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Automated Web-Based Curriculum Vitae System with QR Code Integration for Portfolio Access

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Abstrak

In the current digital era, the importance of crafting compelling Curriculum Vitae (CV) and presenting portfolios has escalated across various professional domains. This research introduces a pioneering solution, an automated information system designed to empower users to seamlessly create CVs and access portfolios through a dedicated website. The system facilitates a user-friendly process wherein individuals can register, input their CV and portfolio data, choose from a variety of templates, and generate a personalized CV embedded with a QR code. This QR code serves as a convenient link, providing instant access to the individual's comprehensive portfolio. Notably, the system is not confined to personal use, as users can effortlessly share their CVs and portfolios with others by distributing the QR code. The integration of web technology, QR codes, and a diverse range of templates constitutes a novel approach, enhancing both the efficiency and quality of CV compilation and portfolio presentation. This research aims to address the evolving needs of professionals by offering a streamlined and technologically advanced solution for managing career profiles. By combining innovative features, such as QR code integration, with the flexibility of template selection, the system seeks to redefine the standards of CV creation and portfolio management, making the entire process more accessible and efficient.

Kata kunci: *Curriculum Vitae; Portfolio; Resume builder; Career profile management; Web technology*

Abstrak

Di era digital saat ini, pentingnya membuat *Curriculum Vitae* (CV) yang menarik dan menampilkan portofolio telah meningkat di berbagai bidang profesional. Penelitian ini memperkenalkan solusi inovatif berupa sebuah sistem informasi otomatis yang dirancang untuk memberdayakan pengguna membuat CV dan mengakses portofolio dengan mulus melalui situs web khusus. Sistem ini memfasilitasi proses yang mudah digunakan di mana individu dapat mendaftar, memasukkan data CV dan portofolio mereka, memilih dari berbagai templat, dan menghasilkan CV yang dipersonalisasi dengan kode QR. Kode QR ini berfungsi sebagai tautan yang nyaman, memberikan akses instan ke portofolio lengkap individu tersebut. Khususnya, sistem ini tidak terbatas untuk penggunaan pribadi, karena pengguna dapat dengan mudah membagikan CV dan portofolio mereka dengan orang lain dengan menyebarkan kode QR. Integrasi teknologi web, kode QR, dan beragam templat merupakan pendekatan baru yang meningkatkan efisiensi dan kualitas pembuatan CV serta presentasi portofolio. Penelitian ini bertujuan untuk menjawab kebutuhan profesional yang terus berkembang dengan menawarkan solusi yang efisien dan berteknologi maju untuk mengelola profil karier. Dengan menggabungkan fitur inovatif, seperti integrasi kode QR, dengan fleksibilitas pemilihan templat, sistem ini berupaya untuk mendefinisikan ulang standar pembuatan CV dan pengelolaan portofolio, membuat seluruh proses lebih mudah diakses dan efisien.

Kata kunci: *Curriculum Vitae; Portofolio; Resume builde; Pengelolaan profil karier; Teknologi web*

1. Introduction

The global technological transformation has brought significant changes to the environmental landscape, especially in the field of information technology. In the past, common practices involved manual writing and note-taking using traditional mediums such as pen and

paper. However, with digitalization, high efficiency has been introduced in various tasks, marking a significant departure from conventional methodologies.

Currently, there is a clear shift from ancient practices like handwritten notes on paper to the widespread adoption of technological devices such as laptops and smartphones. This paradigmatic transition emphasizes the importance of technology that can quickly adapt to the evolving preferences of society and the advancements in contemporary technology.

In the context of job recruitment, a parallel transformation is observed in resume creation. CVs that were once handwritten have undergone a metamorphosis into digitally written or even creatively designed documents, aiming for visually appealing presentations. However, the evolution of CV creation into a more modern format should not compromise the fundamental aspects of crafting a well-conceived CV.

Existing research has extensively explored the realm of information system development, with a specific emphasis on Curriculum Vitae (CV) creation. Notably, one study [1] primarily focused on the intricate process of CV creation, resulting in the development of a dedicated CV generator application. Similarly, another study [2] concentrated exclusively on CV creation, seeking to enhance the user experience in crafting effective CVs. Additionally, a third study [3] delved into CV creation, with a specific emphasis on allowing users to choose appealing templates. In contrast, a separate research endeavor [4] expanded its scope to include the development of a landing page. This platform showcased the system's capability to facilitate swift and effortless CV generation by inputting essential data, with the system autonomously generating aesthetically pleasing designs. However, these studies collectively exhibited certain limitations, particularly in their approach to portfolio creation, QR code integration as an access medium, and the provision of a limited selection of templates.

