**“Document Share via QR Code”**

# A Project Report

Submitted in partial fulfilment of the

Requirements of the award of the Degree of

**BACHELOR OF SCIENCE (INFORMATION TECHNOLOGY)**

# By

Student Name Roll No.: 24

**Under the esteemed guidance of**

# Ms. Archana Raut



**DEPARTMENT OF INFORMATION TECHNOLOGY**

# Late Shri Vishnu Waman Thakur Charitable Trust’s Bhaskar Waman Thakur College of Science,

**Yashwant Keshav Patil College of Commerce, Vidya Dayanand Patil College of Arts.**

***(Affiliated to University of Mumbai)***

**VIRAR, 401303 MAHARASHTRA 2022-2023**

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# DEPARTMENT OF INFORMATION TECHNOLOGY



**CERTIFICATE**

**Roll No: 24 Exam Seat No**.

This is to certify that the project entitled, **“Document Share via QR Code "**, is bonafied work of **Student name**

bearing Seat. No: submitted in partial fulfilment of the requirements for the award of degree of BACHELOR OF SCIENCE in INFORMATION TECHNOLOGY from University of Mumbai.

**Internal Guide Head of Department**

**External Examiner**

**Date : College Seal**

# ABSTRACT

**“Document Share via QR Code”** is web-based application which helps student to easy submit or share their document with college or school or education institute just Via submit QR Code . Its fast and Secure . Student can also print their digital Document ID CARD. Documents are saved on server are encrypted so documents are secure. From other users. As students of FYJC/SYJC/engineering/under-graduation/post-graduation those who are searching for admissions in different colleges submitting their documents to perceive admission in that college .It takes so much time to go to that colleges and submit their documents .The colleges are far away from the place the person stays so basically students face time issues to do this important task.

To overcome this above problem this particular topic is chosen to reduce cost of travelling and the most important time of the student.

# ACKNOWLEDGEMENT

I am very grateful to our Principal for providing us with an environment to complete my project successfully.

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I express our sincere thanks to all our lecturers, for their constant encouragement and support throughout our course, especially for the useful suggestions given during the course of the project period.

I am grateful to my internal guide **Prof. Archana Raut** Lecturer, for being instrumental in the completion of our project with her complete guidance.

We would like to thank our parent for providing us with all their support and encouragement right from the project’s budding stage to its current maturity.

Above all we would like to thank the almighty for giving us courage and energy to work day and night to make this project a grand success.

# DECLARATION

I hereby- declare that the project entitled, **“Document Share via QR Code”** submitted by me,under the guidance of my supervisor it is own work and has been presented for a degree in any other university

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# Chapter 1: Introduction

QR is short for Quick Response (they can be read quickly by a cell phone). They are used to take a piece of information from a transitory media and put it in to your cell phone. You may soon see QR Codes in a magazine advert, on a billboard, a web page or even on someone’s t-shirt. Once it is in your cell phone, it may give you details about that business (allowing users to search for nearby locations), or details about the person wearing the t-shirt, show you a URL which you can click to see a trailer for a movie, or it may give you a coupon which you can use in a local outlet.

The Quick Response Code was develop

ped in 1994 for the automotive industry by a Toyota subsidiary. The QR code is a 2- dimensional barcode that can be read optically, for instance using a mobile phone camera. The code can contain data such as website URLs, product descriptions or vCard’s (electronic business cards). The original purpose of the QR code was to track vehicles during manufacturing. Today QR codes are primarily used for advertising, linking printed media with online media (such as websites, YouTube videos or online product brochures). Another usage area for QR codes that is growing in popularity is for mobile payments. Using QR codes is free, it doesn’t require any form of license. QR codes are not the only way to link the printed and online world, other technologies include Microsoft Tags and NFC (Near Field Communication), but more on those in another blog post.

Document Share is web-based application which helps student to easy submit or share their document with college or school or education institute just Via submit QR Code. Its fast and Secure. Student can also print their digital Document ID CARD. Documents are saved on server are encrypted so documents are secure. From other users.

The Login and Registration module allows the student to create their own profile on the site and Manage their account to upload and download and delete their documents as per requirements.

* QR Code and ID CARD: - This module helps to student generate QR code and Digital

Document card for sharing their document securely and easily with any organization.

Student can generate different QR Code for group of documents.

* OTP: Student can protect their document with Mobile OTP so only real person get access with whom student shared the OTP
* Group Share: Student can create group and so other fellow students can get document access without OTP.
* Block and Recover QR Code: - Any student can block their QR Code show one able to access document. And If student lost ID Card or forgot Account Details can easily recover it with OTP.

