The Development Of Website-Based Curriculum Vitae And Job Application Letter Using The Laravel Framework

I Ketut Dedy Suryawan[*], Dw Ayu Agung Indra Swari[**], Gede Herdian Setiawan[**], Cokorda Gde Agung Surya Pramana[**]

[*] Computer Science, Institut Teknologi dan Bisnis STIKOM Bali
[**] Computer Information System, Institut Teknologi dan Bisnis STIKOM Bali

Abstract- The platform for making Curriculum Vitae and job application letters is a medium for job applicants in making CVs and job application letters online. The problem that is often experienced by job applicants when preparing a CV or cover letter is making a design. It is hoped that job applicant researchers can be assisted in making ready-to-use CV files and job application letters quickly and without the need to have expertise in design. The website-based platform is designed using the Laravel framework. The final result of this research is that a website-based CV and job application letter creation platform was successfully created with the testing technique used, namely Blackbox Testing, which shows the results obtained by the system can run as expected. SUS (System Usability Scale) testing was also carried out, where the conclusions obtained, this platform has been made properly and received a grade "B". With this platform, it is hoped that it can help applicants to make CVs and job applications in a short time.

Index Terms- Curriculum Vitae, Job Application, Website, Laravel

I. INTRODUCTION

A. Background

Learning Indonesian language learning is an activity that is planned and purposed, as well as learning to make and write job application letters. To increase a person's knowledge in the activity of compiling a job application letter, continuous training is needed, meaning that a person is continuously trained to develop skills in the activity of writing a job application letter. This activity needs to be done considering the important role of letters in communication. In addition, language and literature teaching and learning activities will also be directed at writing letters. One's ability to write letters is one part of the success of learning Indonesian language and literature. therefore, the increased understanding of students in writing letters can reflect students' ability to communicate [1].

Making a Curriculum Vitae is an important thing in preparation for entering the world of work. Preparing a Curriculum Vitae for applying for work can be the first step to getting a new job [2]. CV (Curriculum Vitae) and job application letter are important files in applying for a job that serve to provide confidence to the company to be applied for that the job applicant has the skills needed to do the job. CV is used to describe information about my curriculum vitae which includes me, educational history, work experience, organizational experience, achievements, hobbies, and others. A job application letter is used to make an official submission of a job application to the company. Nowadays, CVs are no longer made up of sheets, because many HRD (Human Resources Development) companies currently provide conditions for CVs so that they can be made of no more than two sheets. This is done so that recruiters can easily read every detail listed on the CV [3].

Based on the results of interviews conducted by the author with prospective job applicants who are colleagues of the author and workers where the author works, there are common problems when making a CV, namely in terms of making a CV design which sometimes takes hours to make, and experiences confusion as to what will be described in the CV. Then after conducting interviews, the author makes observations in order to obtain factual data in the field, namely CV files and job application letters which will be collected so that they can be taken into consideration and benchmarks in making CV designs and job application letters as well as the forms required later to complete the file requirements. which will be provided in the development system later. This observation was carried out internally by collecting CV data and job application letters who had previously submitted job applications at AW Bali Digital located on Jl. Sulatri No. 168x, East Denpasar, Denpasar City, Bali.

The platform system research is designed to answer problems that occur with job applicants obtained from the results of the interviews above which can even be said to be common in society. This research aims to assist job applicants in making CVs and job application letters and is expected to increase revenue from the company where the author works. The system was developed using the Laravel framework which will then be deployed using a

VPS (Virtual Private Server) so that it can be accessed by many people.

Based on the description above, this research will build a platform system for creating website-based CVs and job applications so that they can be accessed on any device connected to the internet. The purpose of building this system is to assist job applicants in making CVs and job application letters which usually take hours to make, but with this system it is enough to be able to make these documents in approximately 10 minutes without the need for expertise in making designs and hopefully can increase revenue in the company internal. This system will be developed using the Laravel framework which is built using PHP which is one of the frameworks that is widely used by Web Developers because the MVC concept is easy to understand and supported by very complete documentation so that it can facilitate Web Developers in its development.

B.   Research Purpose

Based on the background of the problems encountered, the purpose of this research is to design and build a platform system for making CVs and job application letters using the Laravel Framework to assist job applicants in making CVs and job application letters that can be made online.

C.   Research Benefits

The benefits derived from the system research are:

1) Helping job applicants in making CVs and job application letters.
2) Provide education to job applicants for the correct format for making CVs and job application letters.
3) Saving time for job applicants in making CVs and job application letters.
4) Help introduce the platform to all Fresh Graduates and people.