This research aims to develop a more comprehensive CV creation information system by adding portfolio features, QR code integration for access, and increasing template options. This is expected to provide a more comprehensive solution for efficient and effective CV creation needs in the current digital era.

Identifying the limitations in previous research emphasizes the importance of a web-based portfolio data repository, providing accessibility to users or recruitment entities seeking more extensive information beyond traditional CV boundaries. Therefore, there is an urgent need to design a system that can efficiently address these requirements. The main challenge lies in the demand for a system capable of automating the CV creation process while simultaneously managing portfolios based on the data contained within the CV.

2. Literature Reviews

Existing research has extensively explored the realm of information system development, particularly focusing on Curriculum Vitae (CV) creation and portfolio management. Research by [1] presented a study on the design and development of a Visual Builder-based CV and portfolio system, specifically targeting UNWAHA students. Their research emphasized the importance of visual design in enhancing the presentation of CVs and portfolios, catering to the preferences of modern users. However, their study did not delve into QR code integration or provide a wide selection of templates.

In developing the Resume Maker Application researched by [2], aiming to streamline the CV creation process and improve user experience. This application focused on providing users with a user-friendly interface and customizable templates to create effective CVs. Although the study contributed to enhancing CV creation efficiency, it did not address portfolio management or QR code integration.

Subsequent research introduced a web-based Curriculum Vitae application, emphasizing accessibility and ease of use for users [3]. This application allowed users to input their data and generate CVs directly on the web platform. While the study facilitated CV creation, it lacked features for portfolio management and QR code integration.

Research by [4] developed a Profile Generator website to simplify the process of creating CVs, portfolios, and name cards within a single platform. Their research showcased the system's capability to automate CV and portfolio generation based on user input, enhancing efficiency. However, similar to previous studies, it did not extensively address QR code integration or offer a diverse range of templates.

Research endeavors in the present aim to bridge the identified gaps in previous studies by developing a comprehensive CV generation system with robust portfolio features and

seamless QR code integration. These QR codes will serve not only as promotional tools but also as information gateways for user data [5]. This research emphasizes providing users with a wide array of visually appealing template options while ensuring efficient CV creation and portfolio management.

This review highlights the novelty of the current research, which aims to address the limitations of previous studies and offer a more comprehensive solution for CV creation and portfolio management in the digital era.

3. Method

3.1. Data Collection Techniques

The success of the system design and implementation is intricately tied to the precision and pertinence of the gathered data. To ensure the efficacy of the proposed system, a multifaceted approach incorporating various data collection techniques will be employed, drawing inspiration from established research methodologies[6].

1) Observation

   The observational method employed in this research entails direct, firsthand observations conducted in environments directly pertinent to the study. These direct observations will unfold within a variety of corporate institutions and amidst individuals in the process of creating their CV. By immersing in these settings, the research aims to capture authentic, real-world insights into the intricate dynamics involved in the development of CV.

2) Interviews

   The author will conduct interviews with diverse stakeholders, including students, alumni, and faculty members of the University Dr. Soetomo Surabaya. These interviews aim to capture nuanced perspectives on CV creation, elucidating crucial points involved in the process. Additionally, interviews with Human Resource Development (HRD) representatives from selected companies will provide insights into the CV preferences of employers and identify key elements in CV creation.

3) Literature Review

   A comprehensive literature review will complement the core material related to the research problem. Information gleaned will be extracted from pertinent topics surrounding the researched issue, encompassing theories and insights from a diverse range of textbooks and previous research journals. This ensures that the research is grounded in a robust theoretical framework and informed by the wealth of knowledge generated by previous scholars.

Figure 1. Agile Software Development [7]

By adopting these meticulously selected data collection techniques, the research endeavors to glean valuable insights from direct observations, real-world interviews, and an exhaustive review of existing literature. This multifaceted approach is crafted to provide a holistic understanding of the challenges and requirements inherent in CV creation within both academic and professional realms. The inclusion of diverse data sources enhances the reliability and depth of the research findings.

