



Web-Based Student Identification Card System Generator

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Abstract — Identification or ID cards are used by many organizations nowadays to prove the person's identity. Educational institution provides ID cards to their students, faculty, and staff to shows their connections to the institution. Several educational institutions have offices that will process the student's ID cards. In this study, the researchers developed a web-based application that addressed the problem of restraining the students to on-site process their ID cards. This application allowed the student to process their ID cards thru the use of the online application. Using this application students will no longer go to the office of the school site to process their ID cards. The application also helped the students to save their time and effort in processing their ID. The newly developed system will be deployed on the web and it can access by many devices with the internet browser and connected to the world-wide-web

Index Terms – *Web-based Application, Online ID Card Processing, and Online Transaction System*

I. INTRODUCTION

Identification (ID) cards are used by many establishments nowadays to prove the person's identity. Educational institution provides ID cards to their students, faculty, and staff to show their connections to the institution. Student ID card may have the summary of student information [1]. ID cards are useful to the students, it can be used by the students to avail discounts on their fare. It can also use as for identity verification for their purpose for such as for claiming money remittances and other purposes. Several educational institutions have offices that will process the student's ID cards. The students will go directly to that office to request and process their ID cards. In some institution, there is a specific office or department that services provide ID cards to the students. The processing of ID took place in that particular office and done it manually [2]. The student will directly request to the office. But due to the COVID-19 pandemic, students were restricted inside the school. This a measure to ensure the student's safety and to prevent the spread of the COVID-19 virus. In this study, the researchers developed a web-based application that addressed the problem of restricting the students to process their ID cards. This application allowed the student to process their ID cards thru the use of the online application. Using this application students will no longer go to the office of the student affairs and services to process their ID cards. This application also helped the students to save their time and effort in processing their ID.

II. RELATED WORK

The User experience (UX) design plays a crucial role in the success of blogging platforms, influencing user engagement, content consumption, and overall satisfaction. Several studies have emphasized the importance of intuitive and visually appealing interfaces in attracting and retaining users (Liu et al., 2019). Research by Smith and Johnson (2020) highlights the significance of personalized recommendations and content discovery mechanisms in enhancing user engagement on blogging platforms. Furthermore, accessibility features, such as support for screen readers and keyboard navigation, are essential for ensuring inclusivity and accommodating users with disabilities (Brown & Miller, 2021). These findings underscore the multifaceted nature of UX design in blog applications, encompassing aspects of usability, aesthetics, and accessibility.

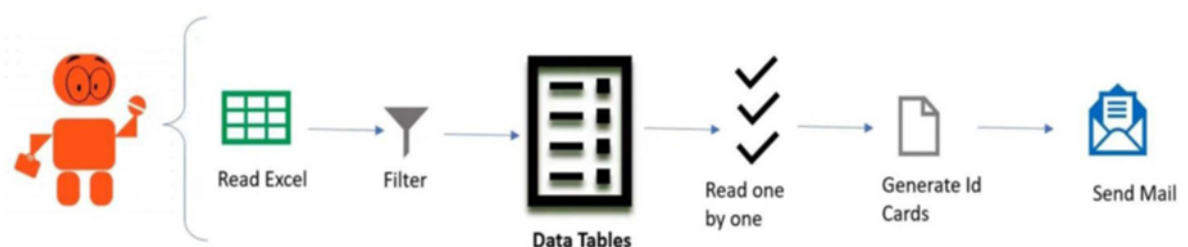
In addition to interface design and content discovery, studies have also examined the impact of performance on user experience in blogging platforms. Research by Garcia and Martinez (2022) emphasizes the importance of fast loading times and responsive design for reducing bounce rates and increasing user engagement. Furthermore, features such as smooth scrolling, lazy loading of images, and efficient caching mechanisms contribute to a seamless browsing experience (Chen et al., 2020). Moreover, the role of mobile responsiveness cannot be overstated, as an increasing number of users access blogging platforms from smartphones and tablets (Jones & White, 2021). Therefore, optimizing the platform for various screen sizes and device capabilities is essential for catering to the diverse needs of the user base

III. PROPOSED WORK

In this paper, The proposed system aims to automate the process of generating identity cards using the Robotic Enterprise (RE) Framework in UiPath. By leveraging the capabilities of UiPath and the structure provided by the RE Framework, the system enables organizations to streamline the identity card generation process, improve accuracy, and enhance operational efficiency.

