# CHAPTER I

# INTRODUCTION

## 1.1 About this System:

A Cloud Gallery project is a software development project that involves building a web-based platform for users to upload, manage, and share their images online. The project involves designing and implementing a user-friendly interface that makes it easy for users to upload and organize their images, as well as implementing search features that allow users to browse images by tags, categories, or keywords.

The Cloud Gallery project also involves implementing advanced features like image editing and image recognition, which enhance the user experience and make it easier for users to manage their images. The project includes implementing strong encryption protocols and regular backups to ensure the security of users' images and personal information.

One of the key components of a Cloud Gallery project is the development of a database to store users' images and personal information. The database needs to be scalable and capable of handling large amounts of image data, and it needs to be hosted on a cloud-based server to ensure high availability and reliability.

The Cloud Gallery project also involves implementing social features that allow users to interact with each other through comments and likes. Users would be able to share their images with others through social media platforms like Facebook, Twitter, and Instagram.

Overall, a Cloud Gallery project is a complex software development project that requires expertise in web development, database design, and cloud computing. The project aims to provide users with a centralized platform where they can store, manage, and share their images in a convenient and secure way, while also providing social features that allow them to engage with other users and share their images with a wider audience.

## 1.2 Aim of the Project:

The aim of a Cloud Gallery project can vary depending on the requirements and goals of the project. Generally speaking, the main aim of a Cloud Gallery project is to provide users with a platform where they can upload, manage, and share their images online.

- Some specific aims of a Cloud Gallery project can include:
- Providing a user-friendly interface for users to upload and manage their images.
- Allowing users to search and browse images by tags and categories.
- Providing a platform for users to interact with each other through comments and likes.
- Ensuring that images are stored securely and can be accessed anytime, anywhere.
- Providing advanced features like image editing and image recognition to enhance the user experience.
- Providing insights and analytics on user engagement and image popularity.

Overall, the aim of a Cloud Gallery project is to provide users with a centralized platform where they can store and manage their images in a convenient and secure way, while also providing social features that allow them to engage with other users and share their images with a wider audience.

# CHAPTER II

# SYSTEM CONFIGURATION

## 2.1 Hardware Requirement:

Hardware requirements refer to the specifications and capabilities of the physical components of a computer system needed to support a particular software or application. These specifications include

Platform : Windows XP

Processor : 1 gigahertz (GHz)

RAM : 1 gigabyte (GB)

Hard disk : 32GB

Display : 800x600

Keyboard : 107 keys

Mouse : Optical Scroll Mouse

The hardware requirements for a particular application or software can vary depending on factors such as the operating system, version of the software, and the specific tasks being performed. It's always a good idea to check the manufacturer's recommendations for hardware requirements before installing or running an application or software.

## 2.2 Software Requirement:

Operating System : Windows, Linux

Front End Tool : HTML, CSS, JavaScript

Libraries : BootStrap, jQuery

## 2.3 About the Software used:

### HTML:

HTML, which stands for Hypertext Markup Language, is a standard markup language used to create web pages and other online content. It is the backbone of the World Wide Web and provides a standard means of creating and structuring content for the web.

HTML is based on a markup system where tags are used to define the structure and content of a document. Each HTML tag describes different types of content such as text, images, links, and multimedia, and can be used to create headings, paragraphs, lists, tables, forms, and other types of content.

HTML documents are typically created using a text editor and saved with an .html file extension. They can be viewed using a web browser, which reads the HTML code and displays the web page as a combination of text, images, and other multimedia content.

In addition to defining content, HTML also supports the use of styles and formatting through Cascading Style Sheets (CSS), which allows developers to control the layout and appearance of web pages. JavaScript can also be used to add interactivity and dynamic functionality to web pages.

### Features Of HTML:

**Markup Language**: HTML is a markup language, which means that it uses tags to define the structure and content of a web page. These tags are enclosed in angle brackets and provide instructions to the web browser about how to display the content.

**Cross-Platform Compatibility**: HTML is a cross-platform language, which means that it can be viewed on any device that has a web browser. This makes it easy to create content that is accessible to a wide audience.

**Support for Multimedia**: HTML includes tags for embedding multimedia content such as images, videos, and audio files. This makes it easy to create engaging, interactive web pages that incorporate a variety of media.

**Accessibility**: HTML includes features that make it easier to create web pages that are accessible to people with disabilities. For example, HTML includes tags for headings, lists, and tables, which can be used to create clear and meaningful content for people using screen readers or other assistive technologies.

**Extensibility**: HTML is an extensible language, which means that it can be extended to include new tags and attributes as needed. This makes it possible to create custom elements and attributes that are specific to a particular application or use case.

**Separation of Concerns**: HTML promotes separation of concerns by separating the content, structure, and presentation of a web page into distinct layers. This makes it easier to maintain and update web pages, and also makes it possible to reuse content across multiple pages and websites.

**Standardization**: HTML is standardized through a set of guidelines and specifications that are agreed upon by the web development community. This ensures that web pages are consistent, predictable, and interoperable across different browsers and platforms.

**Why HTML?**

- It is a simple markup language. Its implementation is easy.
- It is used to create a website.
- Helps in developing fundamentals about web programming.
- Boost professional career.

**Advantages:**

- HTML is used to build websites.
- It is supported by all browsers.
- It can be integrated with other languages like CSS, JavaScript, etc.

**CSS**

CSS, which stands for Cascading Style Sheets, is a style sheet language used to define the layout, formatting, and presentation of HTML and XML documents, including web pages. CSS provides a way to separate the presentation of a document from its content, allowing developers to create web pages that are more modular, flexible, and maintainable.

CSS works by selecting elements in an HTML or XML document and applying rules that define how those elements should be displayed. CSS rules consist of a selector, which specifies which elements the rule applies to, and a declaration block, which contains a set of property-value pairs that define the style and layout of the selected elements.

CSS properties can be used to control a wide range of visual elements, including font size and style, text color, background color and image, spacing and alignment, and layout and positioning. CSS also supports advanced layout techniques such as grid and flexbox, which make it easier to create complex, responsive designs.

CSS files are typically created using a text editor and saved with a .css file extension. They are then linked to HTML documents using a <link> tag, which specifies the location of the CSS file and its relationship to the HTML document.

**Why CSS?**

**Separation of Concerns**: CSS allows web developers to separate the content of a web page from its presentation. This means that the HTML document can focus on the structure and content of the page, while the CSS file can handle the layout and formatting. This makes it easier to maintain and update web pages, and also makes it possible to reuse content across multiple pages and websites.

**Consistency**: CSS allows web developers to create a consistent look and feel across an entire website, or even multiple websites. By defining common styles for headings, text, buttons, and other elements, developers can ensure that users have a consistent experience, no matter where they are on the site.

**Control**: CSS gives web developers fine-grained control over the layout and formatting of web pages. This makes it possible to create complex, responsive designs that adapt to different screen sizes and devices.

**Accessibility**: CSS provides features that make it easier to create web pages that are accessible to people with disabilities. For example, CSS can be used to control the layout and appearance of text, making it easier to read for people with visual impairments.

**Efficiency**: By separating the content and presentation of a web page, CSS can reduce the amount of code that needs to be sent to the browser. This can lead to faster page load times and a better user experience.

**Features of CSS:**

**Selectors:** CSS uses selectors to apply styles to specific elements on a web page. There are a variety of selectors available, including element selectors, class selectors, ID selectors, attribute selectors, and pseudo-classes.

**Cascading**: CSS is designed to allow styles to cascade from more general to more specific rules. This means that styles can be applied to an entire document, or only to specific elements within the document.

**Inheritance**: CSS also supports inheritance, which means that styles can be inherited from parent elements to child elements. This makes it possible to create consistent styles across an entire website, without having to define the styles for each individual element.

**Box Model**: CSS uses a box model to represent the layout of elements on a web page. The box model consists of the content area, padding, border, and margin of an element, and allows developers to control the spacing and layout of elements on a page.

**Units of Measurement**: CSS supports a variety of units of measurement, including pixels, ems, and percentages. This makes it possible to create layouts that adapt to different screen sizes and devices.

**Media Queries**: CSS also supports media queries, which allow developers to apply different styles based on the size of the browser window or the type of device being used to view the page. This makes it possible to create responsive designs that adapt to different screen sizes and devices.

## JAVASCRIPT:

JavaScript is a programming language used primarily in web development to create interactive and dynamic web pages. It was first introduced in 1995 by Brendan Eich while he was working at Netscape Communications Corporation. Since then, it has become one of the most widely used programming languages on the web.

JavaScript is a client-side language, meaning that it is executed by the user's web browser rather than by a server. This allows for a more responsive and interactive user experience, as JavaScript code can be used to respond to user input, manipulate web page content, and create animations and other visual effects.

JavaScript code is executed by the user's web browser, allowing for a more responsive and interactive user experience. It supports features such as variables and data types, functions, conditional statements, loops, objects, and event handling. JavaScript's ability to create dynamic and interactive web pages has made it a cornerstone of modern web development, and it continues to evolve with new features and capabilities.

JavaScript is a versatile and powerful programming language that has transformed the way we think about web development. Its support for asynchronous programming and server-side programming makes it an essential tool for building modern web applications, and its vibrant ecosystem of libraries and frameworks continues to expand and improve with new features and capabilities.

### Why JavaScript?

JavaScript is a key component of modern web development, and is likely used in the cloud gallery project for a variety of reasons. Here are a few possible reasons:

**Interactivity**: As a client-side language, JavaScript can be used to create interactive and dynamic user interfaces. This is especially important in a gallery application, where users will want to be able to browse, filter, and view images in an intuitive and responsive way.

**Visual Effects**: JavaScript can be used to create visual effects and animations, which can be used to enhance the user experience in a gallery application. For example, JavaScript might be used to create a slideshow of images, or to add transitions and effects when images are displayed or filtered.

**Validation**: JavaScript can be used to validate user input and ensure that only valid data is submitted to the server. This is important in a gallery application, where users might be uploading or sharing images, and where data integrity is important.

**Integration**: JavaScript can be used to integrate with other technologies and APIs, allowing the gallery application to communicate with external services and perform complex tasks. For example, JavaScript might be used to retrieve images from a cloud storage service or to integrate with a third-party image processing API.

**Features of JavaScript:**

**Object-oriented**: JavaScript is an object-oriented programming language, which means that it is based on the concept of objects. This allows developers to organize their code into logical units and reuse code more easily.

**Client-side scripting**: JavaScript is primarily used as a client-side scripting language, which means that it runs in the user's web browser. This allows for a more responsive and interactive user experience.

**Dynamic typing**: JavaScript is dynamically typed, which means that variables can be assigned different types of values at different times. This allows for greater flexibility and can simplify coding in some cases.

**Event-driven programming**: JavaScript is event-driven, which means that it responds to user input and other events, rather than executing code in a predetermined order.

