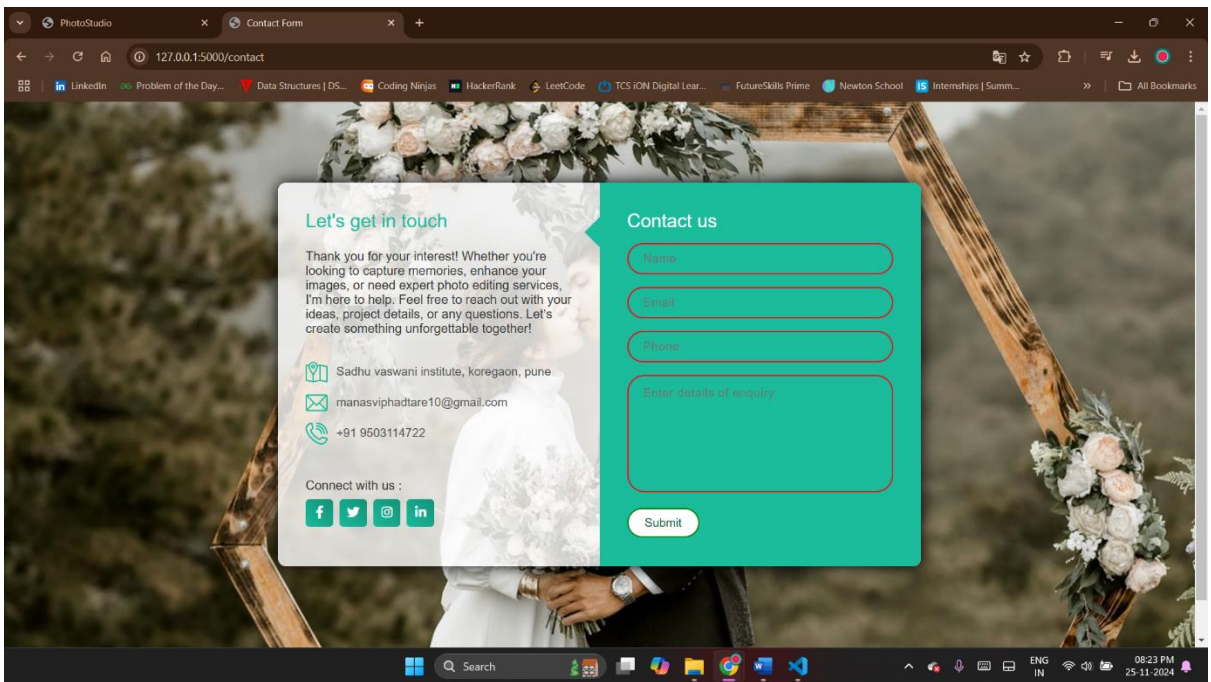
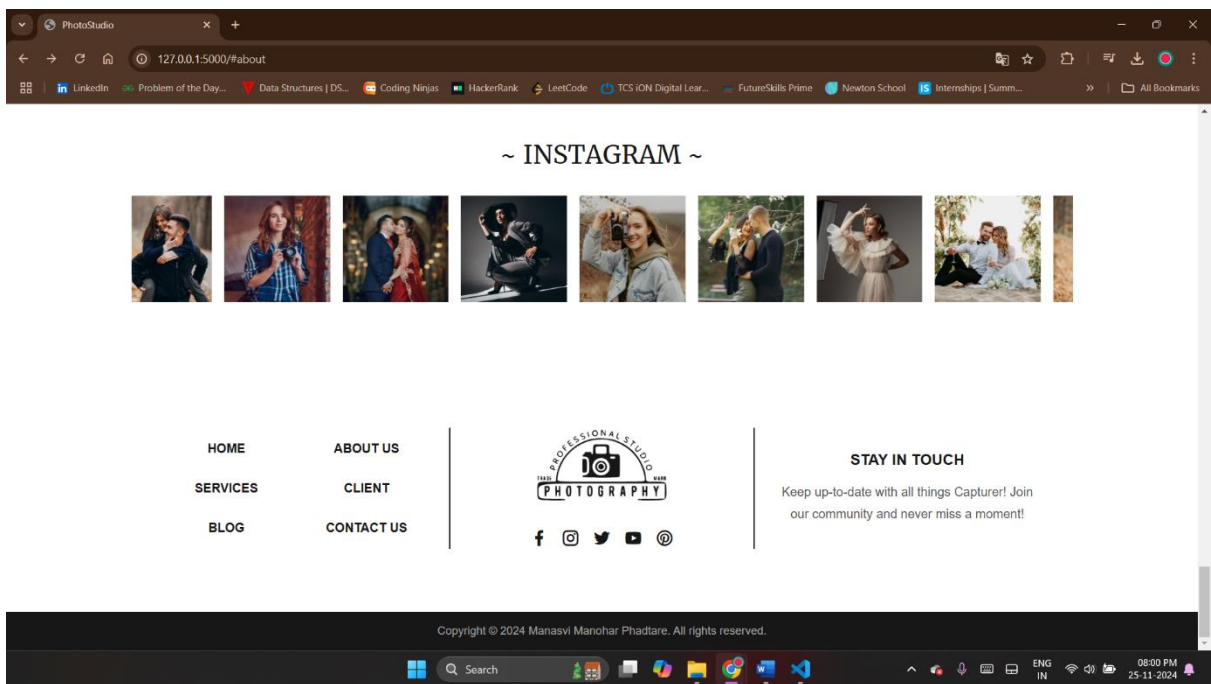
4.1 User Interface Design (Screens etc.)