II.   RESEARCH ELABORATION

In previous research, research related to the research to be carried out included research entitled "Designing a Web-Based Sales Information System (Case Study on Newbiestore)" by Dadan Zaliluddin, Rohmat in [4]. This research resulted in a Web-Based Sales Information System that was implemented at Newbiestore. The system is designed to provide convenience in the process of buying and selling transactions for customers and Newbiestores. Another research was conducted by Ade Suryadi, Diah Ayu Ambarsari, Hamdun Sulaiman, Riswandi Ishak, Cep Adi Wihardja in 2022. With research entitled "Design of a PDF Job Application Letter Information System Using the Prototype Approach". This research produced a PDF Job Application Letter Information System. The system is designed to make it easy for prospective workers who will apply for work to create files with the output in the form of a PDF [5].

III.   RESEARCH METHODOLOGY

The research method used for this research is as follows:

A.   Data Types and Sources

1) Primary data
The primary data in question is direct interviews conducted with several co-authors and workers where the author works.

2) Secondary Data
The secondary data in question are documents from the results of previous research which are used as comparisons and references by the author.

B.   Collection Data Method

1) Interview
The interview process is carried out by asking several questions that lead to any problems encountered when they make a CV and job application letter. From the results of these interviews, information was obtained about the needs that would be implemented on the platform system for making CVs and job application letters that would be developed.

2) Observation
This observation activity was carried out by collecting CV (Curriculum Vitae) data and job application letters from internal companies that had previously submitted job applications at AW Bali Digital, located on Jl. Sulatri No. 168x, Trainer, Kec. East Denpasar, Denpasar City, Bali. This observation was carried out to obtain factual data that occurred in the field so that it could be taken into consideration and benchmarks in order to get the right decision for the structure and format of the data needed in developing a platform system for making CVs and job application letters.

C.   System Requirements Analysis

At this system analysis stage an analysis of system requirements and problem solving is carried out which describes the component parts by studying how well the component parts work and interact to achieve the goals and objectives that have been set. The results of this system analysis will be a reference in designing the required system.

D.   System Planning

At this stage using Context Diagrams and Level DFD to design general systems, then ERD, Conceptual Database, and Table Structures to design databases, and design interface designs.

E.   System Implementation

The implementation phase of this system will begin by creating program code with a predetermined programming language and framework in accordance with the results of the analysis and system design that have been determined previously. The platform system will be built on a website basis using Visual Studio Code as a text editor, the programming language used is PHP with Laravel as the framework. The database used is MySQL and uses NGINX as a web server.

F.   System Testing

The test used with the Black Box Testing method which is the focus of the test is the output generated from each input that is processed. This test aims to ensure that the output produced is in accordance with what has been predetermined and to minimize errors that occur in the system being built.

G.   Maintenance

On this platform system, maintenance is carried out every month on a regular basis by running cron jobs to delete assets in the form

of user photos that are not registered in the database (user photos that just want to try - try uploading profile photos without completing the creation stage to completion), and performing database backup every once a month.

IV. RESULT AND ANALYSIS

A. Analysis Result

1) Functional Requirements

a. Admin Analysis

Can do login authentication, Can see statistics on the dashboard page, Can send emails such as newsletters to customers, Can view and make changes to order data, Can do CRUD CV list, Can CRUD list job applications, Can do CRUD CV inspiration list, Can do CRUD coupon list.

b. Customer Analysis

Able to authenticate (login, register, forget password, verification), Can view statistics on the dashboard page, Can create, modify, and download CVs, Can create, modify, and download job application letters, Can view order history and confirm payment for the manual payment method, can make changes to user profile data.

2) Non-Functional Requirements

a. Servers

The server used is a VPS (Virtual Private Server) from the DigitalOcean Cloud Service with the specifications used are Image: Ubuntu 20.04 (LTS) x64, Size: 2 vCPUs, 2GB / 60GB Disk, Region: New York City 1

b. Vendors

Google Oauth as a bridge for users who want to register on the platform by logging in using a Google account, LaravelDOMPDF to provide support for converting data from HTML to PDF, Midtrans as a bridge for automatic payments with various supported banking and e-wallet payment methods.

c. Performance

Assist in making CVs and job application letters, providing options for inspirational words in the CV making section, providing various attractive and professional CV designs and job application letters, automatic payment systems with various payment methods that can speed up the transaction process, converting CV data and job application letter into a ready-to-use PDF file.