The first step in the proposed methodology is to conduct a thorough requirement analysis. This involves understanding the specific requirements and constraints of the identity card generation process. It includes identifying data sources, validation rules, template design specifications, and any other relevant considerations.

The researchers used the Online Transaction Processing (OTP) model. Figure 4 shows that students used their personal owned or borrowed devices that have an access to the internet browser and the world-wide-web. The role system administrator is to monitor the flow of the transaction.



The proposed methodology outlines the steps involved in generating identity cards in the RE Framework using UiPath. By following this structured approach, organizations can automate and streamline the identity card generation process, ensuring data accuracy, scalability, and operational excellence.

UiPath's capabilities, along with the robustness of the RE Framework, provide a powerful combination for efficient and reliable automation solutions

IV. PROPOSED RESEARCH MODEL

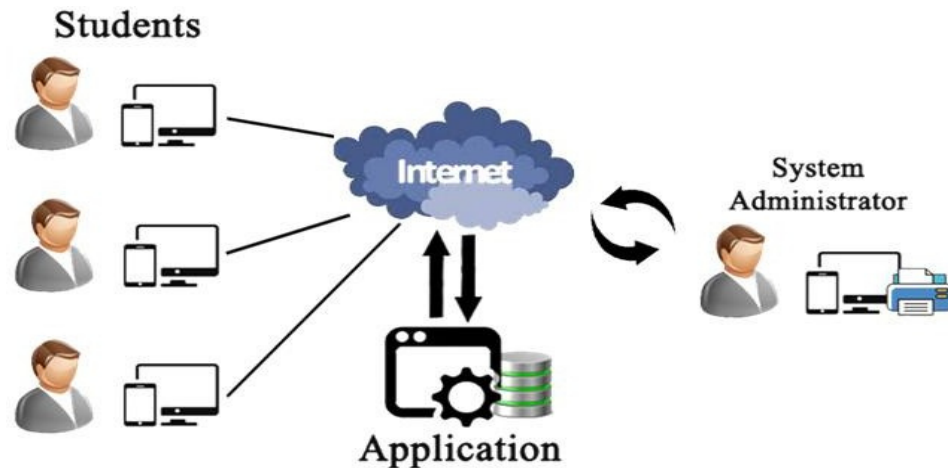


Fig 4. Online Transaction Processing of ID Card Processing The process includes three (3) phases.

These phases
are the following:

- Student ID Card Application.* In this phase, the student was required to log into the Student Portal to apply for an ID card.
ID Card Approval. In this phase, the system administrator monitored and approved those students that have completed the application. Additionally, the system administrator can print the ID card and it will be ready for release.
- ID Card notification for release.* In this phase, the student will notify (via email) that their requested ID is ready to be released.

A. To identify the tools and resources in the development of the system.

Some tools and resources were needed in the development of the system. Some of this was considered open-source. These includes the following:

Software:

- Apache (PHP)
- MySql
- CodeIgniter
- Bootstrap

Hardware:

- Any CPU (Intel i5/ i7/ Xeon recommended for web-hosting)
- 1 GB of RAM (at least 8GB for recommended for web-hosting)
- 40 GB HDD Free Space

B. To design and develop a Web-based ID card processing system.

Designing a database for an application is important. This utilized the storage of data to store more information and it will be available for future use. In this study, the researchers used an Entity Relationship Diagram (ERD) to illustrate the database design used in this study. Figure 5 illustrates the database of the system.