**Cross-platform**: JavaScript can run on a wide range of platforms, including web browsers, servers, and even mobile devices.

**Large ecosystem**: JavaScript has a large and vibrant ecosystem of libraries, frameworks, and tools that make it easier to develop complex web applications.

# CHAPTER III

# SYSTEM ANALYSIS

## 3.1 INTRODUCTION

A cloud gallery is a digital platform that allows users to store, manage, and share their photos and other media files in the cloud. In simple terms, it is an online photo storage service that provides a convenient and secure way for college students to access and share their photos from anywhere at any time.

As college students, it's common to capture a lot of memories through photos during various events and activities on campus. However, managing and sharing these photos can be a challenge due to the limitations of physical storage options like USB drives, external hard drives, or even personal devices.

A cloud gallery solves these problems by providing a central location where students can store and organize their photos. With the photos stored in the cloud, students can access them from any device with an internet connection, making it easier to share their photos with friends and family. Additionally, cloud galleries typically provide features like automatic backup and synchronization, which ensure that the photos are always safe and up-to-date.

Overall, a cloud gallery is a valuable tool for college students who want to keep their photos organized and accessible, whether it's for personal use or to share with others. It offers a secure and reliable way to store and manage photos and eliminates the need for physical storage devices, making it a convenient option for students on the go.

## 3.2 System Analysis of Cloud Gallery:

**Efficient storage**: A cloud gallery should provide efficient storage options that allow users to store large amounts of photos and other media files without worrying about storage capacity. This ensures that users have access to their photos when they need them.

**Easy accessibility**: A cloud gallery should provide easy accessibility to users, allowing them to access their photos from anywhere at any time, using any device with an internet connection.

**User-friendly interface**: A cloud gallery should have a user-friendly interface that is easy to navigate, making it simple for users to upload, organize, and share their photos with others.

**Security**: A cloud gallery should have robust security measures in place to protect user data, ensuring that photos and other media files are safe and secure from unauthorized access.

**Customization**: A cloud gallery should provide customization options that allow users to personalize their gallery, such as custom themes, photo editing tools, and other features that make their photos unique.

**Collaboration**: A cloud gallery should provide collaboration features that allow users to share their photos with others and collaborate on projects or events.

**Backup and synchronization**: A cloud gallery should provide backup and synchronization features that ensure that photos and other media files are always up-to-date and backed up, in case of device failure or loss.

Overall, the objectives of a cloud gallery are to provide efficient storage, easy accessibility, a user-friendly interface, security, customization, collaboration, and backup and synchronization features, to meet the needs of users who want a convenient and reliable way to store and manage their photos and other media files.

## 3.3 Existing System

The existing system for a cloud gallery would typically involve cloud storage services such as Google Drive, Dropbox, or Amazon S3. Users would upload their photos to the cloud storage service, and the service would store and manage the photos in the cloud.

A cloud gallery website or application would then use an API to access the user's cloud storage and display the photos on the website. The website could also provide features such as photo sharing, commenting, and tagging.

Some existing cloud gallery websites and applications include:

**Google Photos**: A cloud storage service that provides unlimited storage for photos and videos. The service includes features such as automatic backup, sharing, and editing.

**Flickr**: A photo and video hosting service that allows users to upload, organize, and share photos and videos. The service includes features such as tagging, commenting, and photo editing.

**SmugMug**: A photo sharing and hosting platform that provides unlimited photo storage, custom domain support, and e-commerce features such as print sales.

There are also many open-source cloud gallery solutions available, such as Lychee, Piwigo, and Zenphoto, which can be self-hosted or deployed on a cloud server.

## Disadvantages of Existing System

Here are some potential disadvantages of the existing system for a cloud gallery:

**Dependence on Internet connectivity**: Since the photos are stored in the cloud, users need to have a reliable Internet connection to upload, access, and manage their photos. If the Internet connection is slow or unreliable, it can impact the user experience.

**Privacy concerns**: Storing photos in the cloud means that the photos are stored on a third-party server, which may raise privacy concerns. Users may be hesitant to upload sensitive or personal photos to the cloud, as they may not have control over who can access them.

**Cost**: Cloud storage services often charge a fee for storage and bandwidth usage. If users have a large collection of photos or share their photos frequently, the cost can add up quickly.

**Limited control**: Users may have limited control over the features and functionality of the cloud gallery. For example, they may not be able to customize the appearance or functionality of the gallery beyond the options provided by the service.

**Downtime and outages**: Cloud storage services can experience downtime or outages, which can impact the availability of the photos. Users may not be able to access or manage their photos during these periods, which can be frustrating.

Overall, while the existing system for a cloud gallery offers many benefits, it may not be suitable for all users or use cases.

## 3.4 Proposed System

A proposed system for a Cloud Gallery would consist of a web-based platform that allows users to upload, manage, and share their images online. The system would have a user-friendly interface that makes it easy for users to upload and organize their images in folders or albums.

The system would also have a search feature that allows users to browse images by tags, categories, or keywords. Additionally, the system would provide advanced features like image editing and image recognition, which would enhance the user experience and make it easier for users to manage their images.

To ensure the security of users' images, the system would implement strong encryption protocols and regular backups. The system would also have access controls to prevent unauthorized access to users' images and personal information.

The proposed system would provide social features that allow users to interact with each other through comments and likes. Users would also be able to share their images with others through social media platforms like Facebook, Twitter, and Instagram.

The proposed system would be scalable and capable of handling large amounts of image data. It would be hosted on a cloud-based server to ensure high availability and reliability.

Overall, the proposed system for a Cloud Gallery would provide users with a centralized platform where they can store, manage, and share their images in a convenient and secure way, while also providing social features that allow them to engage with other users and share their images with a wider audience.

**Benefits Of Proposed System:**

**Offline access**: The proposed system could include an option for users to download their photos to their local device for offline access. This would address the dependence on Internet connectivity and ensure that users can access their photos even without an Internet connection.

**Increased privacy**: The proposed system could prioritize user privacy by offering end-to-end encryption or other security features to protect user data. This could help to alleviate concerns around storing sensitive or personal photos in the cloud.

**Flexible pricing**: The proposed system could offer flexible pricing options, such as a pay-as-you-go model or a flat fee for unlimited storage. This would help to address concerns around cost and give users more control over their spending.

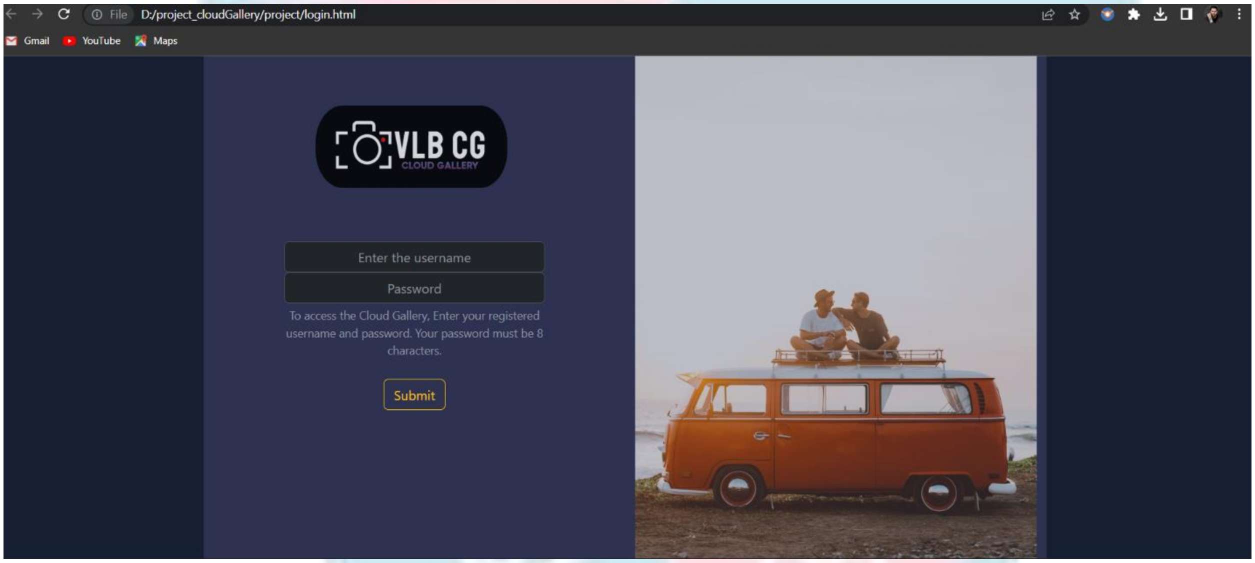
**Customization**: The proposed system could allow users to customize the appearance and functionality of their gallery beyond the options provided by the service. This could include features such as custom branding, themes, and plugins.

**High availability**: The proposed system could prioritize high availability and reliability, with redundancies in place to ensure that photos are always accessible. This could help to reduce the impact of downtime or outages.

Overall, a proposed system for a cloud gallery could offer a more flexible, customizable, and secure experience for users. By addressing the disadvantages of the existing system, it could help to meet the evolving needs and expectations of users in an increasingly digital world.

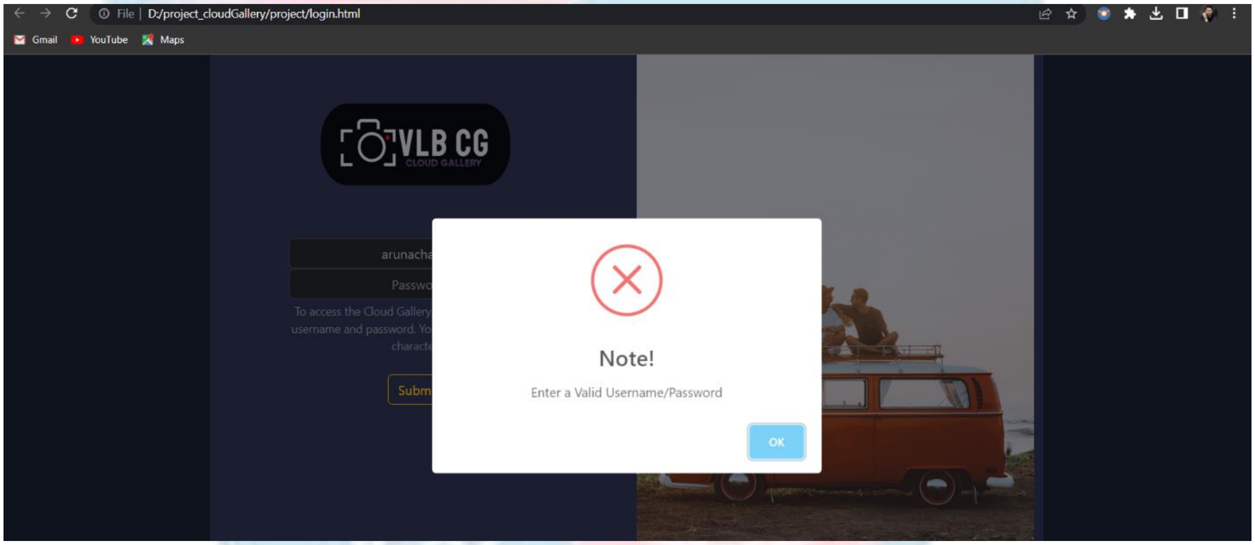
## 3.5 Modules:

- **Log-In View:**



To access the Cloud Gallery, Enter your registered username and password. Your password must be 8 characters.