3.2. Agile Software Development

Agile is a dynamic and iterative approach to software development that prioritizes flexibility, collaboration, and adaptability. Unlike traditional linear models, Agile embraces changes in requirements, allowing for continuous improvement throughout the development process. It emphasizes delivering functional components in short development cycles, known as sprints, to quickly respond to evolving needs and enhance client satisfaction [8].

In developing software using the Agile Methodology, there are several stages that must be navigated as follows:

1) Brainstorming involves generating ideas and discussing potential solutions collaboratively. Team members, stakeholders, and sometimes clients engage in discussions to share thoughts, needs, and innovative concepts.
2) Design is the phase where a blueprint or plan for the software is created. Designers outline the structure, features, and user interface, ensuring a clear vision before transitioning to the development stage.
3) Development is the coding and programming phase of the software. Developers transform the design into functional software, often breaking down the work into manageable iterations or sprints.
4) Quality Assurance (QA) is an integral part of Agile. In this stage, the software undergoes thorough testing to identify and rectify issues, ensuring that it meets requirements and functions as expected.
5) Deployment is the implementation of software that has passed testing. In Agile, deployment can be incremental, with each iteration adding new features or improvements.

These stages align with Agile principles, emphasizing collaboration, adaptability, and delivering a functional product in shorter cycles. It's essential to note that Agile is often characterized by its iterative and incremental approach, allowing flexibility and responsiveness to changes throughout the development process.

3.3. System Analysis

System analysis utilizing a use case diagram is a method that employs visual representation to understand, clarify, and organize system requirements from an end-user perspective. A use case diagram illustrates different interactions between actors (users or external systems) and the system itself [9]. In this context, a use case refers to a specific functionality or a set of actions that the system performs, typically initiated by an actor. Each use case provides a detailed description of how a user or an external system interacts with the system to accomplish a particular goal. Use cases are essential elements in the diagram, helping to identify, clarify, and prioritize system functionalities based on user interactions [10]. This approach facilitates a comprehensive analysis of the system's behavior and functionalities, ensuring a user-centric and effective design.

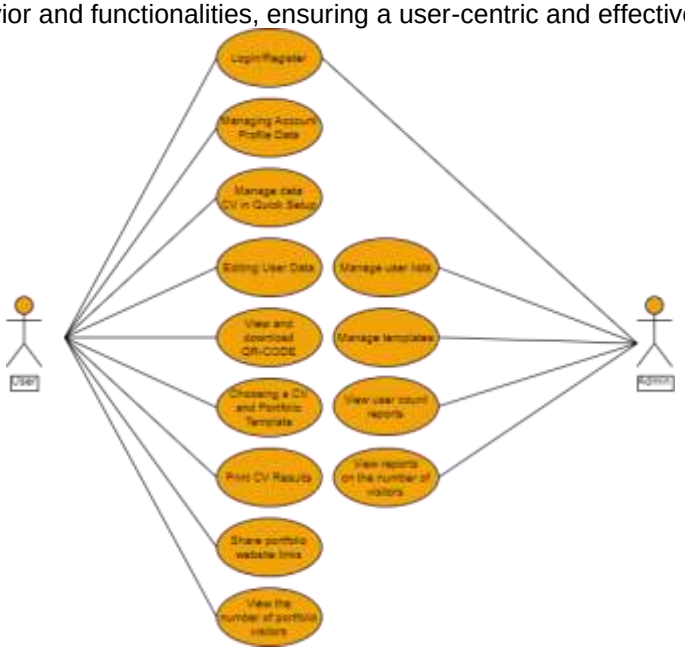

Figure 2. Use Case Diagram

Based on the above diagram, the author will develop an application with the following features. Firstly, for the admin, these include:

1) Login feature serves as the pivotal gateway, facilitating exclusive access to the administrative dashboard. Meticulously designed to embody a fortress of security, this feature stands as the linchpin of the entire system, ensuring that only authorized personnel can traverse into the administrative domain. This critical authentication process not only safeguards sensitive information but also establishes a secure entry point for administrators to navigate and oversee the system's functionalities effectively.
2) User Management Feature empowers the admin to oversee registered users within the system, facilitating a spectrum of tasks that includes viewing user profiles, resetting passwords, and managing account deletions. This robust feature serves as the administrative control center, providing a comprehensive toolkit for effective user account management. From personalized user insights to essential account maintenance, this feature ensures that administrators can efficiently navigate and administer user-related functionalities, contributing to a streamlined and secure system administration process.
3) Template Management Feature allows the admin to efficiently organize, add, and remove CV and portfolio templates within the system, providing flexibility and customization options.
4) User Statistics feature offers the admin insights into the total number of registered users, aiding in a comprehensive understanding of the user base.
5) System Visitation Analytics feature enables the admin to monitor and analyze overall system traffic, providing valuable information on the total visits made.