Quick Response (QR) codes are versatile. A piece of long multilingual text, a linked URL, an automated SMS message, a business card or just about any information can be embedded into the two-dimensional barcode. Coupled with moderate equipped mobile devices, QR Codes can connect the users to the information quickly and easily. The low technical barrier of creating and reading QR codes allows innovative educators to incorporate them into their educational endeavours. The operations to retrieve or store QR codes are incredibly simple and quick, and with mobile devices, make them the ideal educational tools for teaching and learning. QR codes are everywhere and most people have mobile phones equipped with QR code readers. Although QR codes existed for over fifteen years, there are not so many research applications in this area. QR code was developed by Denso-Wave, a Japanese automatic data capture equipment company (Denso, 2009), in 1994. “QR” stands for “Quick Response.” It is readable by moderately equipped mobile phones with camelinked by the URL quickly, we can send the SMS message directly or we can save the contact information onto the address book easily.

# 1.1 Background

This project will design and develop a QR coding system that tags relevant historical points of interest in Athabasca as a means of enriching the experience of people wanting to learn more about the places, people and events that have shaped the town and the area. The system will provide an easy method of creating QR codes, metadata entry, geo-referencing, and web linking for anyone wishing to update the information in future, or create new information. It will have a statistical tracking and reporting function to help measure use of the system.

Quick Response (QR) codes are easy to use, simple to make and becoming increasingly pervasive. They can be generated instantly, allowing users to access information using QR code readers with a mobile device such as a cell phone. The idea of linking spaces and objects to information is not new; parks and museums 3 have traditionally used interpretive signs for this purpose. But the addition of QR code technology allows for a much richer interaction with places and things by providing people with options to receive their information from an array of images, audio-files, videos as well as text. QR codes essentially provide new levels of meta- tagging that increase flexibility and interactivity with the environment.

QR codes are a simple technology that can be used in many ways. The technology might, for example, be used to deepen a tourist's experience with interpretive signage on-site and then direct her to an array of other sites; the system might encourage school children to collect points along the way in a sort of treasure hunt. AU Library has been working with the Town of Athabasca on a QR Coding such a project aimed at assisting the town to market itself better to tourists. But the information could be of use to others as well. A local teacher, for instance, might choose to use the QR Codes with his students during field trips that focus on Athabasca’s history.

The Town of Athabasca is in the process of updating a series of panels located throughout the community. The current panels, which have historical and nature images and text, will be augmented with QR codes allowing the user to link to timely information and activities in the town. The project will create content and apply fifteen QR tags to objects/places throughout the town, including AU campus.

These QR codes will link to interactive and contextual contents, including short video clips from "experts" speaking about the object/place, and other visual and interpretive text. The information will provide an in-context tour of the town introducing objects, places and people important to the town. This project will include a pilot launch in May to determine the success of the project. It is anticipated that this pilot in Athabasca could be turned into a regional initiative that would attract and keep tourists in the area longer.

# 1.2 Objective

The first objective of this thesis work is to study the concept of QR Code in detail, which involves the development history and the definition of QR Code. Furthermore, the characteristics of QR Code are introduced, and through different types QR Code the features of different QR Code are analysed. In addition, the underlying and feasible technologies of QR Code will be explored and analysed in the thesis. The analysis involves the symbol of QR Code, encoding and decoding procedures of QR 8 Code. Moreover, regarding the QR Code generator and QR Code reader process implementation is demonstrated in this research. To achieve the objective, various resources are used to support this thesis. The second objective of the thesis work aims to find out the benefits of using QR Code within companies and give reasonable recommendations on companies QR Code usage. In order to achieve this objective, this research is to explore the application of QR Code in WeChat and the characteristics of QR Code. Moreover, examples are used to explore and explain the benefits of using QR Code.

The objectives of this project are to:

* Design and develop a QR coding system to tag and code landmarks and attractions in the Town of Athabasca
* Conduct research on the history of the Town of Athabasca and liaise with library, archives, historical society and the public as needed for the QR Codes
* Digitize and develop content (audio, video, images) in support of the project, including short stories, images and other media; these will be recorded, archived, and coded
* Create tags with content for at least 15 locations in the Town of Athabasca and AU campus
* Conduct a pilot launch to test usability and feasibility of using QR codes in the Town of Athabasca
* Prepare a summary report on the technology used and results of the project
* Prepare guidelines or best practices to help other towns regarding QR code technology deployment.

# 1.3 Purpose, scope and Applicability

## 1.3.1 Purpose

In Document share via QR code, the customer can share the Document, he can also add the product. Document Sharing is web-based application which helps student to easy submit or share their document with college or school or education institute just Via submit QR Code. Its fast and Secure. Student can also print their digital Id card Documents are saved on server are encrypted so documents are secure. From other users.

## 1.3.2 Scope

This system will reduce the manual operation required to view or share document and also generates the QR code for analysis. This module helps student generate QR code and Digital Document card for sharing their document securely and easily with any organization. Student can generate different QR Code for group of documents.

## 1.3.3 Applicability

The project entitled “**Document share via QR code**” enables customer to share document from anywhere through online. Its fast and Secure. Student can also print their digital Document ID CARD. Documents are saved on server are encrypted so documents are secure. From other users. The Login and Registration module allows the student to create their own profile on the site and manage their account to upload and download and delete their documents as per requirements.

