



ID CARD GENERATION WITH QR INTEGRATION

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Abstract: The ID card generation with QR integration project presents a comprehensive solution designed to streamline the process of ID card generation within organizations and institutions. Featuring an intuitive user interface and seamless maintenance capabilities, this software significantly reduces human effort while ensuring the accuracy and authenticity of generated ID cards. By digitizing the entire process, including generation, distribution, and maintenance, the project minimizes the chances of forgery and simplifies the distribution of ID cards, particularly for large batches. Moreover, the system enables swift detection of fraudulent activities, thereby enhancing security measures.

Furthermore, the ID card generator seamlessly integrates with student information databases, ensuring that all pertinent details are accurately reflected on the ID cards. Leveraging QR code technology, each ID card contains a unique code that grants easy access to the respective student's information portal. This innovative feature facilitates swift information retrieval and enhances security measures for both administration and cardholders, making it a valuable asset for institutions seeking to optimize their ID card management processes.

I. INTRODUCTION

ID card generator with QR integration is a website designed for to display the student information along with generator of student ID card where the QR code will be embedded to view the results of the candidate in a effective way. The chief aim of website is to generate the candidates ID Card in a automated system which besides preserving time, offers swifter outcomes. Generally, people are provided with a long process for generating ID cards but the website doesn't require much time. This website is fundamentally developed in PHP which is a web software that can be employed to develop a wonderful website. The advantage of this software is that it is free to use. ID card generator seamlessly integrates with student information databases, ensuring that all pertinent details are accurately reflected on the ID cards. Leveraging QR code technology, each ID card contains a unique code that grants easy access to the respective student's information portal.

This innovative feature facilitates swift information retrieval and enhances security measures for both administration and cardholders, making it a valuable asset for institutions seeking to optimize their ID card management processes.

II. Literature review

• Paper-Based ID Cards

In the late 19th century, as cities grew due to industrialization, the need for reliable personal identification became clear. Paper ID cards were introduced as a simple solution. These early IDs included basic information like name, age, place of birth, and sometimes a photograph. They were easy to produce but had issues with durability and forgery.

- **Digitally Printed ID Cards**

To improve paper IDs, governments started using specialized printing press machines. These machines produced higher-quality cards with better durability and security features like watermarks and UV ink. However, the process was still manual and prone to errors. With the advent of digital technology, ID cards became more sophisticated. Design software allowed for better customization and inclusion of photographs. These cards were more durable and secure but still required manual data entry, which was time-consuming and prone to mistakes.

- **RFID Technology**

In the early 2000s, RFID (Radio Frequency Identification) technology began to be used in ID cards. These cards could transmit data wirelessly, making them more convenient and secure. They are now widely used for various applications like building access, public transport, and payment systems.

III. Existing System

The old manual system was to be maintained with hands for the process of keeping, maintaining and retrieving the information was very tedious and lengthy. There used to be a lot of difficulties in associating any particular context. If any information was to be found it was required to go through the different websites, portals of the educational institutions. There would always be unnecessary consumption of time while entering login credentials and retrieving results. One more problem was that it was very difficult to find errors while generating the id cards.

To manually generate an ID card, you'll need certain materials and information. Here's a basic checklist to get you started by designing a template for the ID card. This can be done using graphic design software like Adobe Photoshop, Illustrator, or even Microsoft Word. The template includes spaces for the following:

- ID holder's photo
- Name
- ID number
- Batch
- Organization or institution logo
- Signature

Drawbacks:

- Filing the information and generating the id cards is a tedious and strenuous process.
- The memory space will be a significant problem. If a certain mistake is committed, then one or more ID cards may collapse.
- The perceived difficulty in generating large volumes of cards, especially when each requires a unique set of data in the digital printing process.

IV. Proposed system

The new system addresses all the drawbacks of the existing ID card generation process. This project, built in PHP, simplifies the process for administrators, making it less hectic and strenuous. It offers a web application that can generate various types of ID cards, including Student, Bus, and Faculty IDs, with QR codes embedded in them. These QR codes allow students to view their academic results quickly.

Advantages:

- **Bulk ID Card Generation:** The system can generate a large number of ID cards efficiently.
- **Variety of ID Cards:** It can produce different types of ID cards, such as Student, Bus, and Faculty IDs.
- **QR Code Integration:** Each ID card includes a QR code that students can scan to access their academic results.
- **Easy Result Access:** Students can easily check their results by scanning the QR code on their ID cards.
- **Anywhere, Anytime Access:** Administrators can use this tool from anywhere in the world, at any time.
- **Time-Saving:** The automated process reduces the time required to generate ID cards.