These features collectively enhance the admin's ability to efficiently manage users, templates, and gain valuable insights into system usage. Secondly, for users, the features encompass:

1) The Login and Register feature enable users to securely log into their accounts using existing credentials or register for a new account by providing the necessary information. This functionality is crucial for user authentication and account creation, ensuring a secure and personalized experience within the system.
2) Managing Account Profile Data empowers users to efficiently update and maintain their account profile information. This feature allows users to modify personal details, contact information, and other relevant particulars, ensuring the accuracy and completeness of their profiles.
3) The Manage CV Data in Quick Setup feature is meticulously designed to guide users through an intuitive step-by-step process, ensuring a seamless and efficient experience in handling their CV data. This user-friendly functionality empowers users to effortlessly input and organize their information, contributing to the creation of a comprehensive and well-structured CV. By providing a streamlined and user-centric approach, this feature aims to enhance the overall user experience and facilitate the generation of professional and visually appealing curriculum vitae documents.
4) Editing User Data provides users with the flexibility to edit and update their personal information within the system. This ensures that their profiles remain current and reflective of any changes or developments in their professional information.
5) View and Download QR-Code offers users the convenience of viewing and downloading their unique QR codes. These QR codes serve as quick access points for others to reach their profiles or CVs effortlessly.
6) Choosing CV and Portfolio Templates allows users to explore, select, and customize templates for both CVs and portfolios. This feature provides a personalized and visually appealing presentation of their professional information.
7) Print CV Results allows users to easily print the finalized version of their CV. This feature ensures the production of a polished and professional document suitable for various purposes, including job applications, interviews, or networking events.
8) Share Portfolio Website Links facilitates users in effortlessly sharing links to their portfolio websites. Whether with colleagues, potential employers, or other interested parties, users can enhance the visibility of their professional work.
9) View the Number of Portfolio Visitors empowers users with insights into the impact of their portfolios by tracking and monitoring the number of visitors. This information is valuable for assessing the reach and interest generated by their professional profiles.

4. Implementation Results

The Implementation Results section stands as a pivotal exploration, delving deep into the intricacies and nuances of the implemented system. It meticulously elucidates not only the design and execution of the User Interface (UI) but also delves into the extensive Black Box testing, showcasing the robustness and reliability of the application. Through this thorough and comprehensive analysis, the section aims to provide a detailed and comprehensive account of the user experience, shedding light on the seamless functionality of the incorporated features.

As we embark on this journey through the Implementation Results, our objective is to unveil the myriad successes and achievements attained during the implementation phase. Through detailed examination and scrutiny, we aim to offer valuable insights into the system's performance, highlighting the nuances of user interaction and the overall effectiveness of the implemented features.

4.1. User Interface (UI) Design

The meticulous implementation of the User Interface (UI) stands as a testament to our dedication to delivering a seamless and visually appealing experience for users. Each element of the UI has been thoughtfully designed to improve navigation and accessibility. The intuitive layout guarantees that users can effortlessly interact with the numerous functionalities offered by the application. This user-centric design approach, as demonstrated in the Implementation of the User Centered Design method on the Mobile Web [11], ensures an enhanced user experience and effective utilization of the application's features. A glimpse of the UI can be observed in the image below.

1) Landing Pages

The landing page functions as the crucial introductory interface of the website, meticulously curated to provide visitors and prospective users with a comprehensive glimpse into the diverse range of features and services offered by the system [12]. This crucial entry point is strategically designed to convey essential information, enticing individuals to explore further and engage with the platform's offerings. The landing page serves as a virtual showcase, presenting a visual and informational overview that captures the essence of the system, ultimately inviting users to embark on a journey of exploration and interaction.

Figure 3. Landing Pages

2) Login & Register

The Login process serves as the gateway for users to enter the system, requiring them to authenticate their identities by providing valid credentials such as a username or email and password. This crucial step ensures that only authorized users gain access to the system's functionalities and resources, safeguarding sensitive information and maintaining security protocols. On the other hand, the Register function enables new users to create personalized accounts within the system. During registration, individuals are prompted to input essential details, which are then utilized to tailor their experience and provide access to relevant features. By offering both Login and Register functionalities, the system effectively manages user identities, fostering a secure environment while delivering a seamless and personalized user experience.