# Chapter 2: Survey of Technologies

**Front End- ASP.Net**

ASP.NET is one of the most exciting web development technologies on offer today. Here was a powerful platform with lots of built-in functionality, astonishing performance levels, and one of the best IDEs (Integrated Development Environments) around: Visual Studio. ASP.NET showed the way for the faster, easier and more disciplined development of dynamic web sites, and the results were impressive.

ASP.NET is a server-side Web application framework designed for Web development to produce dynamic Web pages. It was developed by Microsoft to allow programmers to build dynamic web sites, web applications and web services. It was first released in January 2002 with version 1.0 of the .NET Framework, and is the successor to Microsoft's Active Server Pages (ASP) technology. ASP.NET is built on the Common Language Runtime (CLR), allowing programmers to write ASP.NET code using any supported .NET language.

**Back End –SQL Server**

Microsoft SQL Server is a relational database management system developed by Microsoft. As a database, it is a software product whose primary function is to store and retrieve data as requested by other software applications, be it those on the same computer or those running on another computer across a network (including the Internet). There are at least a dozen different editions of Microsoft SQL Server aimed at different audiences and for workloads ranging from small single-machine applications to large Internet-facing applications with many concurrent users. Its primary query languages are T-SQL and ANSI SQL.

* Portability across computer systems
* SQL standards
* Relational foundation
* High-level, English-like structure
* Programmatic database access
* Complete database language
* Dynamic data definition
* Client/server architecture
* Extensibility and object technology
* Internet database access

# Chapter 3: Requirement Analysis 3.1 Problem Definition

A QR code (quick response code) is a type of [**2D bar code** that i](https://searchmobilecomputing.techtarget.com/definition/2D-barcode)s used to provide easy access to information throug[h a smartphone. I](https://searchmobilecomputing.techtarget.com/definition/smartphone)n this process, known as mobile tagging, the smartphone’s owner points the phone at a QR code and opens a [barcode reader ap](https://whatis.techtarget.com/definition/barcode-reader-POS-scanner-bar-code-reader-price-scanner)p which works in conjunction with the phone’s camera. The reader interprets the code, which typically contains a call to action such as an invitation to download a mobile application, a link to view a video or an [SMS messa](https://searchmobilecomputing.techtarget.com/definition/Short-Message-Service)ge inviting the viewer to respond to a poll. The phone’s owner can choose to act upon the call to action or click cancel and ignore the invitation.

Static QR codes, the most common type, are used to disseminate information to the general public. They are often displayed in advertising materials in the environment (such as billboards and posters), on television and in newspapers and magazines. The code’s creator can track information about the number of times a code was scanned and its associated action taken, along with the times of scans and the operating system of the devices that scanned it. Dynamic QR codes (sometimes referred to as unique QR codes) offer more functionality. The owner can edit the code at any time and can target a specific individual for personalized marketing. Such codes can track more specific information, including the scanners names and email address, how many times they scanned the code and, in conjunction with tracking codes on a website, conversion rates.

The technology for QR codes was developed by Densa-Wave, a Toyota subsidiary.

The codes were originally used for tracking inventory.

## Here are a few examples of QR codes in current use

* QR codes on business cards link to the individual's full resume or website.
* A Starbucks promotion featured a QR code-enabled scavenger hunt involving hints accessed through QR codes in the stores.
* Quirking Monuments in Seattle puts QR code on gravestones to connects people to an online obituary or a website about the deceased.

# 3.2 Requirement Specification

## 1. Functional Requirements

* At the Login module email and password facility and credentials should be checked properly at the time of login for admin as well as User.
* User Manage folder groups and Files as well as QR Code details
* User Can Create QR code for particular folder.
* Student can book event as per their need like location and date time
* Automatic checking of availability of location and place
* User also Activate and Deactivate his/her account for time being using OTP.
* User can share documents with other user without QR code by just giving permission access.
* User can block QR code at any given time. • This web portal access through internet or intranet.

## 2. Non-Functional Requirements

* The application shall not change any of the operating system options or to any of the other applications that are installed.
* The application shall not access any data stored on the device except its own DB and data stored in the application own cookies.
* Response time won't exceed 5 seconds.
* All the information that is asked to be deleted will be deleted from the application, including all Facebook credentials.
* The user interface will be easy to operate and will be native to iOS and\or Android users.
* The application should work with iOS and Android devices that have HTML5 supported browser

## 3. Interface Requirements

* **User Interface** o The UI shall be graphical. o The UI will be developed with HTML5 and JavaScript and converted to specific mobile platforms using the Phone Gap framework.
* **Hardware Interfaces**

The supported devices are Android and iPhone devices. The device must include a touch screen, a keyboard and a camera (for scanning QR codes).