- **Log-In Error View**


File | D:/project_cloudGallery/project/login.html
Gmail
YouTube
Maps
VLB CG
CLOUD GALLERY
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Passwo
To access the Cloud Gallery
username and password. Yo
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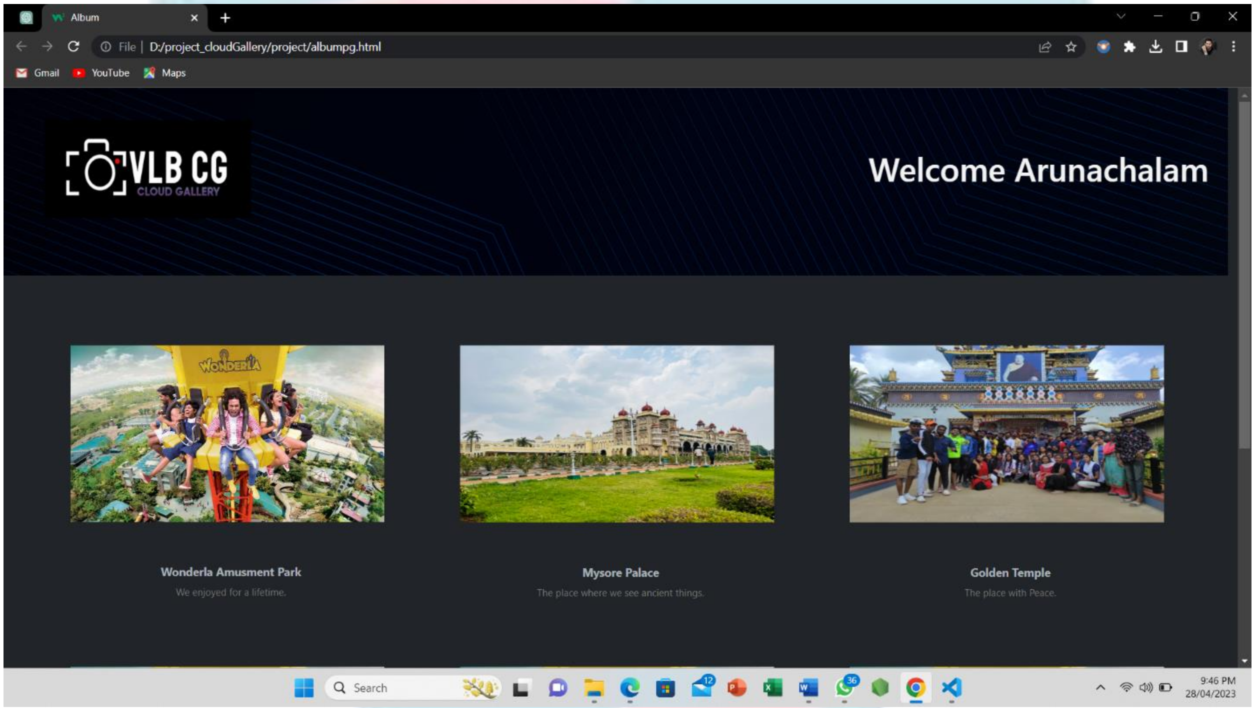
OK

Note!

Enter a Valid Username/Password

- **Album Page View**



Welcome Arunachalam

Wonderla Amusment Park

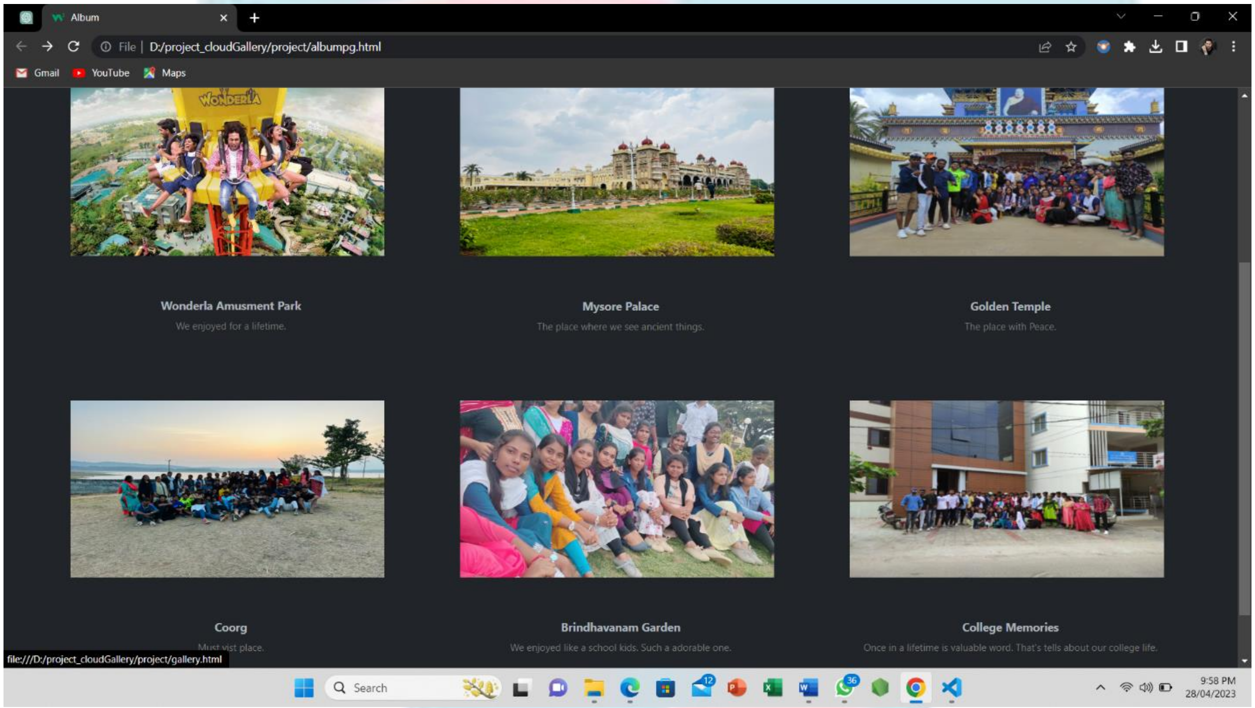
We enjoyed for a lifetime.

Mysore Palace

The place where we see ancient things.

Golden Temple

The place with Peace.



**Wonderla Amusment Park**

We enjoyed for a lifetime.

**Mysore Palace**

The place where we see ancient things.

**Golden Temple**

The place with Peace.

**Coorg**

Must vist place.

**Brindhavanam Garden**

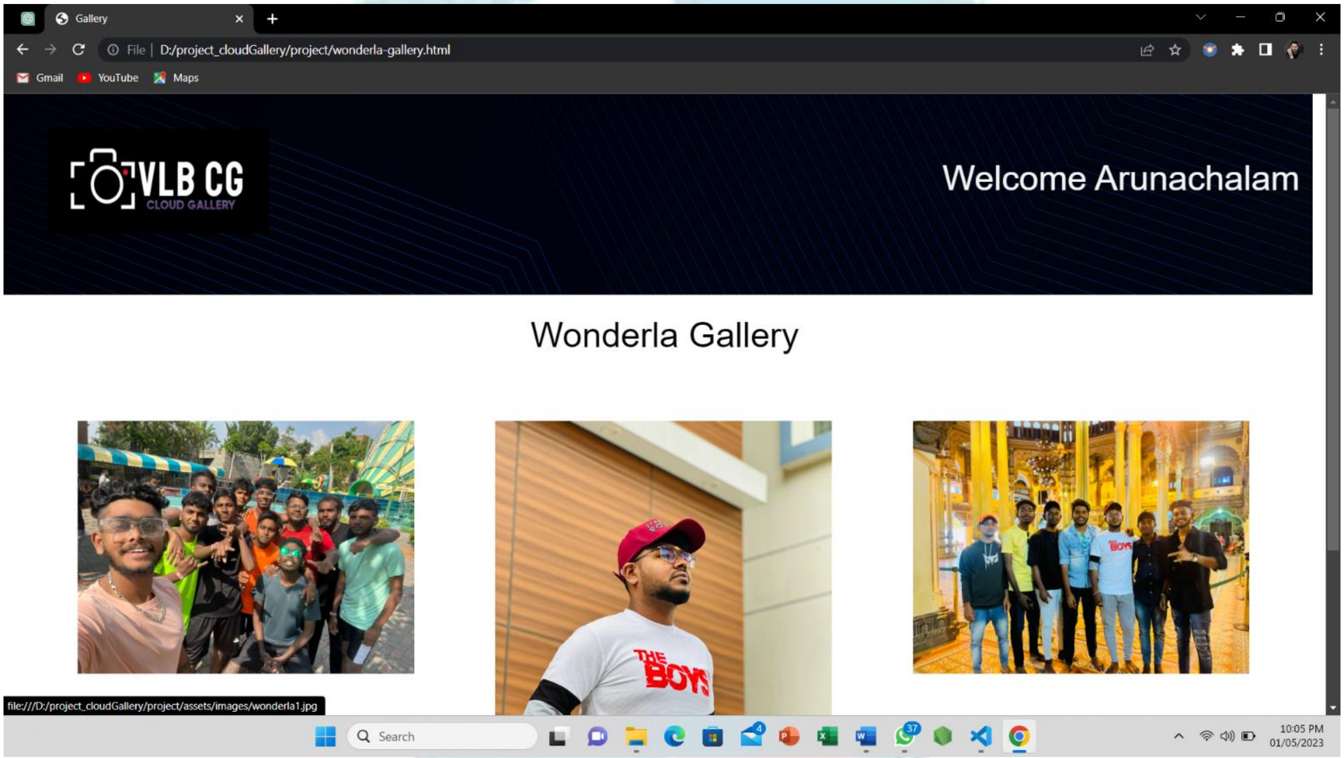
We enjoyed like a school kids. Such a adorable one.