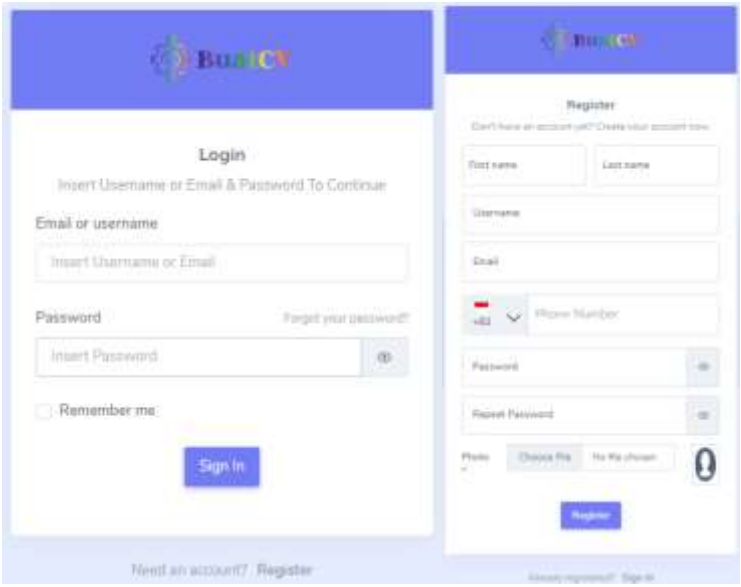

Figure 4. Login & Register

3) Forgot & Reset Password

This functionality addresses instances where users forget their login credentials. In the event of a forgotten password, users can initiate the process by providing their registered email address. The system will then generate a reset link or token and send it to the user's email. Upon receiving the link or token, users can proceed to reset their password, ensuring a secure and user-friendly approach to account recovery. This feature enhances the overall user experience by offering a streamlined solution to password-related issues.

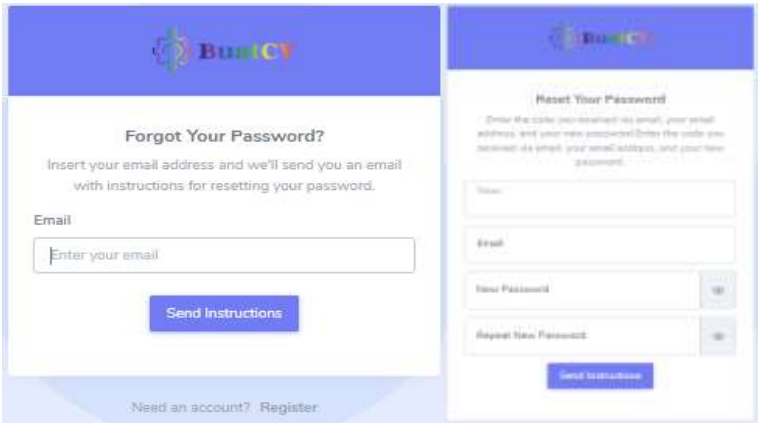

Figure 5. Forgot & Reset Password

4) Quick Setup

During this crucial stage, users are encouraged to meticulously input their personal data, commencing with the inclusion of a photograph and extending to the provision of exhaustive details in adherence to the system's designated form. Upholding the principles of utmost transparency, users have the opportunity to furnish their personal information with precision, encompassing identity photos and comprehensive personal details within the predefined format. This meticulous process is designed to guarantee the accurate recording of every pertinent detail, aligning seamlessly with the system's requirements and ensuring an effective and comprehensive portrayal of users' personal information.

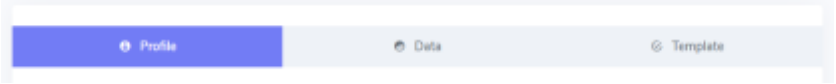

Figure 6. Step 1 Quick Setup

Next, users will be prompted to choose a CV category from the options provided by the system. This selection will display recommended data fields based on the chosen category. Users also have the option to customize their choices through other categories, allowing them to input data as they prefer into their CV. This process provides flexibility, enabling users to determine the information they want to include in their Curriculum Vitae, creating a personalized and tailored user experience.