* **Software Interfaces**

The server side will be written in PHP programming language. The application shall interface with the following external software components:

# 3.3 Planning and Scheduling

**3.3.1 Gantt chart:**

**3.3.2 Pert Chart:**

# 3.4 Software and Hardware Requirements

**Software Requirements:-**

* **Front End:** Asp with C#
* **Development Environment:** Microsoft Visual Studio 2010 or higher
* **Back End:** SQL Server (2008)
* **Operating System:** Window 7 or higher

**Hardware Requirements:-**

* **Operating System:** Windows 7, 8, 8.1, 10
* **Hard disk:** Minimum 500 GB
* **RAM:** Minimum 4 GB

# 3.5 Preliminary Product Description

The product will be developed completely independent and dynamic form. Customer must have an account to purchase the product. This application stores all the information in the database which can be retrieved whenever needed and all the validations are performed during the entry of the data by the user thus ensuring that the user cannot enter any wrong data which could cause problem later.

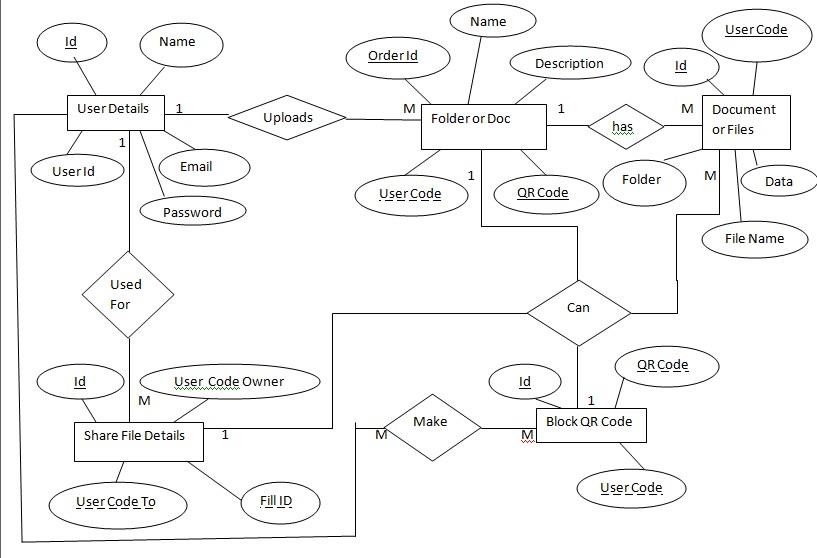
Initially customer has to register to the form to access most of the features of the application. The customer has to enter the details like username, password…etc. After registration customer will be able to purchase products and the purchased product can be added to the cart. Later customer has to enter his card details or take COD to buy the products.

# 3.6 Conceptual model

## 3.6.1 Event Table

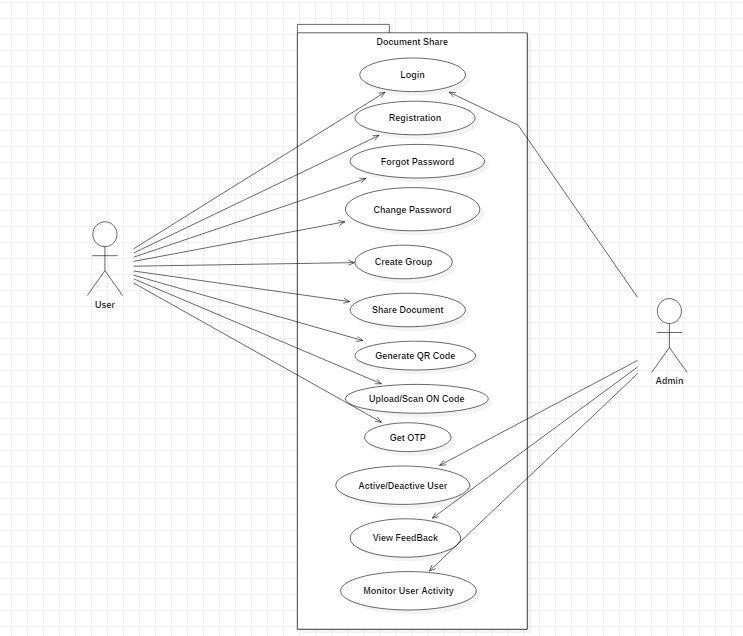
|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Sr. No** | **Event** | **Trigger** | **Source** | **Use Case** | **Response** | **Destination** |
| 1 | Admin add new Event | Event | Admin | Adding  Event  Details | Event Details | Admin |
| 2 | Student | Event | Admin | Adding  Event Details | Event Details | Admin |
| 3 | Receiver | Event | Admin | Adding  Event Details | Event Details | Admin |
| 4 | Receiver | Event | Admin | Adding  Event Details | Event Details | Admin |