**College Memories**

Once in a lifetime is valuable word. That's tells about our college life.

file:///D:/project_cloudGallery/project/gallery.html

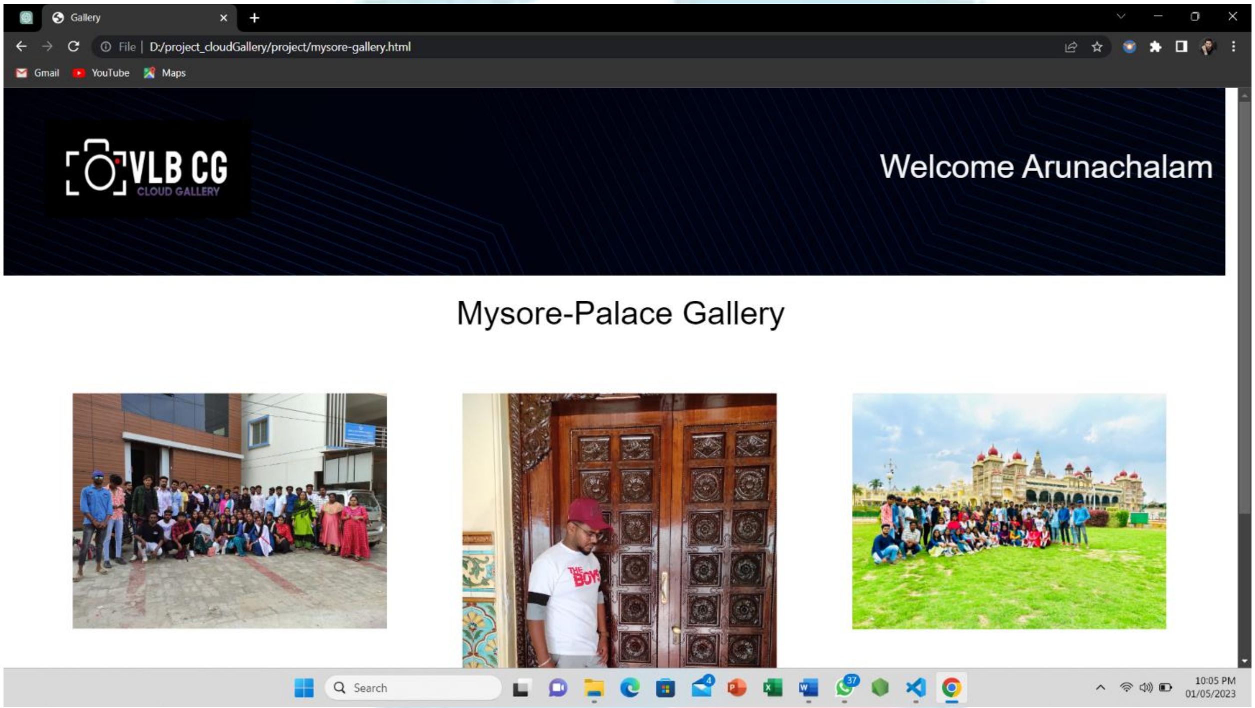
- **Album 1 gallery page view**



D:/project_cloudGallery/project/wonderla-gallery.html

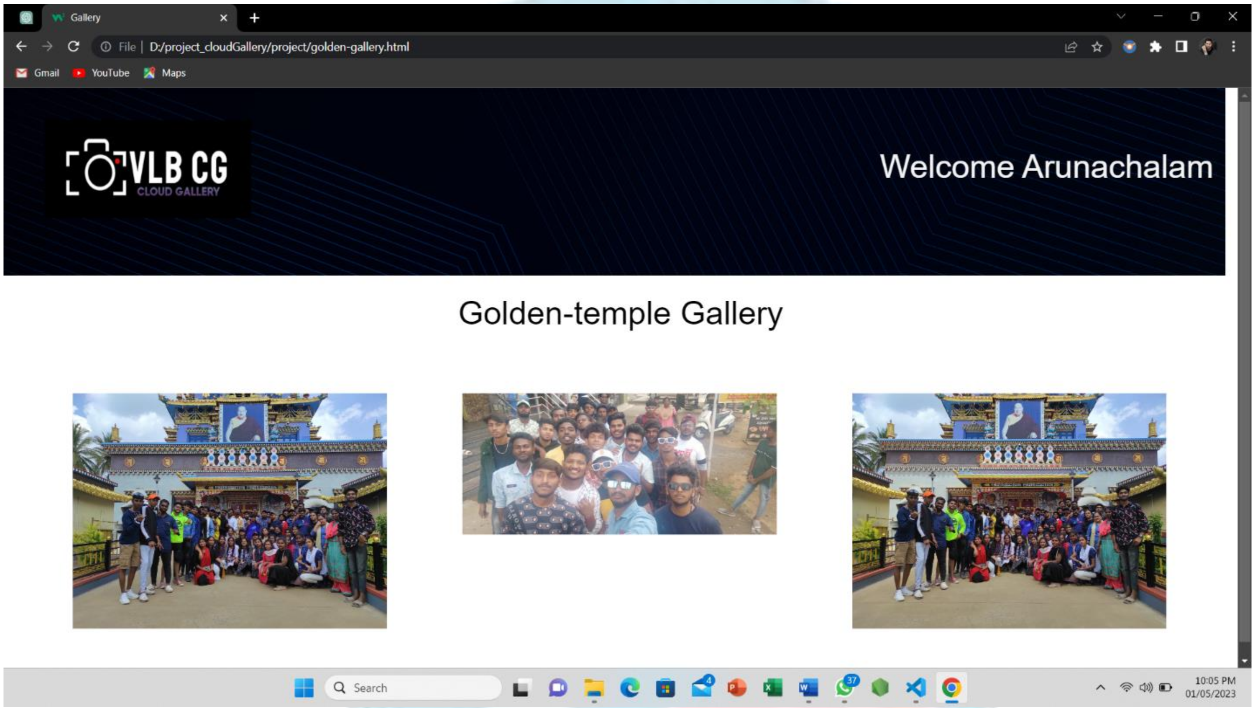
file:///D:/project_cloudGallery/project/assets/images/wonderla1.jpg