Figure 7. Step 2.1 Quick Setup Selection of CV Category

Figure 8. Step 2.2 Quick Setup Custom Input Data

Following this, users will be guided to select a CV template recommended by the system based on the previously chosen category. These template options are tailored to match the characteristics and requirements of the selected CV category. This process provides users with ease in choosing a layout and design that aligns with their preferences and needs, enhancing personalization and aesthetics in the resulting Curriculum Vitae.

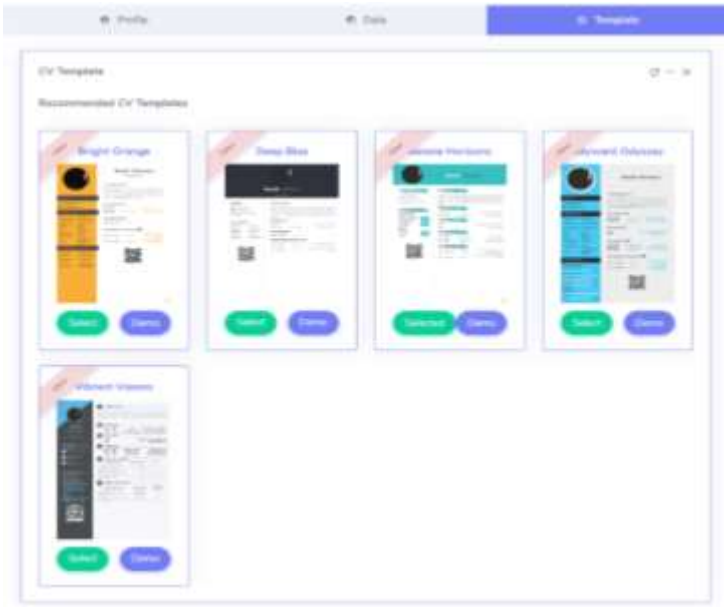

Figure 9. Selection of Recommended CV Templates

5) Select Portfolio Template

This feature empowers users to choose from a variety of pre-designed templates for their portfolio. This functionality allows users to customize the visual presentation of their professional work, enhancing the overall aesthetics and appeal of their portfolio. The selection process involves exploring different templates and opting for the one that best aligns with the user's preferences and the nature of their portfolio content. This feature adds a layer of personalization and creativity to the portfolio creation process, contributing to a unique and visually impactful representation of the user's work.

Figure 10. Select Portfolio Template

6) User Dashboard

The user dashboard page presents a succinct compilation of personal data, accompanied by essential features such as a portfolio QR-Code, portfolio link, total portfolio visits, and convenient options to preview and print the CV. This meticulously designed section aims to furnish users with a comprehensive snapshot of their profile, encapsulating key details alongside streamlined access to pertinent portfolio-related resources. With concise personal information readily available, users can swiftly navigate to their portfolio using the QR-Code or share it effortlessly through the provided link. The total portfolio visits metric serves as a valuable indicator of the portfolio's allure to visitors, offering insights into its reception and engagement. Furthermore, the inclusion of preview and print CV functionalities empowers users to review and document their CV presentation with ease, ensuring seamless management of their professional profile. In essence, the user dashboard page is thoughtfully crafted to offer users intuitive access to vital information about their profile and portfolio, enhancing their overall user experience.