## 3.6.2 ER Model

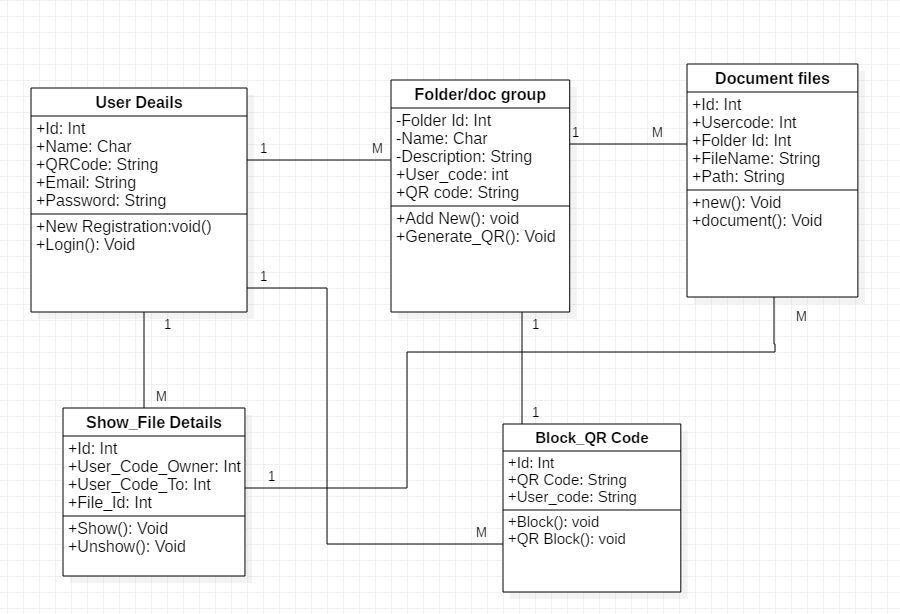


1

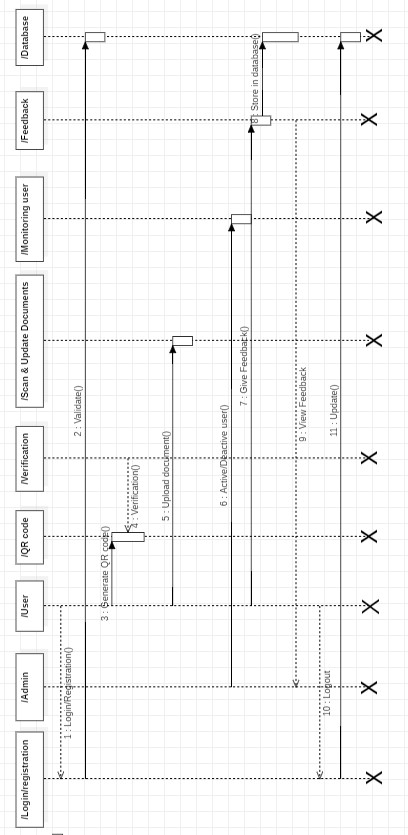
### 3.6.3 Use Case Diagram



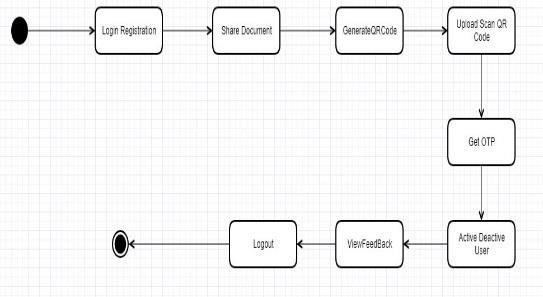
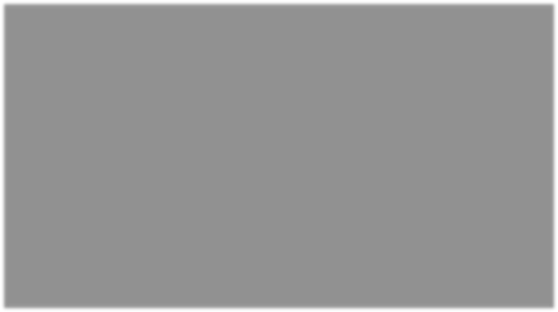
**3.6.4 Class Diagram**