- **Album 2 gallery page view**

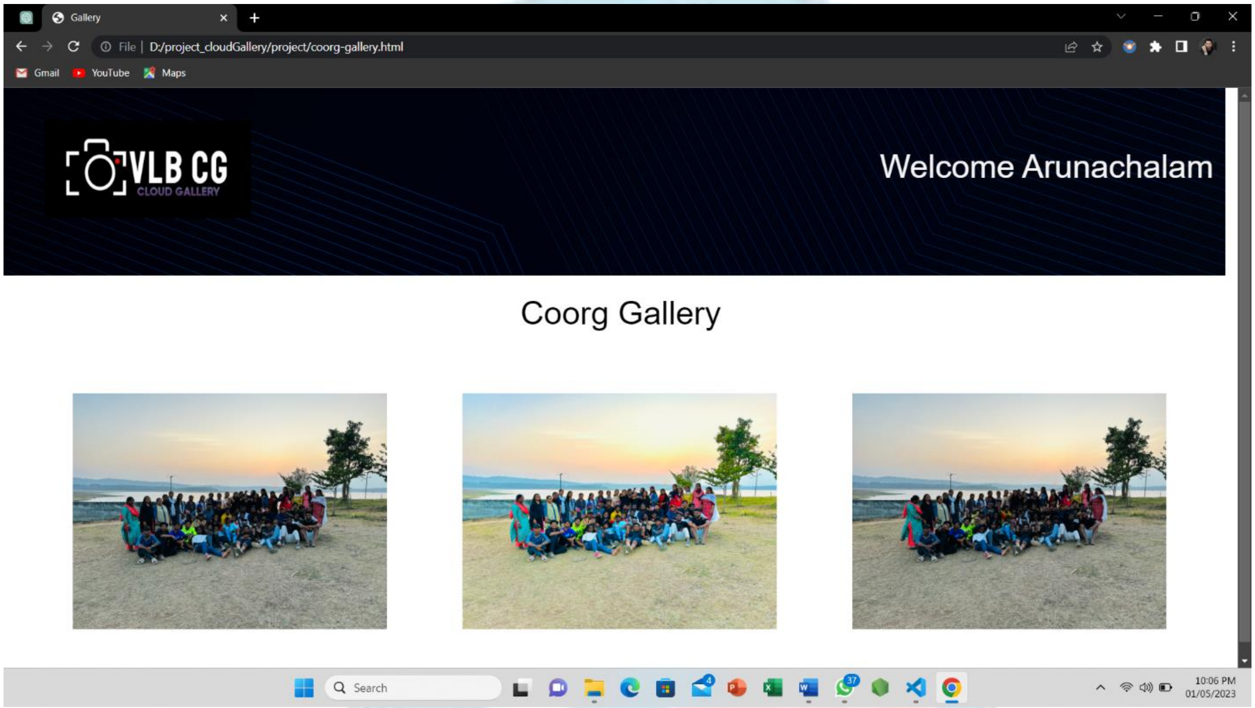


Mysore-Palace Gallery

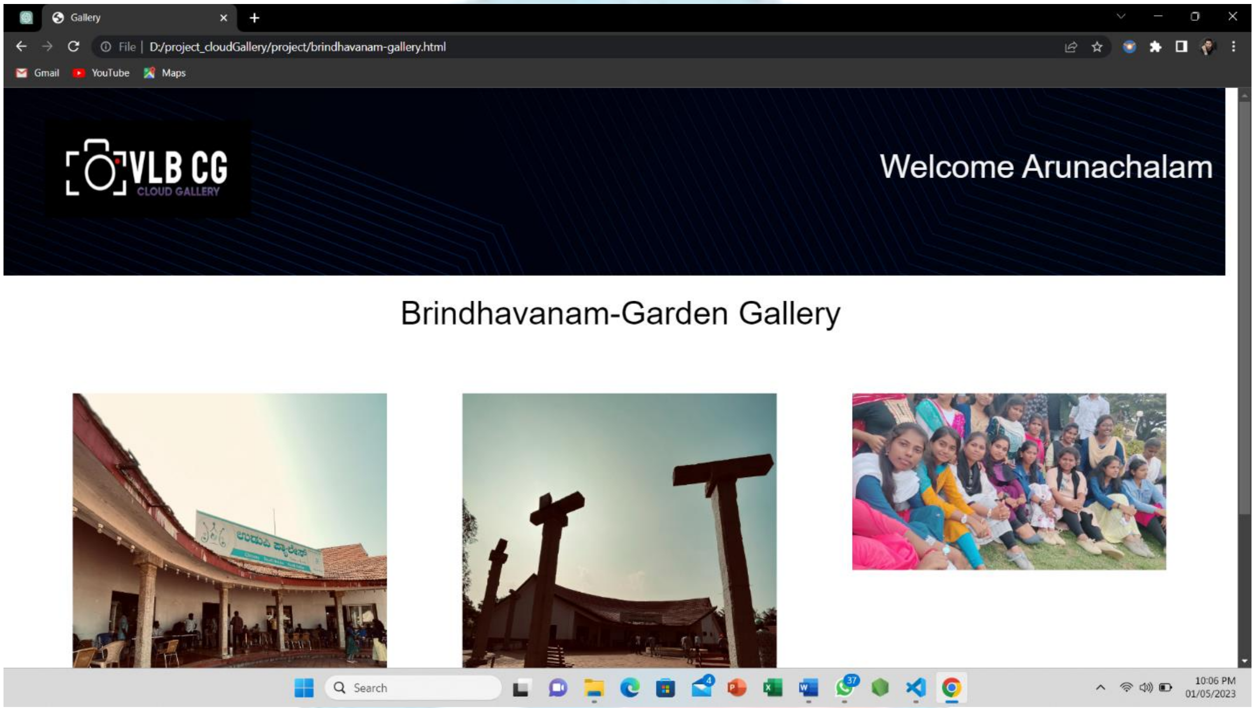
- **Album 3 gallery page view**



- **Album 4 gallery page view**



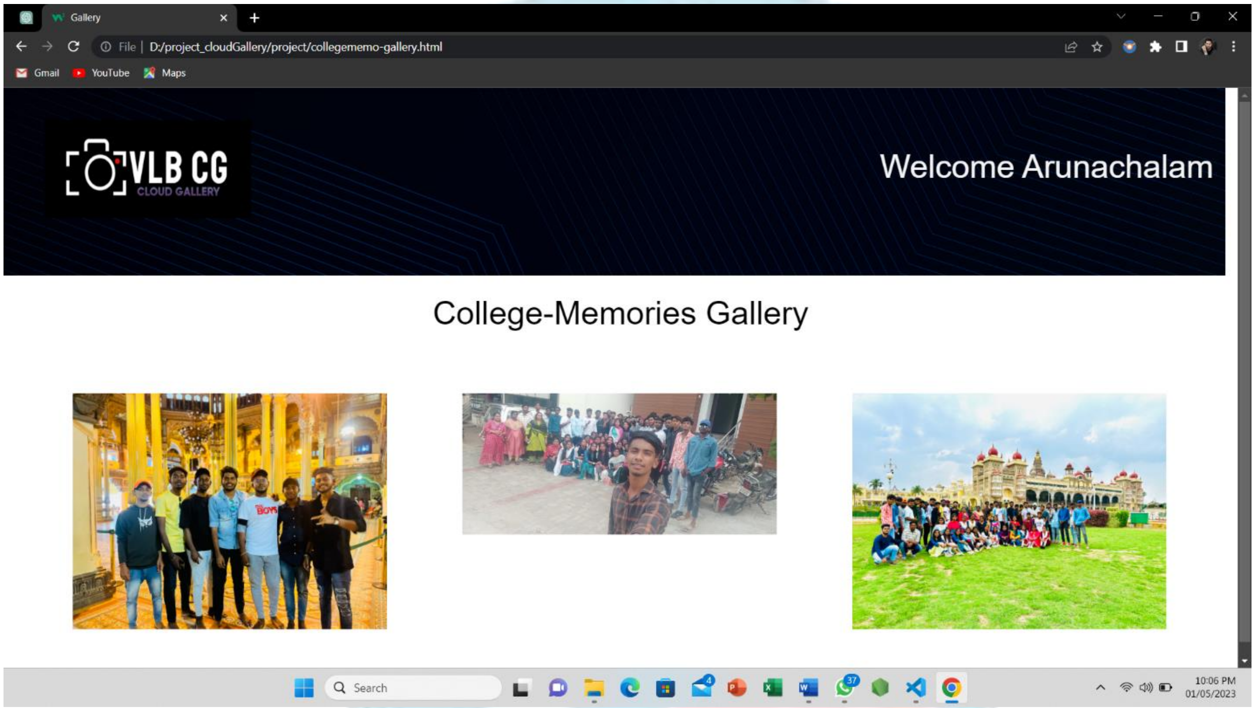
- **Album 5 gallery page view**



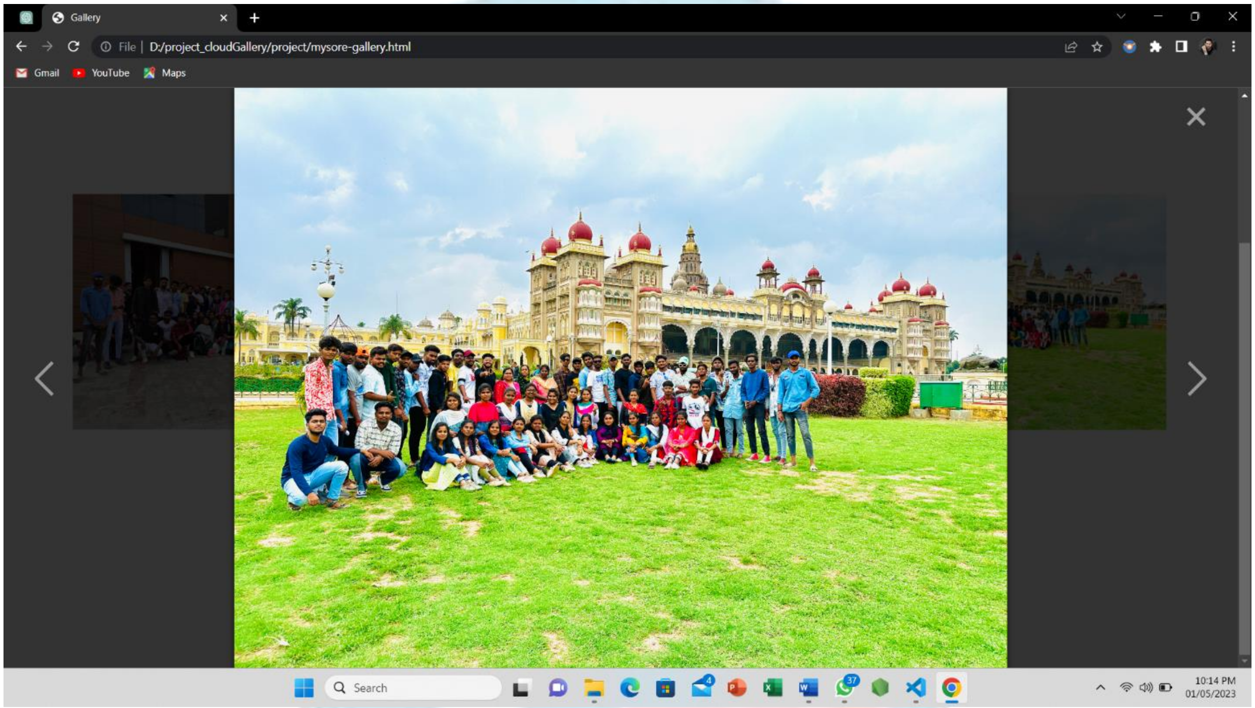
Welcome Arunachalam

Brindhavanam-Garden Gallery

- **Album 6 gallery page view**



## ➢ Image Pop-up view



# CHAPTER IV

# DIAGRAMS

## 4.1 Entity Relationship Diagram:

Entity-Relationship (ER) model is a conceptual model used in database design to represent the entities, relationships, and attributes involved in a particular business domain. It is used to describe the data that will be stored in a database, and the relationships between the data.

In an ER diagram, entities are represented by rectangles, attributes by ovals, and relationships by diamonds. Each entity has a set of attributes that describe the properties of the entity. For example, in a university database, an entity could be "student" with attributes such as "student ID", "name", and "major".

Relationships describe the associations between entities. There are three types of relationships in an ER diagram:

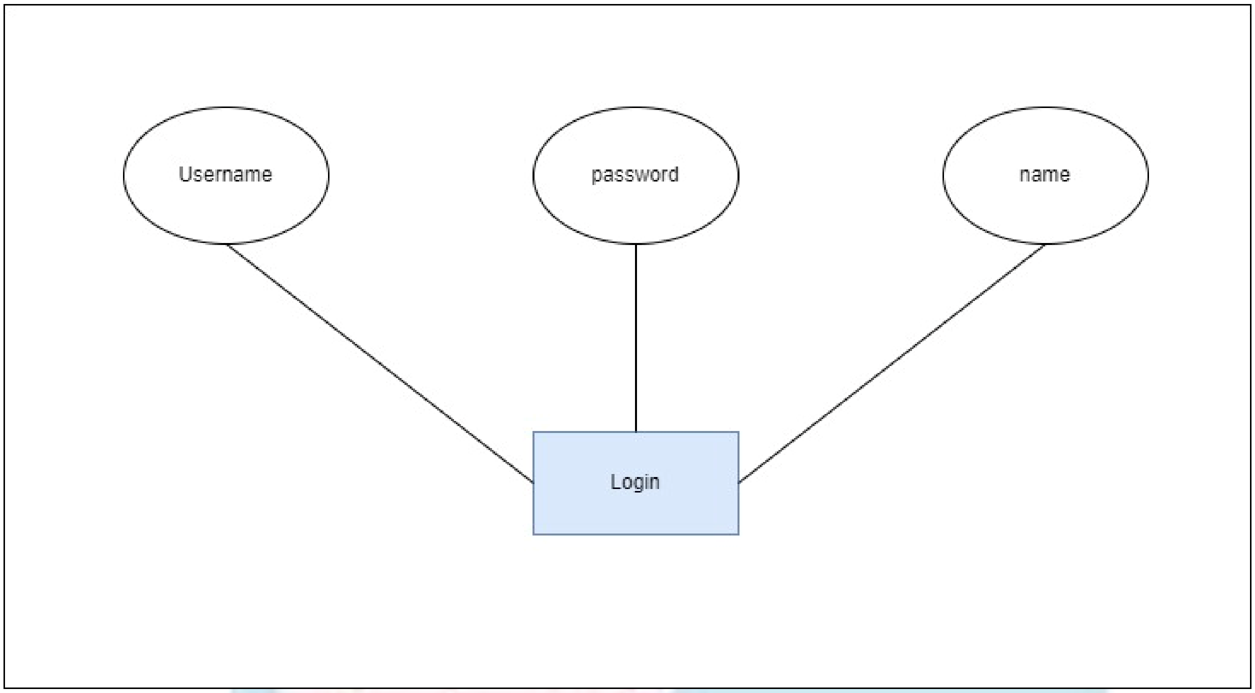
**One-to-One (1:1)**: This relationship represents that one instance of an entity is related to only one instance of another entity. For example, each employee has only one social security number.

**One-to-Many (1:N)**: This relationship represents that one instance of an entity can be related to many instances of another entity. For example, each department can have many employees.