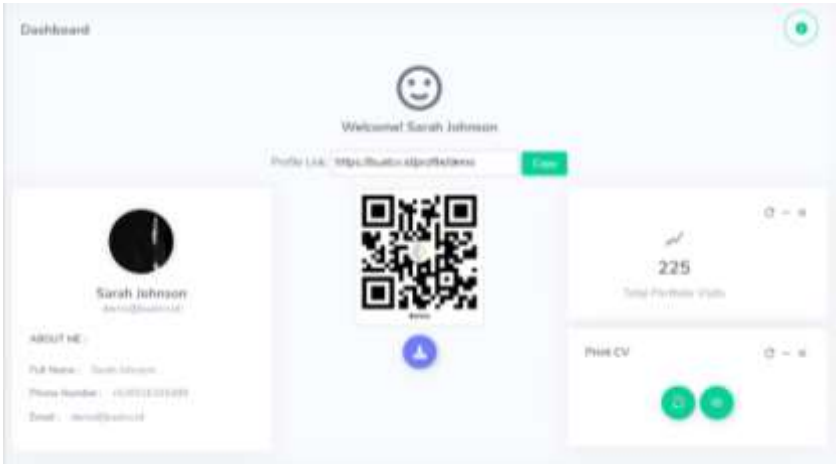

Figure 11. User Dashboard

7) Admin Dashboard

Within the admin dashboard, administrators are greeted with a wealth of numerical insights, ranging from the total user count to active and inactive user figures, alongside the overall system visit count. Furthermore, a line chart representation offers a visual depiction of user distribution and visit statistics, spanning daily, weekly, and monthly intervals. This amalgamation of data furnishes administrators with a comprehensive grasp of user engagement levels and system usage patterns. By placing emphasis on both numerical figures and graphical visualization, the dashboard simplifies the analysis of crucial metrics, alleviating the need for complex matrices and facilitating informed decision-making.

Figure 12. Admin Dashboard

8) Share Portfolio Link

The link provided by the system can be shared on any social media platform, including WhatsApp. The SEO principles embedded in the system will showcase brief data when the link is shared, including a QR code image, profile name, and about me information. This feature enhances the visibility and accessibility of the user's portfolio across various online channels.

Figure 13. Share portfolio link with Whatsapp

4.2. Black Box Testing

Black box testing is a pivotal phase in the evaluation of a software system's functionality and reliability without delving into its internal code structure [13]. This testing approach centers on scrutinizing the system's outputs based on various inputs, simulating user interactions to guarantee that the software behaves as anticipated. In this exhaustive black box testing session, our objective is to evaluate the entire system comprehensively, encompassing aspects such as user authentication, registration, content creation, dashboard metrics, security measures, and more. By exploring diverse scenarios and inputs, we aim to validate the system's performance, security, and user experience across a spectrum of functionalities, ensuring a robust and reliable software product.

Table 1. Blackbox Testing

No	Tested Case	Test Scenario	Expected Outcome	Test Result
1	Landing page	Open the application's main page for the first time.	Display the home page with accurate information and a correct layout.	Succeed
2	Login	Enter correct username and password, then press the login button.	Redirect to the user page after successful login.	Succeed

No	Tested Case	Test Scenario	Expected Outcome	Test Result
3	Registration	Fill out the registration form with valid information, then press the register button.	Confirmation message for registration and account activation email.	Succeed
4	Forgot Password	Enter the registered email address, send a password reset request.	User receives an email containing a token to reset the password.	Succeed
5	Input Data	User inputs valid data according to the chosen data options.	Proper storage of data without error messages.	Succeed
6	Upload Portfolio Files	Choose the portfolio type to add and submit data.	Successful file upload, visible in the input list.	Succeed
7	User Page	Open the user page using the provided menu.	User page opens with accurate information.	Succeed
8	Template Selection	Navigate to the user page and select the template menu.	CV and portfolio display changes according to the selected template.	Succeed
9	User Profile	Navigate to the user profile page, edit some information, and save changes.	Changes in the profile are saved and displayed accurately.	Succeed
10	Admin Page	Use a link or special access to enter the admin page.	Admin page opens with all relevant admin functions.	Succeed
11	User Management	Change status, reset passwords, delete users.	User changes are saved and displayed correctly.	Succeed

4.3. User Acceptance Test

User Acceptance Testing (UAT) is a critical phase in the software development lifecycle where the system is evaluated by end-users to determine if it meets their requirements and expectations. During UAT, real users engage with the software to perform typical tasks and scenarios, providing feedback on its usability, functionality, and overall suitability for their needs [14].

The testing was conducted by distributing the website link to students and the general public to try out the ready-to-be-tested information system. Users were also asked to fill out a questionnaire provided based on their experience using the information system. In filling out the questionnaire, it was completed or participated in by 22 individuals, including students, professionals, and members of the general public.

Table 2 User Rating Weighting

Scale	Description	Score	Percentage
STS	Strongly Disagree	1	80 - 100 %
TS	Disagree	2	60 - 79 %
C	Neutral	3	40 - 59 %
S	Agree	4	20 - 39 %
SS	Strongly Agree	5	0 - 19 %

Here is the formula for calculating the percentage based on the score from the predetermined scale:

$$P = \frac{s}{score} \; x \; 100\% \quad \text{..... (1)}$$

Information:

P = Percentage value
s = Total frequency multiplied by the answer score
score = Highest score multiplied by the ideal sample count