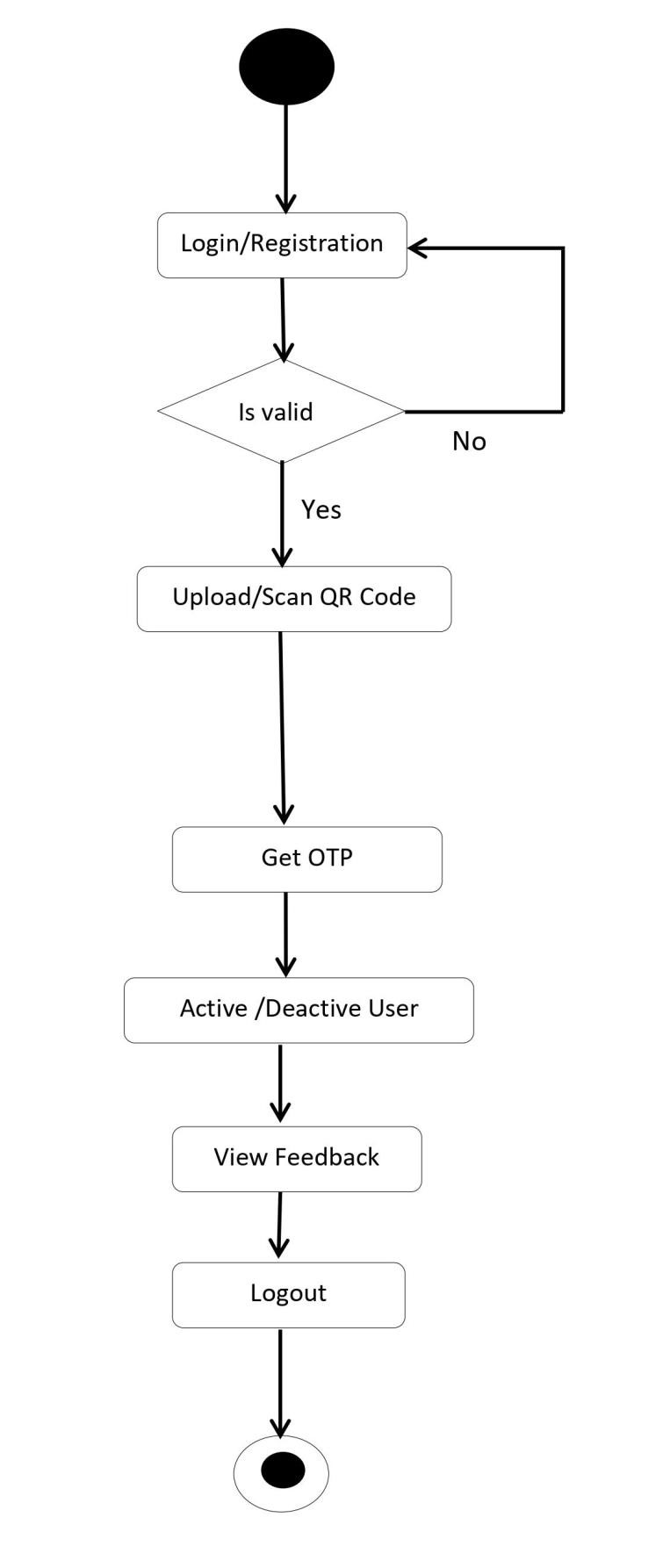
**3.6.5 Sequence Diagram**



### 3.6.6 State Diagram



### 3.6.7 Activity Diagram



# Chapter 4: System Design 4.1 Basic Module

1. **Login and Registration :** The Login and Registration module allows the student to create their own profile on the site and Mange their account to upload and download and delete their documents as per requirements.
2. **QR Code and ID CARD :-** This module help to student generate QR code and Digital Document card for sharing their document securely and easily with any organization . Student can generate different QR Code for group of documents.

1. **Protecting Document with OTP** : Student can protect their document with Mobile OTP so only real person get access with whom student shared the OTP.

1. **Group Share :** Student can create group and so other fellow students can get document access without OTP.

1. **Block and Recover QR Code :-** Any student can block their QR Code show one able to access document. And If student lost ID Card or forgot Account Details can easily recover it with OTP.

1. **Document and Content Search :-** Through this module user can search content as well as document with by name,date,size,extentions etc.

1. **Active and Deactive Account :-** User can deactive/active account for security reason through Mobile OTP.

1. **Mobile Contact share with QR Code :-** This module help use to share important contact and group of contacts with QR code.

1. **Accessed log:-** A record of all those faculty/people who accesed my document through docshare.

# 4.2 Data Base Design

## 4.2.1 Schema Design & Data Integrity and Constraints

**User Details:**

|  |  |  |
| --- | --- | --- |
| **Column Name** | **Data Types** | **Constrain** |
| Id | Int | Primary Key, Not null |
| Name | Varchar(45) | Not null |
| QR Code | Varchar(45) | Not null |
| Email | Varchar(25) | Not null |
| Password | Varchar(8) | Not Null |

**Folder/Doc Group:**

|  |  |  |
| --- | --- | --- |
| **Column Name** | **Data Types** | **Constrain** |
| ID | Int | Primary Key, Not null |
| Name | varchar(45) | Not null |
| Description | Varchar(45) | Not null |
| User\_Code | Int | Foreign key,not null |
| QR Code | Varchar(45) | Not null |

**Document Files:**

|  |  |  |
| --- | --- | --- |
| **Column Name** | **Data Types** | **Constrain** |
| ID | Int | Primary Key,Not null |
| User Code | Int | Primary Key,not null |
| Folder Id | Int | Not Null |
| File Name | Varchar(45) | Not Null |
| path | Varchar(45) | Not Null |

**Show\_file details :**

|  |  |  |
| --- | --- | --- |
| **Column Name** | **Data Types** | **Constrain** |
| ID | Int | Primary Key,Not null |
| User\_ Code\_owner | Int | Not null |
| User\_ Code\_to | Int | Foreign key,not null |
| File\_Id | Int | Foreign key,not null |

**Block\_QR code :**

|  |  |  |
| --- | --- | --- |
| **Column Name** | **Data Types** | **Constrain** |
| ID | Int | Primary Key,Not null |
| QR code | Varchar(45) | Foreign key,not null |
| User\_code | Varchar(45) | Foreign key,not null |

**Data Integrity and Constraints**

* **Primary Key Constraint:** Primary key constraint uniquely identifies each record in a database. A Primary Key must contain unique value and it must not contain null value.