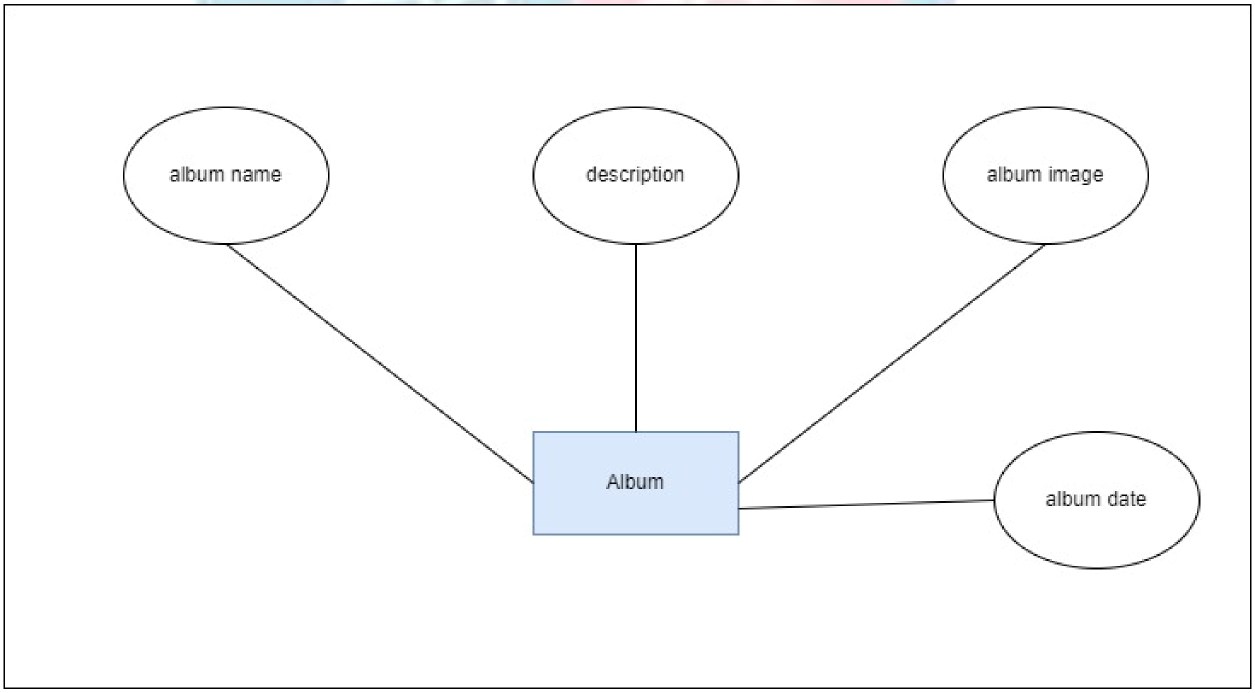
**Many-to-Many (N:M)**: This relationship represents that many instances of an entity can be related to many instances of another entity. For example, each student can take many courses, and each course can be taken by many students.

ER diagrams provide a visual representation of the entities, relationships, and attributes in a database. This allows for easier communication between developers, designers, and stakeholders in the database design process. Additionally, ER diagrams can be used to generate SQL code for creating tables, constraints, and relationships in a database management system.

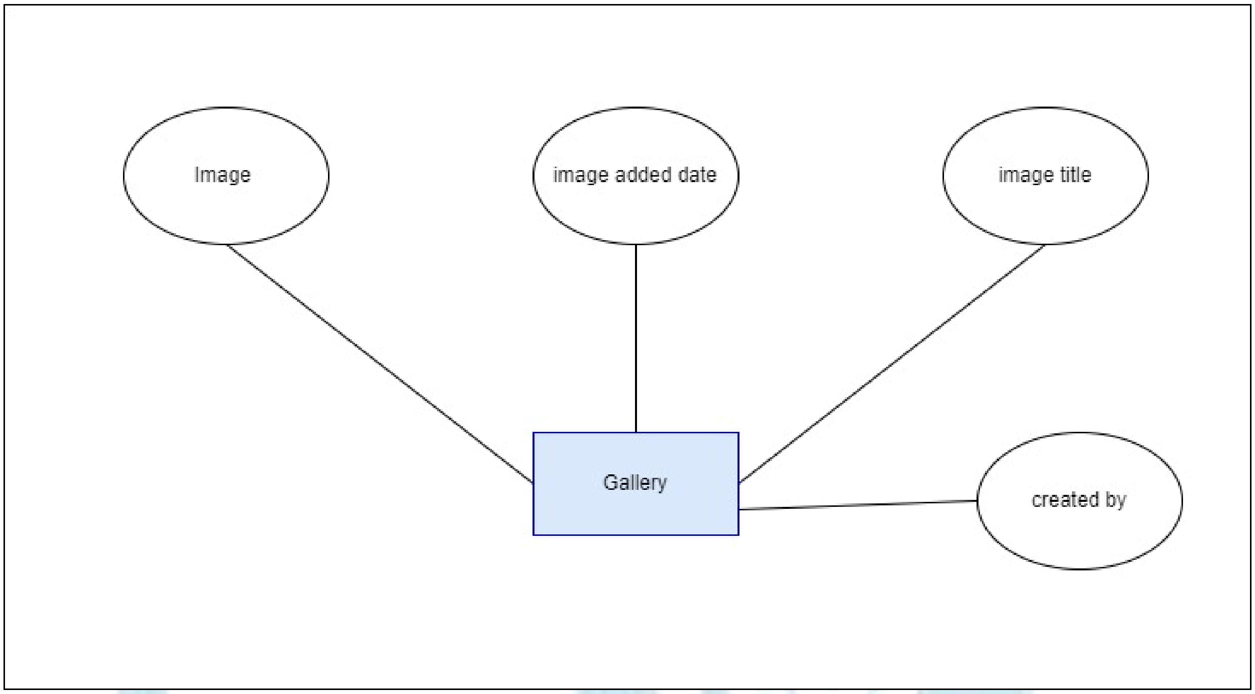
- **Login ER Diagram:**



- **Album ER Diagram:**



- **Gallery ER Diagram:**



## 4.2 Data Flow Diagram:

Also known as DFD, Data flow diagrams are used to graphically represent the flow of data in a business information system. DFD describes the processes that are involved in a system to transfer data from the input to the file storage and reports generation.

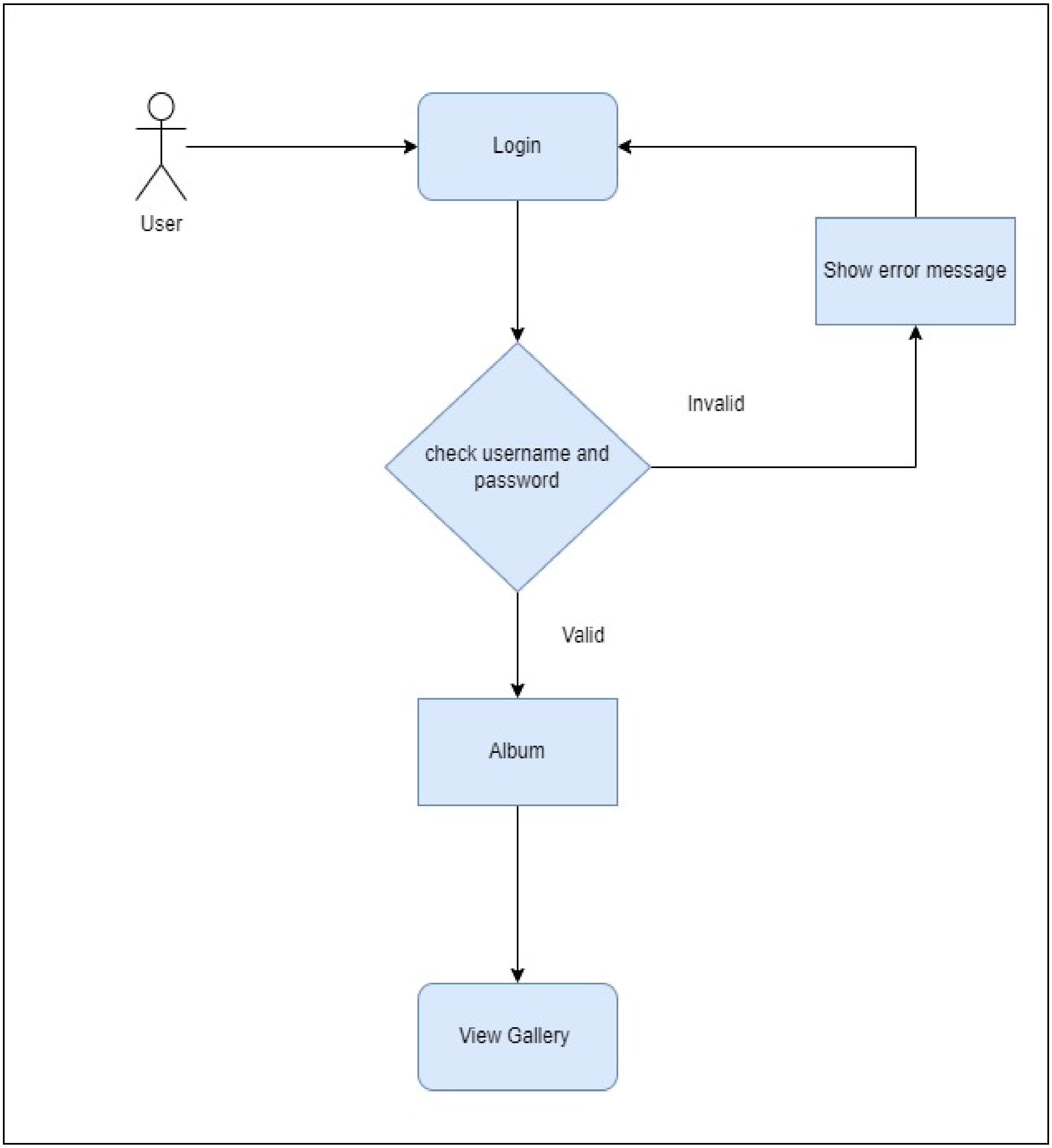
Data flow diagrams can be divided into logical and physical. The logical data flow diagram describes flow of data through a system to perform certain function business. The physical data flow diagram describes the implementation of the logical data flow.