d. User

Admin and Customer

e. Appearance

Simple elegant design that aims to attract the interest of potential customers, the design of each information section is made as good as possible so that it can be understood by users and good best practice

B. General System and Database Design Results
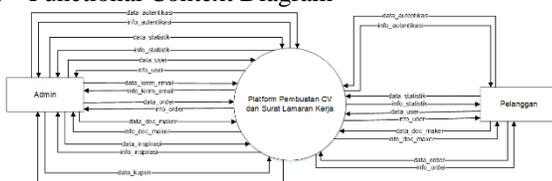
1) Functional Context Diagram
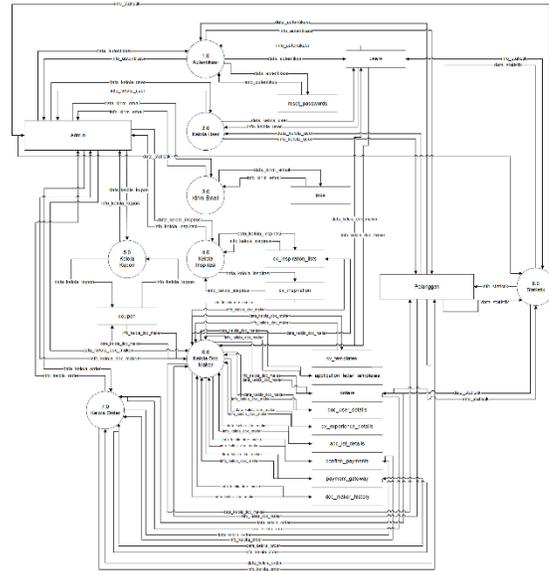

Figure 1. Context Diagram

2) DFD Level 0

Figure 2. DFD Level 0

3) ERD

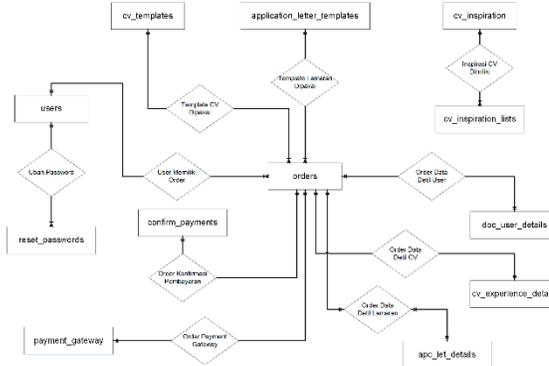
Figure 3. Entity Relationship Diagram
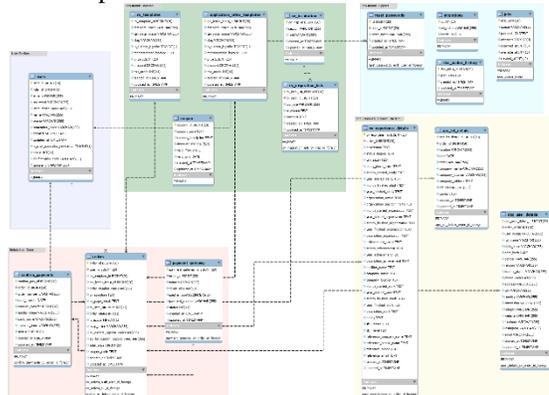
4) Conceptual Database

Figure 4. Conceptual Database

C.   Implementation Result

1)   Homepage

Is the initial page that will be displayed to users when accessing the website address. On this page visitors will be able to see information about the website, features, examples of CV templates or job application letters, and also supported payment methods. The following is the implementation of the interface design of the homepage in Figure 5 below.

Figure 5. Homepage Implementation

2)   Select to Bulid Page

Is a page that functions to provide choices to customers for options to choose between making a CV or a job application letter before entering the creation page. The following is the implementation of the interface design from the manufacture options page in Figure 6.

Figure 6. Select to Build Page

3)   Login Page

Is a page that functions for customers to start creating sessions to get access to the dashboard page. The following is the implementation of the interface design of the login page in Figure 7.
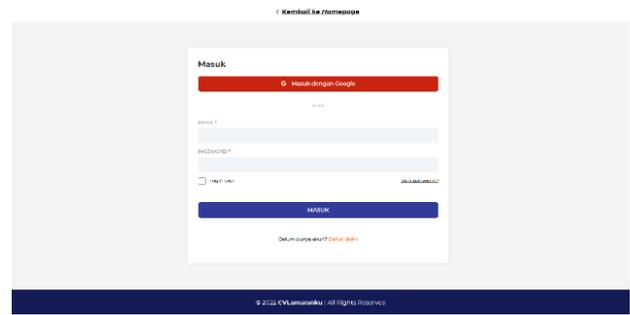
Figure 7. Login Page