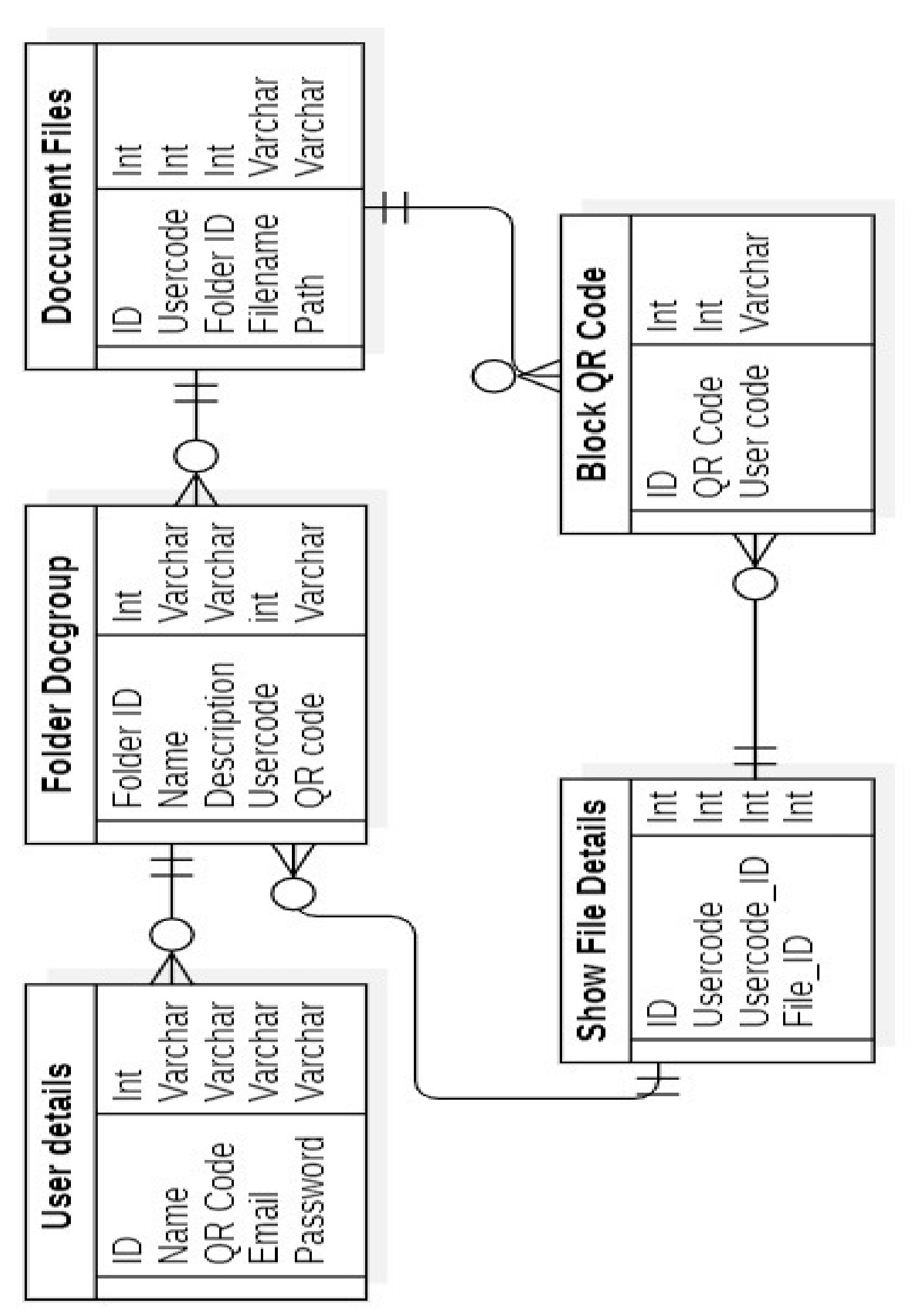
Usually Primary Key is used to index the data inside the table.

* **Not Null Constraint:** Not Null Constraint makes sure that a column is not left null. It forces the person to enter some value else it will show an error.

* **Unique Constraint:** Unique Constraint the name itself suggest that a column will have a unique values. This constraints makes sure that the column don’t have any duplicate value. It can applied to column level or table level.

* **Auto Increment:** The constraint applied to whichever column will see that it increments itself whenever a new record is inserted, so that the duplication is not generated.