Technology Stack

- **Front-End:** Developed using HTML and CSS for the user interface.
- **Back-End:** Utilizes MySQL, PHP, and JavaScript for database management and server-side processing.
- **Compatibility:** Runs on Windows environments such as Win9x, NT, and Windows 10,11.
- **User Access:** Accessible via web browsers, making it easy for users to interact with the system.

Technical Feasibility

- **Availability:** All required hardware and software components are readily available in the market.
- **User-Friendly:** The system is fully GUI-based, ensuring ease of use. Inputs are designed to be self-explanatory, even for non-technical users.
- **Training:** Proper training sessions have been conducted to familiarize users with the system, ensuring they feel comfortable using it.

Operational Feasibility

- **Time-Saving:** The system saves significant time for customers by automating the ID card generation process.
- **Convenience:** Services can be accessed by customers at their workplace, enhancing convenience.
- **Cost-Effective:** The cost of implementing the system is minimal compared to the benefits. The initial investment covers the necessary hardware and software, with no need for further enhancements.

Economic Feasibility

- **Low Initial Investment:** The system's initial cost is the primary expense, with readily available and affordable hardware and software.
- **Cost-Benefit Ratio:** The benefits, such as time savings and improved service efficiency, far outweigh the initial costs, making the system economically feasible.

The proposed system for generating ID cards is technically, operationally, and economically feasible. It leverages commonly available technologies and provides a user-friendly, cost-effective solution for automating ID card generation and result access via QR codes.

V.Implementation

XAMPP stands for Cross-Platform (X), Apache (A), MySQL (M), PHP (P), and Perl (P). It allows developers to create a local web server for testing purposes.

Steps to Install XAMPP:

1. Disable Anti-Virus and UAC (User Account Control)

- Disable your anti-virus software temporarily.
- Disable User Account Control (UAC) to avoid installation issues. Instructions can be found online.

2. Download and Install XAMPP

- Download XAMPP from the official website: apachefriends.org.
- Run the XAMPP installer by double-clicking it. Click 'Next' on the splash screen.

3. Select Components

- On the component selection screen, leave the default options selected and click 'Next'.

4. Choose Installation Folder

- Choose the folder where you want to install XAMPP. The default is usually fine (e.g., C:\xampp).

5. Complete Installation

- Click 'Next' to start the installation process and then 'Finish' when done.

Setting Up Project

1. Add Project Files

Copy your project folder (e.g., idcard generator) into the htdocs folder in the XAMPP installation directory (C:\xampp\htdocs).