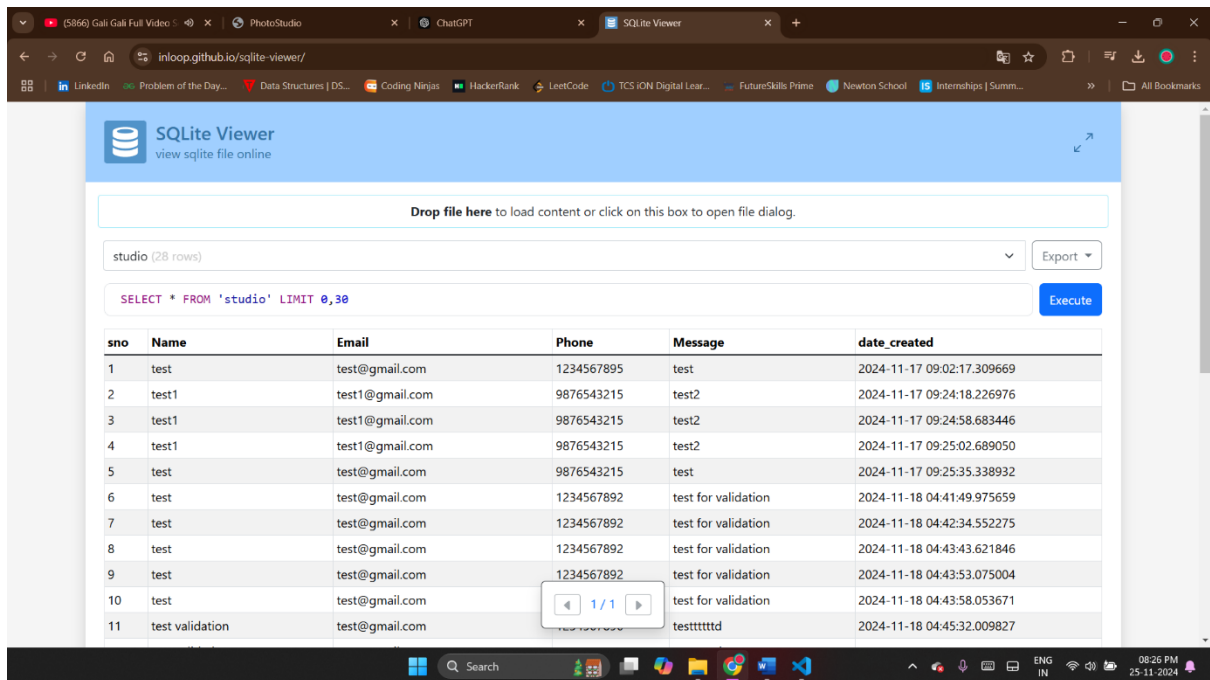
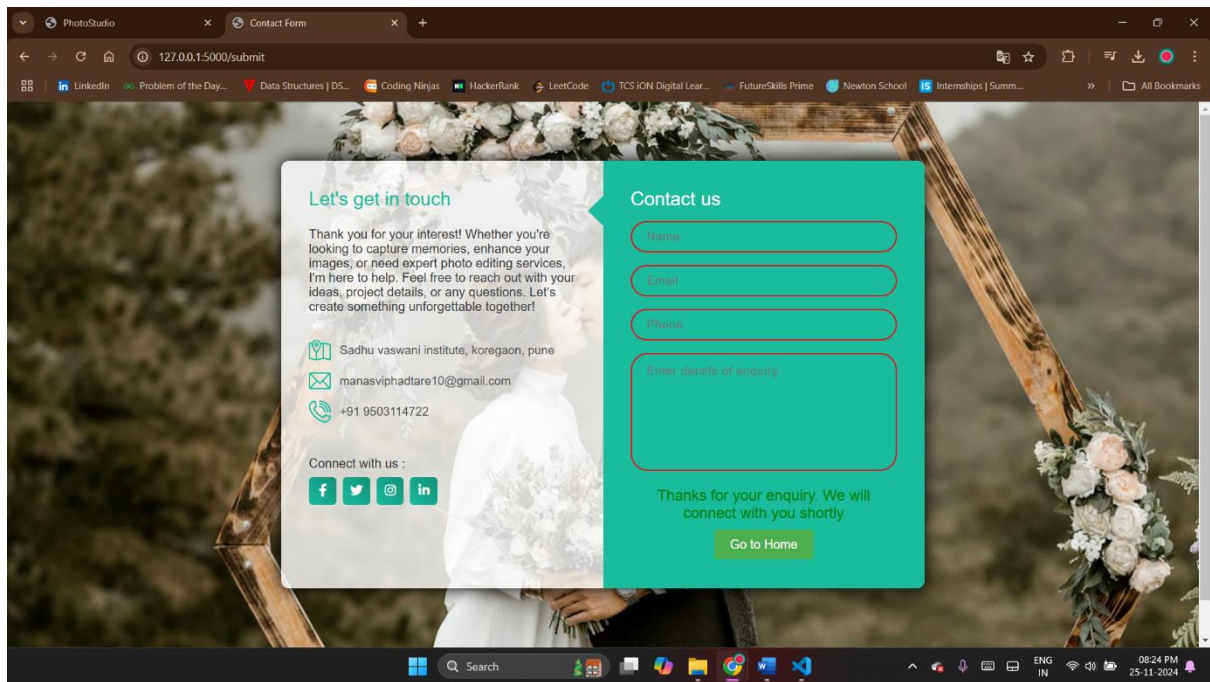