# 4.2 Data Relationship Design

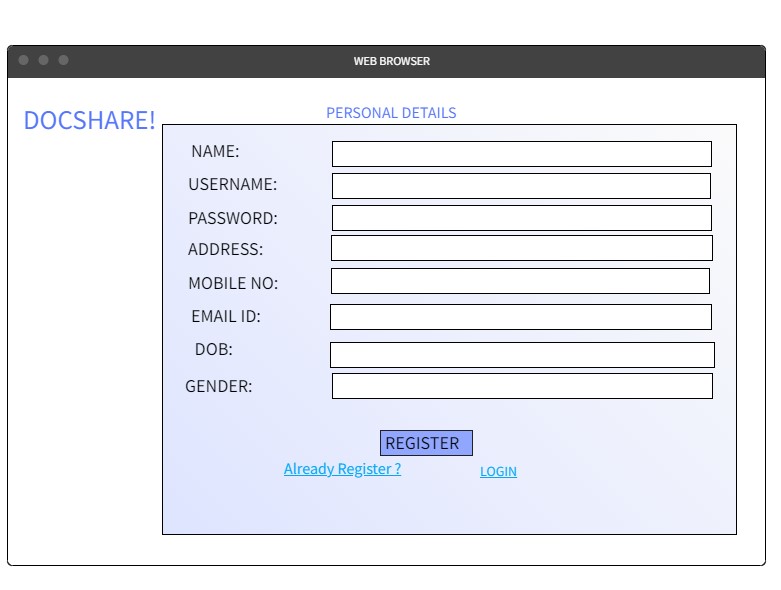


# 4.3 User Interface Design

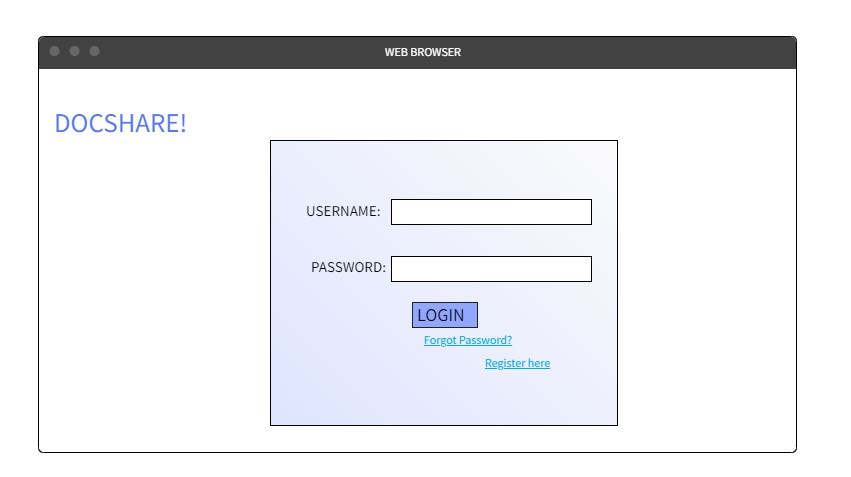
**Home:**



**Registration Page:**



**Login:**



**OTP:**



# 4.4 Security Issues

* **Authorization**: Admin provides the facility to provide the registration to the users which can be customer.
* **Authentication:** Only the registered users i.e. it can be customer or a waiter are allowed to login and access the site for using it. For login purpose the user have to give the username and password and from the database they will be authenticated.
* **Information Integrity**: The information that is being provided by the user are not leaked to any of the outside person. The information about the articles and the document can only be changes by the admin only and no user can change it.
* **Detection:** The passwords of the users and admin are alphanumeric password and there is also an option of changing the password even for the admin so that a single password cannot stay for long.

# 4.5 Test Case Design

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Test cases** | **Input specified** | **Expected result** | **Actual O/P** | **Test Result or Status** |
| User login | Username=”” Password=”” | Username empty | Username empty | Pass/Fail |
| Username  =”abc”  Password=” abc34” | Verify and redirect to home page | Verify and redirect to home page | Pass/Fail |
| Forget password | Email=”” | Please enter email | Please enter email | Pass/Fail |
| Email=”12345er” | Please enter valid email | Please enter valid email | Pass/Fail |
| Email=”anc@gmai  l.com” | Msg has been sent to your email id | Msg has been sent to your email id | Pass/Fail |
| Mobile.no | Mobile.no= | Specify your mobile.no | Specify your mobile.no | Pass/Fail |
| Mobile.no=5%23w w | Enter correct mob.no | Enter correct mob.no | Pass/Fail |
| Mobile.no=996003 4532 | Mobile enter vaild | Mobile enter vaild | Pass/Fail |
| O  T  P | OTP.no= | Specify your  OTP.no | Specify your OTP  .no | Pass/Fail |
| Mobile.no=5%23w w | Enter correct mob.no | Enter correct  OTP.no | Pass/Fail |
| OTP.no=1010 | OTP enter vaild | OTP enter vaild | Pass/Fail |
| File  Format | File = abc.exe | Invalid file format | Please upload valid file | Pass/Fail |
| File = abc.pdf | Automatically file uploaded | File saved to server folder | Pass/Fail |