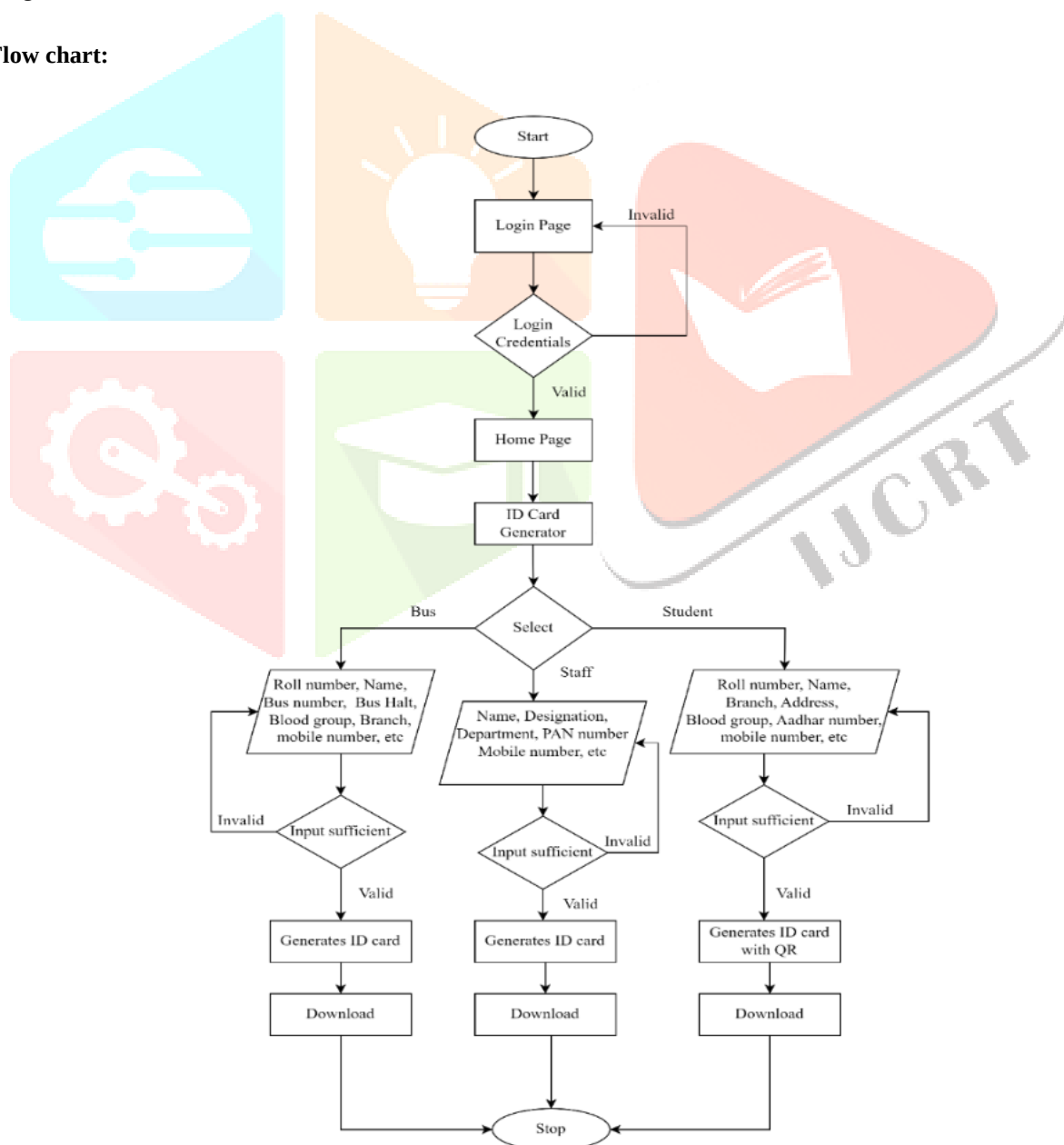
2. Import the Database

Open browser and go to [phpMyAdmin](http://localhost/phpMyAdmin). Create a new database and import the SQL file (e.g., ideal qr.sql).

3. Run Project

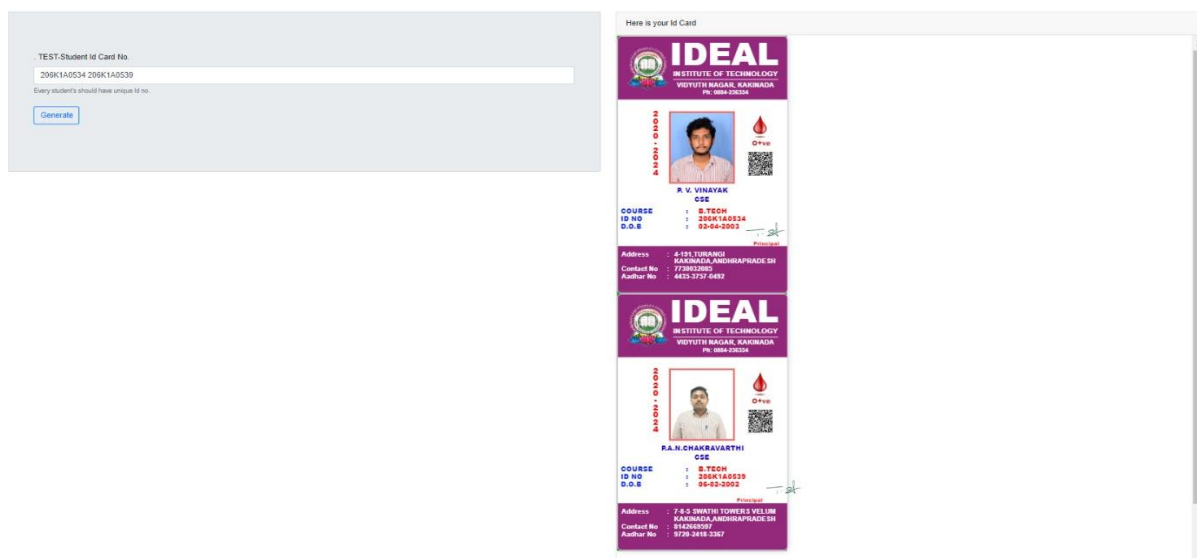
Open browser and navigate to your project URL. For example, if your project is in a folder named idcard generator, go to: <http://localhost/idcard generator/adminlogin/dashboard.php>.