4.2 Limitations

- The system currently lacks a user login feature.
- Requires manual updates to add new categories in the gallery.

4.3 Future Enhancements

- Add a user login system for personalized experiences.
- Enable automated booking for photography services.
- Accessing personalized photo by user login.

BIBLIOGRAPHY

- Flask Documentation
- Bootstrap Documentation.
- Meyer, Eric A. *CSS: The Definitive Guide*. O'Reilly Media, 2017.
- Allen, Grant. *The Definitive Guide to SQLite*. Apress, 2010.
- TutorialsPoint SQLite : <https://www.tutorialspoint.com/sqlite/index.htm>
- Python.org Documentation: <https://docs.python.org>
- Official Bootstrap Guide: <https://getbootstrap.com/docs>
- <https://www.w3schools.com/>
- <https://stackoverflow.com/>
- <https://app.diagrams.net/>

ANNEXURE

Sample Program Code

Flask Backend Code

```
from flask import Flask, render_template, request
from flask_sqlalchemy import SQLAlchemy
from datetime import datetime
```

```

app = Flask(__name__)
app.config['SQLALCHEMY_DATABASE_URI'] = "sqlite:///studio.db" # Corrected URI key
db = SQLAlchemy(app)

class Studio(db.Model):
    sno = db.Column(db.Integer, primary_key=True) # Corrected to primary_key
    Name = db.Column(db.String(50), nullable=False)
    Email = db.Column(db.String(50), nullable=False)
    Phone = db.Column(db.Integer, nullable=False)
    Message = db.Column(db.String(500), nullable=False)
    date_created = db.Column(db.DateTime, default=datetime.utcnow)

    def __init__(self, Name, Email, Phone, Message):
        self.Name = Name
        self.Email = Email
        self.Phone = Phone
        self.Message = Message

@app.route('/')
def index():
    return render_template('index.html')

@app.route('/contact')
def contact():
    return render_template('contact.html')

@app.route('/portfolio/<category>')
def portfolio(category):
    if category == 'portraits':
        return render_template('portraits.html')
    elif category == 'weddings':
        return render_template('weddings.html')
    elif category == 'fashions':
        return render_template('fashions.html')
    else:
        return "Portfolio not found", 404

@app.route('/submit', methods=['POST'])
def submit():
    if request.method == 'POST':
        Name = request.form['Name']
        Email = request.form['Email']

```

```
Phone = request.form['Phone']
Message = request.form['Message']
#print(Name,Email,Phone,Message)
data=Studio(Name,Email,Phone,Message)
db.session.add(data)
db.session.commit()
return render_template('contact.html', message ='Thanks for your enquiry. We will connect
with you shortly')
```

```
if __name__ == '__main__':
```

```
    with app.app_context():
        db.create_all()
    app.run(debug=True)
```