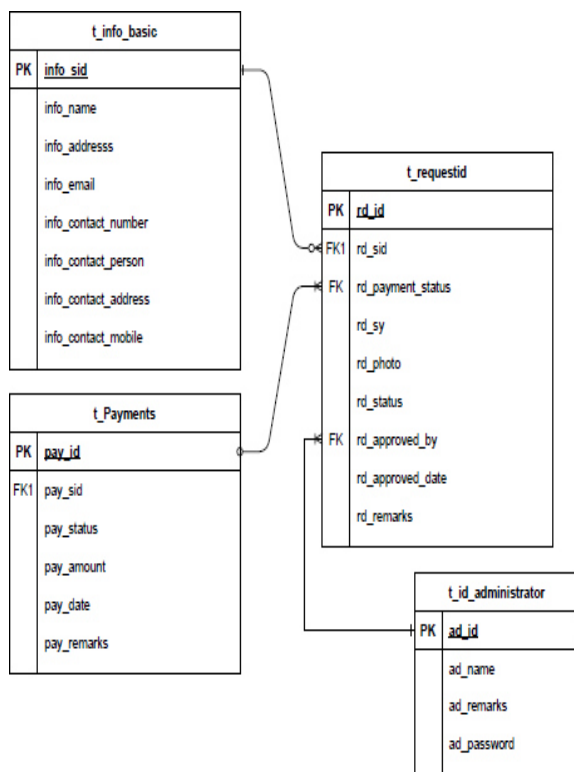


Fig 5. Web-based ID card processing system ERD

Objective 3: To design a friendly user-interface for the system

User-interface is an important component of a computer application. It allows the end-user to interact act with the computer system. In this study, the researchers developed a friendly web-based user interface using HTML, CSS, and JavaScript technology.

Figure 6 shows the log-in pages of the system. This allows the students to log into their accounts.



Please Login

[Student Information System : Request ID]

Tagoloan Community College © 2021

Fig 6. Log-in page of the system

Figure 7 shows the terms and agreements of the system. This page allows the students to read the terms, agreements, and rules in using the newly developed system

Student Request ID

Student ID

Important Reminders:

- Wear your school uniform or any collared shirt.
- Submit a color **photo**, taken in last six (6) months.
- Use a clear image of your face. Do not use filters commonly used on social media.
- Have someone else to take your **photo**. (No Selfies)
- Take off your eyeglasses for your **photo**.
- Take the photo in front of a plain White or Off-White background.
- Make sure that there are no other objects in the background.
- Make sure there are no shadows on your face

Fig 7. Terms and agreement form

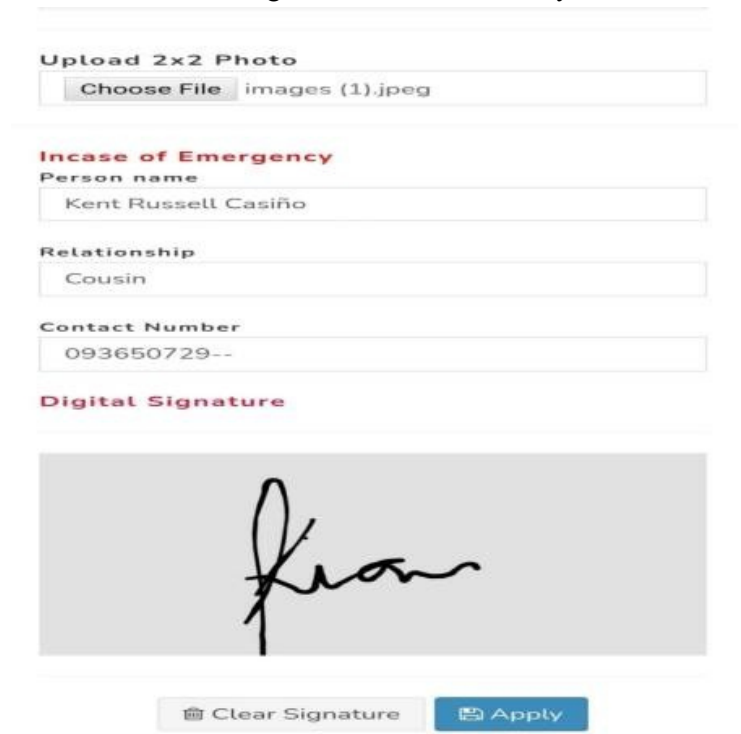
Figure 8 shows the student ID card application. On this page, the student will update their information such as the latest ID photo, contact person in case of emergency, and other important information