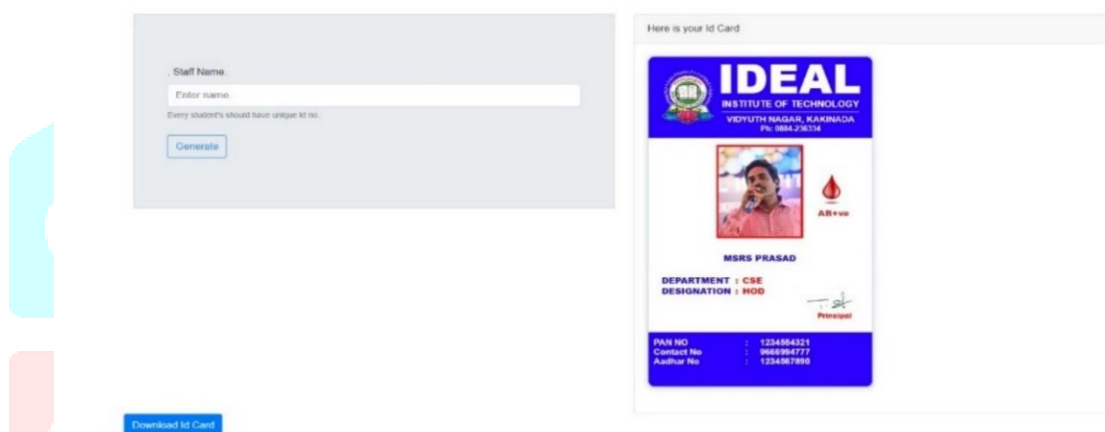
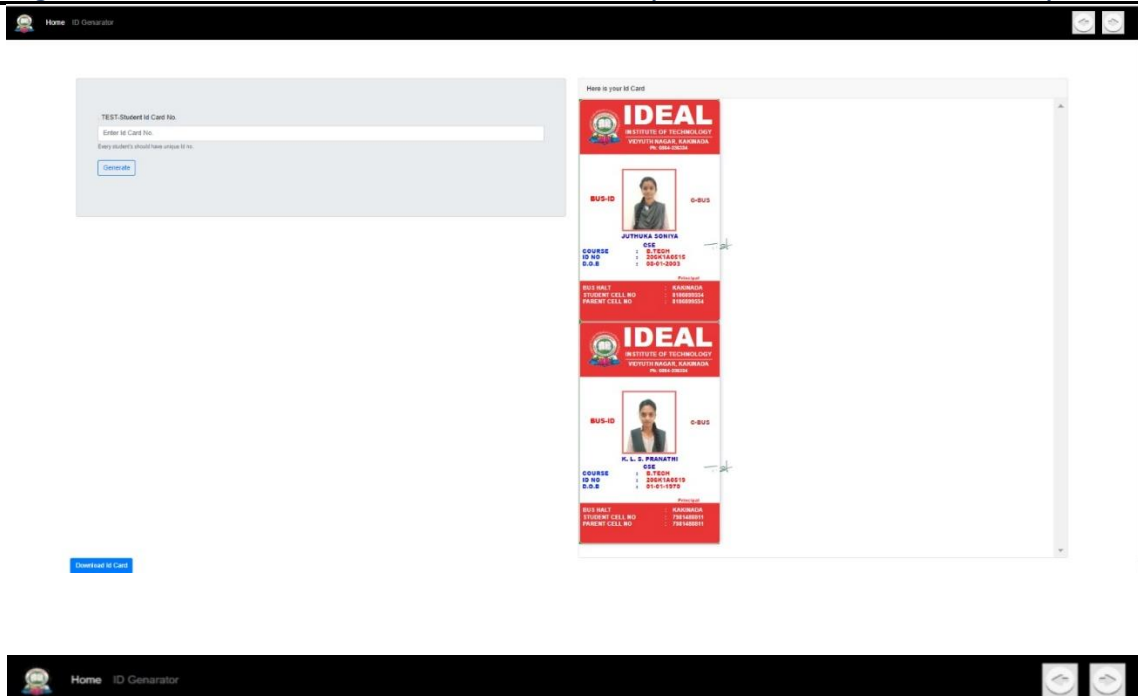
VI.Flow chart:



VII. Modules of the project

- ❖ Administrator Login
 - Student Id card Generator
 - Import student details
 - Generate Student Id card generator with QR
 - View Id card
 - Download Id cards
 - Bus Id card Generator
 - Import Student details
 - Generate Bus Id card
 - View Id card
 - Download Id card
 - Faculty Id card Generator
 - Import Faculty details
 - Generate Faculty Id card
 - View Id card
 - Download Id card





VIII. Conclusion:

ID card generator provides admin to generate Id cards from anywhere and anytime. It saves time. All students can check information, results & etc. Administrator has a privilege to put as many details of the student in any category given in website. User can scan the QR code given in id card and can see the results as well. Having the right approach to the student information is very important, especially when parents have to know the results of their children. Therefore, making sure that an student ID card having QR code system is secure, relevant, accessible, and fair is of the utmost importance.

IX. Future Scope:

The Scope of this project is very broad in terms of gaining knowledge and sharing knowledge among the world.

Main future scope of the project is:

- This website can have second module for faculty login.
- This website can be further used for providing more student information.
- This website can be integrated into application.

X. References:

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2. PHP and MySQL Web Development" by Luke Welling and Laura Thomson.
3. CSS: The Definitive Guide" by Eric Meyer and Estelle Weyl

E-References

1. <https://stackify.com/php-error-handling-guide/>