Table 3 User Questionnaire Results

Scale	Score	Question									
		1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
STS	1	0	0	0	0	0	0	0	0	0	0
TS	2	0	0	0	0	0	0	0	0	0	0
C	3	1	1	2	1	0	0	2	0	0	3
S	4	11	7	10	11	11	11	14	9	15	12
SS	5	10	14	10	10	11	11	6	13	7	7
Frekuensi(s)		**97**	**101**	**96**	**97**	**99**	**99**	**92**	**101**	**95**	**92**

Table 4 User Questionnaire Results

Scale	Score	Question									
		11	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**
STS	1	0	0	0	0	0	0	0	0	0	0
TS	2	0	0	0	0	0	0	0	0	0	0
C	3	0	2	0	1	0	0	0	3	1	5
S	4	13	9	14	11	13	10	8	15	15	11
SS	5	9	11	8	10	9	12	14	4	6	6
Frekuensi(s)		**97**	**97**	**96**	**97**	**97**	**100**	**102**	**89**	**93**	**89**

$$P = \frac{97 + 101 + 96 + 97 + 99 + 99 + 92 + 101 + 95 + 92 + 97 + 97 + 96 + 97 + 97 + 100 + 102 + 89 + 93 + 89}{110\ x\ 20}\ x\ 100\%$$

$$P = \frac{1926}{2200}\ x\ 100\%$$

$$P = 87{,}5454545\%$$

From the acceptance testing conducted with the system users, the result obtained was 87.5454545%, or more commonly represented as **87.55%** (rounded to two decimal places).

4.4. Discussion

The discussion on the results of the designed system's testing provides an in-depth analysis of how well the proposed concepts in this research, particularly the tested functional features, can potentially address the identified issues at the outset of the study. Logical analyses are conducted by referencing or comparing with previous research findings that have proven effective in solving similar issues to those addressed in this research.

One of the tested features is the system's ability to present an informative and engaging landing page for potential users. The test results indicated that the landing page effectively conveyed essential information and captured users' interest, encouraging further exploration of the system's features and services. This finding aligns with prior research indicating that informative and engaging landing pages can enhance user engagement levels [15].

Furthermore, the user testing results also highlighted the effectiveness of features such as login, registration, and user dashboards in providing an intuitive and user-friendly experience. These findings are consistent with previous research showing that a good user interface plays a crucial role in improving user retention and satisfaction [16].

In addition to basic features, the discussion also evaluates advanced features such as QR code integration for user portfolios. The testing results showed that this feature provided convenient access and had the potential to enhance the attractiveness of user portfolios. Previous studies have demonstrated that QR code integration can effectively expand the reach and accessibility of information [5].

Overall, the testing results indicate that the proposed concepts in this research have the potential to address the identified issues effectively. The tested functional features successfully provide effective solutions and enhance the overall user experience.

5. Conclusion

In conclusion, the meticulous design and implementation of the web-based Curriculum Vitae (CV) generation system, seamlessly integrated with QR Code functionality, signify a remarkable leap forward in the realm of career profile management. This innovative approach has adeptly addressed the dynamic needs of users within an ever-evolving technological landscape,

as evidenced by the results of the User Acceptance Test (UAT) which yielded an impressive 87.55% satisfaction rate.

The incorporation of QR Codes introduces an effortless and effective means of portfolio access, enhancing accessibility for both users and prospective employers. The system's commitment to user-centric features, including the guided setup for CV creation, customizable templates, and insightful dashboard analytics, contributes to a highly intuitive and user-friendly experience.

Moreover, the application of Agile Software Development methodologies has ensured a nimble and adaptive development process, resulting in the timely delivery of a functional, dependable product. The successful execution of black box testing further underscores the system's resilience, validating its diverse functionalities and ensuring a commendable standard of performance, security, and user-friendliness.

Additionally, the utilization of use case diagrams in system analysis has provided a lucid visual representation, facilitating a comprehensive understanding of system requirements from an end-user perspective. The research findings affirm that the developed system not only fulfills its primary objective of CV generation but extends beyond, offering supplementary tools for effective career profile management.

The extensive feature set, complemented by QR Code integration, positions users advantageously in the job market by presenting their professional profiles in an accessible and visually compelling manner. As technology marches forward, this system stands as a testament to the ongoing evolution of tools that empower individuals in their professional endeavors.

In essence, the "Automated Web-Based CV System with QR Code Integration for Portfolio Access" has showcased its potential to streamline and elevate the intricacies of career profile management, based on the conclusive findings derived from the UAT results.

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