DED graphically represcing the functions, or processes, which capture, manipulate, store, and distribute data between a sysiem and its environment and between components of a system. The visual representation makes it a good communication tool between User and System designer. Structure of DFD allows starting from a broad overview and expand it 10 a hierarchy of detailed diagrams. DFD has ofien been used due to the, following reasons:

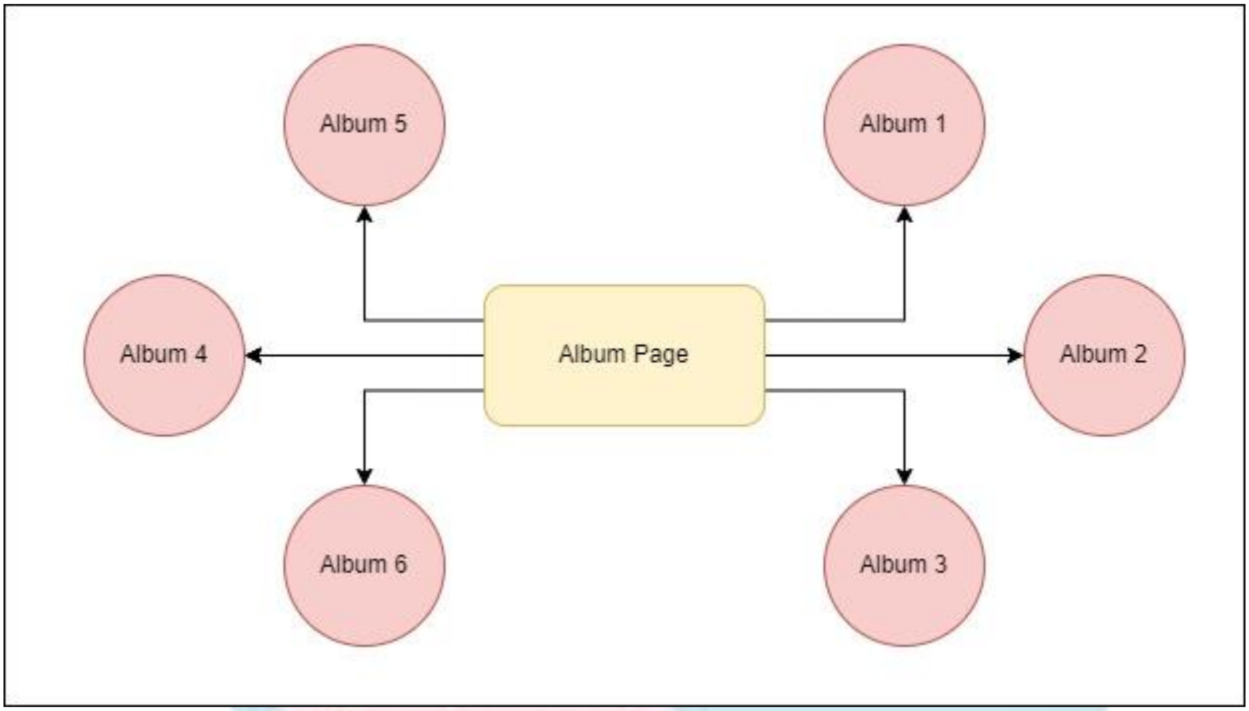
- Logical information flow of the system.
- Determination of physical system construction requirements.
- Simplicity of notation.
- Establishment of manual and automated systems requirements.

In Software engineering DFD(data flow diagram) can be drawn fo represent the system of different levels of abstraction. Higher-level DFDS are partitioned into low levels-beyond.

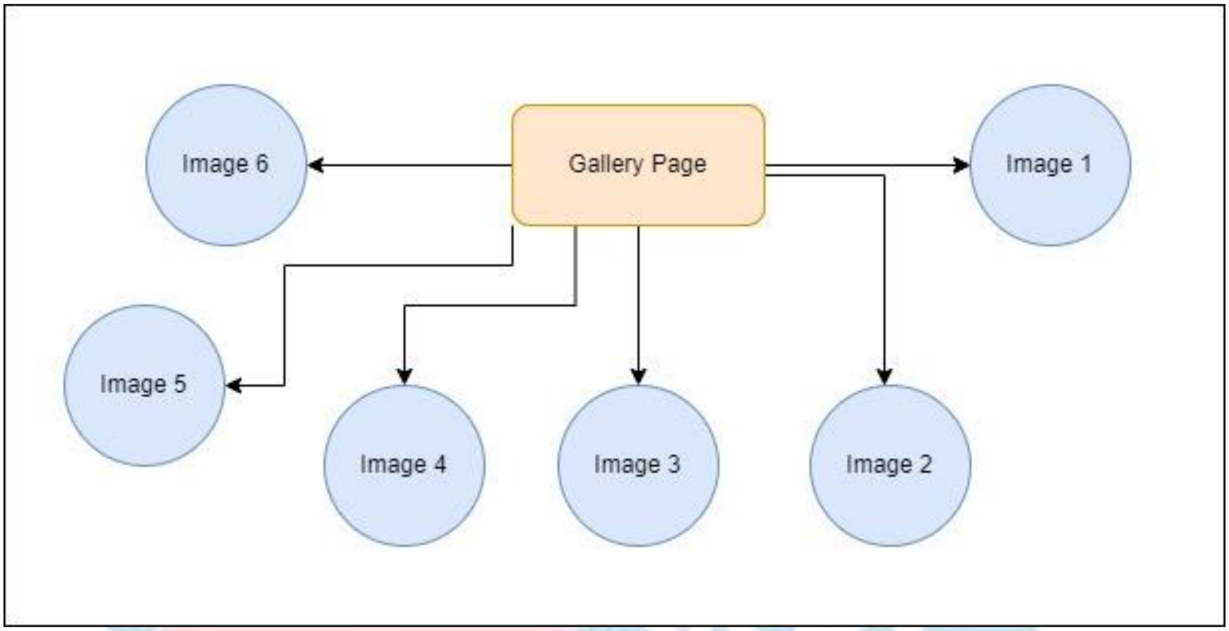
## ➢ Login Workflow Diagram:



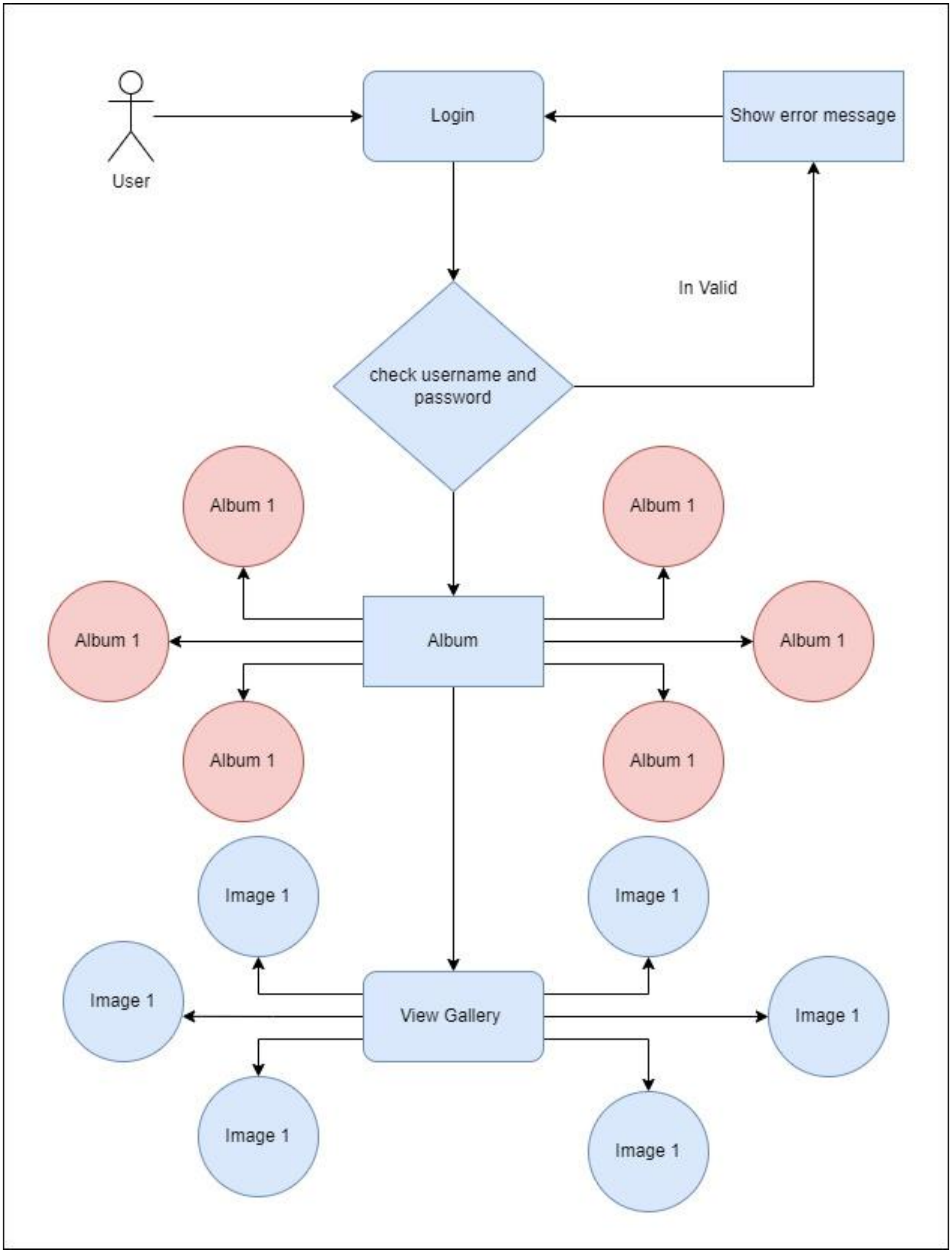
- **Album Page Workflow Diagram:**



- **Gallery Page Workflow Diagram:**



- **Total Workflow Diagram:**



# CHAPTER V

# SYSTEM DESIGN

System design refers to the process of creating a plan or blueprint for the development of a software application or technology system. It involves identifying the requirements of the system, breaking down its components, and determining how they will interact with one another to achieve the desired functionality.

A well-designed system should be scalable, efficient, maintainable, and easy to use. The system design phase typically includes creating architecture diagrams, defining data structures and algorithms, selecting appropriate technologies and frameworks, and outlining the various components and modules that will be developed.

The ultimate goal of system design is to produce a comprehensive and detailed plan that can guide the development team throughout the implementation phase.

## 5.1 Input Design:

In the context of a cloud gallery project, input design refers to the process of creating a user interface that allows users to upload and manage their images in the cloud. The input design must be intuitive and user-friendly to ensure that users can easily navigate and use the cloud gallery. The design should allow users to easily drag and drop images, as well as to upload images from their devices or from external sources such as social media platforms or cloud storage services.

Additionally, the input design should provide features such as image cropping, resizing, and editing to enable users to customize their images within the cloud gallery. It is essential to consider the security aspects of the input design as well, ensuring that users' images are protected and that the input interface cannot be exploited by malicious actors.

By creating an effective input design, the cloud gallery project can ensure that users have a seamless experience when uploading and managing their images in the cloud.

## 5.2 Output Design:

In the context of a cloud gallery project, output design refers to the process of creating a user interface that allows users to view and interact with their images once they have been uploaded to the cloud. The output design should be visually appealing and easy to navigate, allowing users to quickly locate and view their images.

The design should also provide users with a range of options for organizing and displaying their images, such as creating albums or sorting images by date or tag.

Additionally, the output design should include features such as image zooming, slideshow, and sharing, enabling users to showcase their images in the best possible way. It is important to ensure that the output design is responsive and can be accessed from a variety of devices, including desktops, laptops, tablets, and smartphones.