The screenshot shows a web form titled "Student Request ID". It includes a "Student ID" field with a placeholder image, an "ID Number" field containing "20202529", an "Upload 2x2 Photo" section with a "Choose File" button and "No file chosen" text, and an "Incase of Emergency" section with fields for "Person name" (Kent Russell Casiño), "Relationship" (Cousin), and "Contact Number" (093650729--).

Fig 8. Student ID card Application

Using JavaScript technology, the system can accept the digital signature of the student. Figure 9 shows a signature panel. This panel allows the students to attached their signatures. The attached signature will be converted into an image file and it will securely stored in a web hosting server



The screenshot shows a web form for "Student's Signature Attachment". It includes an "Upload 2x2 Photo" section with a "Choose File" button and "images (1).jpeg" text, an "Incase of Emergency" section with fields for "Person name" (Kent Russell Casiño), "Relationship" (Cousin), and "Contact Number" (093650729--), and a "Digital Signature" section with a large text area containing a handwritten signature. At the bottom, there are "Clear Signature" and "Apply" buttons.

Fig 9. Student's Signature Attachment form

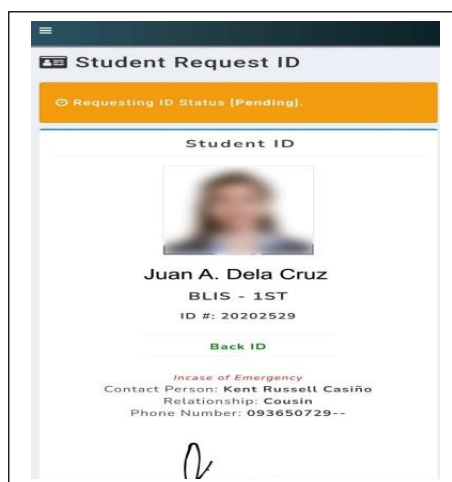
After the submission of the required information, a status preview page will be displayed. Figure 10 shows a page of the student ID. This allowed the students to review their information



Fig 10. Status Preview form.

A. To evaluate the newly developed system in terms of functionality, reliability, usability, efficiency, and portability.

Using ISO 9126, the researchers float a set of questionnaires to a group of students. Table 1 shows that the majority of the students are male



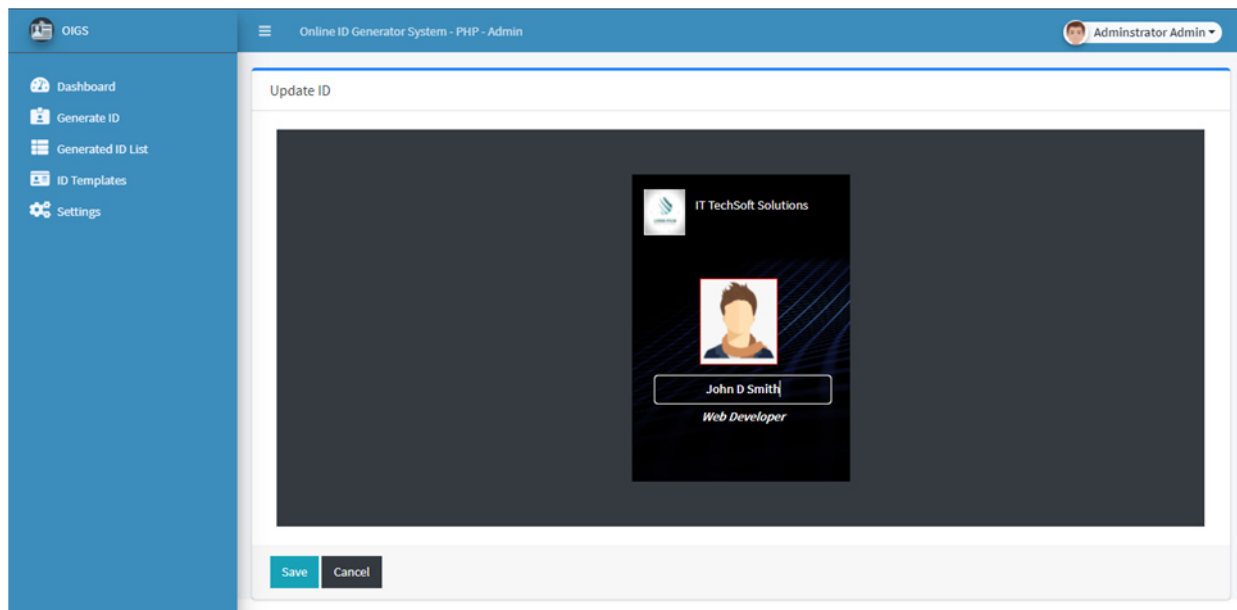
V. PERFORMANCE EVALUATION

Implementation

Implementation phase is mainly concerned with user training, site preparations & file conversions. It also involves final testing of the system. During Implementation the components build during development are put into operational use. Brief Reference of the points that should be addressed during implementation:

- Writing, testing, Debugging & Documenting program.
- Converting data from the old to new system.
- Giving training to user about how to operate the system.
- Developing operating procedures for the computer center staff.
- Establishing a maintenance procedure to repair & Enhance the system.
- Completing system Documentation.
- Reviewing the administrative plan, personnel requirement plan, and hardware plan.

VI. RESULT ANALYSIS



- Secure Login/Logout
- Manage Template List
- Generate ID Cards
- Manage Generated ID Cards
- Print Generated ID Card
- Download Generated ID Card
- Draggable text and image fields in creating templates
- Text field font and container configuration
- Image and ID Card Size Configuration
- Default Text for each Textfields and more

VII. CONCLUSION

This research developed a system that can be an alternative way of processing School ID cards. This will allow the students to process their ID cards using Internet Technology. The system can be used by the students to lessen their time and effort in requesting their ID cards. This System can be used not only during the COVID-19 pandemic. This system can save time and resources for an institution.

Our blog application offers a seamless user experience, with an intuitive interface and robust features such as user authentication, content creation, and social sharing capabilities. The implementation of security measures ensures the protection of user data and accounts, fostering trust and confidence among our user base.

Furthermore, our project has provided valuable insights into user behavior, content performance, and technical operations through key observations and analysis. This information will guide future development efforts and strategic decision-making, ensuring that our application remains relevant and competitive in the ever-evolving digital landscape.

Looking ahead, we are committed to continuous improvement and innovation, driven by user feedback, market trends, and emerging technologies. By leveraging our strengths and addressing areas for enhancement, we aim to further enhance the functionality, usability, and value proposition of our blog application.

In summary, the successful development and launch of our blog application mark the beginning of an exciting journey towards creating a thriving online community and empowering users to share their voices, ideas, and stories with the world.

VIII. FUTURE SCOPE

The future scope of Student ID card generator in Django is very promising. Django is a powerful web framework that makes it easy to develop and deploy web applications. With Django, you can quickly and easily create an Student ID card generator that meets the needs of your organization.

Here are some specific examples of how Student ID card generators could be used in the future:

- Student ID card generators could be used to improve security by making it more difficult for unauthorized individuals to access secure areas.
- Student ID card generators could be used to improve efficiency by automating tasks such as timekeeping and access control.
- Student ID card generators could be used to improve communication by providing Students with a way to quickly and easily identify themselves.
- Student ID card generators could be used to improve compliance by providing a way to track Student attendance and hours worked.

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