Security is also a critical consideration for the output design, ensuring that users' images are protected from unauthorized access or download. By creating an effective output design, the cloud gallery project can provide users with a compelling and engaging way to view and interact with their images in the cloud.

### 5.3 Session Storage Design:

Session storage is a type of web storage mechanism that allows web applications to store and retrieve data on the client-side, within the user's web browser. It is used to temporarily store data that is related to a user's session, such as user preferences or data that is required for the current session. The session storage is cleared when the user closes the browser window or the session ends, making it a useful tool for maintaining state during a user's browsing session.

It is different from local storage, which is designed for long-term data storage, and cookies, which are primarily used for user tracking. Session storage can be accessed using JavaScript APIs and is supported by most modern web browsers.

- Key::String
- Value::String/Number

# CHAPTER VI

# TESTING AND IMPLEMENTATION

## 6.1 System Testing:

Testing refers to a different set of activities that ensure the software has been built in traceable to the concern requirement. Both the plan and procedures are designed to ensure that the user satisfies all functional requirement and all performance requirement under configuration review. All elements of the software configuration have been properly developed and catalogued. They have necessary detail to support the software lifecycle. The testing phase is an important part of the software development. It performs a very critical role for quality assurance and for ensuring the reliability of software. It is the process of finding errors and missing operations and also a complete verification to determine whether the objectives are met and requirement are satisfied. The goal of testing is to uncover requirements design or coding errors in the program.

Consequently, different levels of testing are employed. Software testing is a very critical element of software quality assurance and represents the ultimate reviews of specification design coding. This is considered to be the main portion where the quality and the reliability of the product are determined.

## 6.2 Purpose Of Testing:

The purpose of testing is to evaluate a system or application to ensure that it meets the requirements and specifications, and functions as intended. Testing is an essential part of the software development life cycle, as it helps to identify defects or issues in the system and to correct them before the system is deployed or released to end-users.

**Some of the key purposes of testing are:**

**Ensure quality**: Testing helps to ensure that the system or application meets the quality standards and requirements set by stakeholders. This includes functionality, usability, reliability, performance, security, and other key aspects of the system.

**Identify defects**: Testing helps to identify defects or issues in the system, such as errors, bugs, or inconsistencies. This allows developers to correct these issues before the system is released to end-users, which can help to avoid costly and time-consuming fixes later on.

**Improve user experience**: Testing can help to ensure that the system or application is user-friendly and provides a positive experience for end-users. This includes aspects such as ease of use, accessibility, and responsiveness.

**Compliance**: Testing can help to ensure that the system or application complies with legal, regulatory, or industry standards, such as data protection or security requirements.

### 6.3 Testing Methodologies:

#### 6.3.1 Black Box Testing:

Black box testing is a testing methodology that involves testing the software system without knowledge of its internal structure or workings. Instead, the tester focuses on the inputs and outputs of the system to identify potential defects or vulnerabilities. There are several testing techniques that can be used in conjunction with black box testing to thoroughly test the software system.

- Equivalence partitioning
- Boundary value analysis
- Decision table testing
- State transition testing
- Error guessing

#### 6.3.2 White Box Testing:

White box testing is a testing methodology that involves examining the internal structure and workings of a software system in order to identify potential defects or vulnerabilities. There are several testing techniques that can be used in conjunction with white box testing to thoroughly test the software system.

- Code coverage testing
- Path testing
- Branch testing
- Condition testing
- Data flow testing

**6.4 System Implementation:**

**Cloud infrastructure setup:** The first step would be to set up the cloud infrastructure required to host the gallery. This could involve setting up virtual machines or containers to host the application, setting up a cloud database to store the image metadata, and configuring network settings to allow access to the application from the internet.

**Image storage**: The actual images themselves would be stored in a cloud object storage service such as Amazon S3 or Google Cloud Storage. The application would need to integrate with the object storage service in order to upload and retrieve images as needed.

**Authentication and access control**: The application would need to implement user authentication and access control mechanisms to ensure that only authorized users can view and manage the images in the gallery.

**Security and scalability**: The system would need to be designed with security and scalability in mind. This would involve implementing security best practices such as encryption of data in transit and at rest, and implementing load balancing and auto-scaling to handle increasing traffic and user load.

**Testing and deployment**: Before deploying the system to production, it would need to be thoroughly tested to ensure that it is functioning correctly and meets the requirements of the users. Once testing is complete, the system can be deployed to production and made available to users.

**Maintenance and updates**: The system would require ongoing maintenance and updates to ensure that it continues to function correctly and remains secure. This would involve monitoring system logs and metrics, patching and updating software components as needed, and performing regular backups to ensure that data is not lost in the event of a system failure**.**

# CHAPTER VII

# SAMPLE CODE

## 7.1 Sample HTML Code:

```
            <!DOCTYPE html>
            <html lang="en" data-bs-theme="dark">
            <head>
            <meta charset="UTF-8">
                <meta http-equiv="X-UA-Compatible" content="IE=edge">
                <meta name="viewport" content="width=device-width, initial-scale=1.0">
                <link rel="stylesheet" type="text/css" href="./assets/css/style.css" />
                <link href="./assets/css/bootstarp.css" type="text/css" rel="stylesheet" />
                <script src="./assets/js/bootstrap.js" type="text/javascript"></script>
                <script src="./assets/js/data.js"></script>
                <script src="./assets/js/sweetalert.js"></script>
            <title>Log-In</title>
</head>
<body>
    <div class="container-fluid" id="mainContainer">
        <div class="row">
            <div class="col-2"></div>
            <div class="col-8 justify-content-md-center" id="logInContainer" >
                <div class="row text-center">
                    <div class="col-lg-6 col-xl-6 col-sm-12">
                        <div class="row" id="login">
                            <img src="./assets/images/logo2.png" alt="logo" id="logo" />
                            <div class="col"></div>
                            <div class="col-8 justify-content-md-center">
                              <input type="text" id="username" class="text-center form-control" placeholder="Enter the username" />
                            </div>
                            <div class="col"></div>
                        </div>
                        <div class="row">
                            <div class="col"></div>
                            <div class="col-8 justify-content-md-center">
                              <input type="password" id="password" class="text-center form-control" placeholder="Password" required/>
                              <div id="passwordHelpBlock" class="form-text">
                                To access the Cloud Gallery, Enter your registered username and password. Your password must be 8 characters.
                               </div>
                            </div>
                            <div class="col"></div>
                        </div>
                        <div class="row" id="buttonDiv">
                            <div class="col justify-content-md-center">
                              <button type="submit" class="btn btn-outline-warning" onclick="checkUser()">Submit</button>
                            </div>
                        </div>
                    </div>
                    <div class="col-lg-6 col-xl-6 col-sm-12">
                        <img src="./assets/images/pexels-roman-odintsov-4553618.jpg" alt="Photo Unavailable" class="img-fluid" id="imgContainer"/>
                    </div>
                </div>
            </div>
```

```
            <div class="col-2"></div>
        </div>
    </div>
</body>
</html>
```

**7.2 Sample CSS Code:**

```
#logo{
    width: 255px;
    height: 120px;
    position: absolute;
    top: 40px;
    left: 50px;
}
#welcome{
    width: 100px;
    height: 20px;
    position: absolute;
    top: 220px;
    left: 400px;
    font-family: poppins;
}
#welcome_title{
    text-align: right;
    margin-top: 75px;
    color: whitesmoke;
    font-size: 40px;
}
```

```
#top_banner{
    width: 100%;
    height: 230px;
    background-image: url("../images/backgroundbg.jpg");
    background-attachment: fixed;
    background-position: center;
    background-repeat: no-repeat;
    background-size: cover;
    margin-bottom: 20px;
}
/* Styles for the gallery */
.tz-gallery {
    padding: 40px;
}
.tz-gallery .thumbnail {
    padding: 0;
    margin-bottom: 30px;
    border: none;
}
.tz-gallery img {
    border-radius: 2px;
    max-width: 447px;
    padding: 26px 30px;
}
.tz-gallery .caption{
    padding: 26px 30px;
    text-align: center;
}
```

```
.tz-gallery .caption h3 {
   font-size: 14px;
   font-weight: bold;
   margin-top: 0;
}
.tz-gallery .caption p {
   font-size: 12px;
   color: #7b7d7d;
   margin: 0;
}
.baguetteBox-button {
   background-color: transparent !important;
}
#gallery_title{
   text-align: center;
   margin-top: 5px;
   color: black;
   font-size: 40px;
}
#gallery_title1{
   text-align: center;
   margin-top: 5px;
   color: whitesmoke;
   font-size: 40px;
}
```

# CHAPTER VIII

# CONCLUSION AND SCOPE OF THE PROJECT

## 8.1 CONCLUSION

A cloud gallery system provides an efficient and scalable way to store, manage, and share images in the cloud. By leveraging cloud infrastructure and services, such as object storage, database, and virtual machines or containers, a cloud gallery system can provide high availability and flexibility, as well as cost savings compared to traditional on-premise solutions.

Implementing a cloud gallery system involves several key components, including cloud infrastructure setup, application development, image storage, authentication and access control, security, scalability, testing, deployment, and ongoing maintenance and updates. By taking a systematic approach to each of these components, organizations can ensure that their cloud gallery system is robust, secure, and meets the needs of their users.

A cloud gallery system can provide a powerful tool for individuals and organizations to manage and share their images in a flexible and scalable way, while also providing the necessary security and access control mechanisms to ensure that only authorized users can view and manage the images.

## 8.2 Scope Of Future Enhancement

The scope of future enhancement for a cloud gallery system is quite extensive, and there are several potential areas for improvement and expansion. Some of these include:

**Integration with other platforms and services**: The cloud gallery system can be integrated with other platforms and services, such as social media networks, online marketplaces, and content management systems, to provide more comprehensive and seamless workflows for users.

**Artificial Intelligence and Machine Learning**: The cloud gallery system can be enhanced with AI and machine learning algorithms to enable features such as automatic tagging, facial recognition, and object recognition, making it easier to organize and search for media files.

**Augmented Reality and Virtual Reality**: The cloud gallery system can be augmented with AR and VR technologies, allowing users to experience their media files in immersive environments and contexts.

**User-generated content and collaborations**: The cloud gallery system can enable user-generated content creation and collaborations, allowing users to create and share content with each other, and collaborate on projects and creative endeavors.

**Advanced security and privacy features**: The cloud gallery system can be enhanced with advanced security and privacy features, such as end-to-end encryption, multi-factor authentication, and granular access controls, to ensure the protection of user data.

**Advanced analytics and reporting**: The cloud gallery system can provide advanced analytics and reporting features, enabling users to gain insights into their media file usage patterns, demographics, and other key metrics.

Overall, the scope of future enhancement for a cloud gallery system is vast, and it can be continuously improved and expanded to meet the evolving needs and preferences of users.