4)   Registration Page

This is a page that functions for customers who want to register an account on the platform to be able to log in afterwards. The following is the implementation of the interface design of the login page in Figure 8.
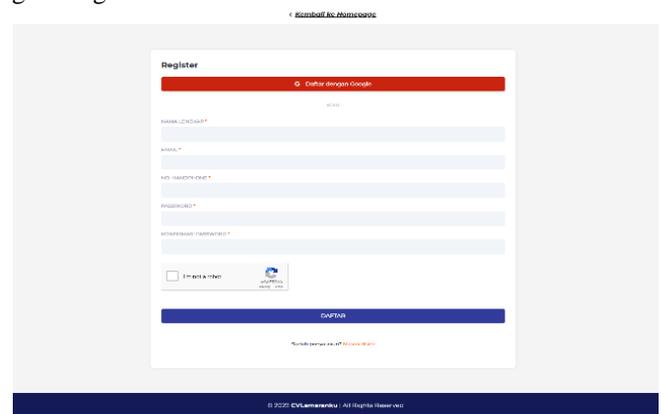
Figure 8. Registration Page

5)   Dashboard Page

Is the initial page when the customer has logged in, where on this page the customer will display some statistical data. The following is the implementation of the interface design from the dashboard home page in Figure 9.

Figure 9. Dashboard Page

6)   Write and Edit Page

This is a page for customers to make or modify a CV or job application letter which has several stages of making and changing it.
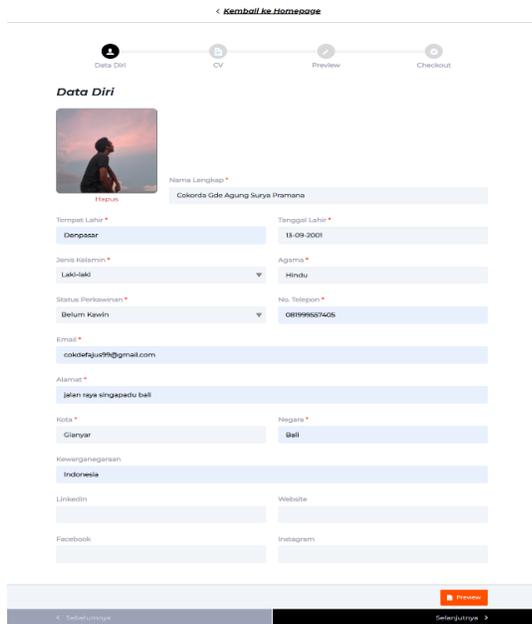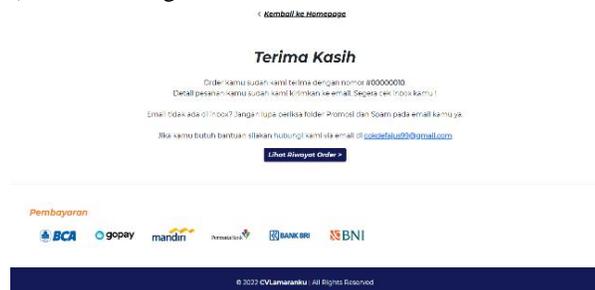
Figure 10. Write and Edit Page

7) Thanks Page

Figure 11. Thanks Page

D. System Testing Result

The first test was carried out using the Black Box Testing method. Black Box Testing or also known as Behavioral Testing is a test carried out to observe the input and output results of the software without knowing the code structure of the software. This test is carried out at the end of making the software to find out whether the software can function properly. To carry out testing, the tester does not have to have the ability to write program code. This test can be done by anyone [6].

In this study, several system testing scenarios were carried out including testing on the Frontend section consisting of the Dashboard section, Making CV, CV editing process, Job Application Letter Making Process, Job Application Letter Changing Process. The Admin section includes the Login process, User Registration Process, Email Form Process, Order List Process, Change Order Process, Payment Confirmation Process, Payment Gateway Process, CV Registration Process, CV Add Form Process, CV Change Form Process, Application Letter List Process Work, process the Add Job Application Letter Form, Change the Job Application Letter Form Process, process the CV Inspiration List, process the CV Inspiration Add List Add Form, process the CV Inspiration List Change Form. The total questions

in this test scenario are 94 questions and the results are as expected.

Tests to measure user satisfaction on the platform use the SUS (System Usability Scale) method, Usability is "The extent to which a product can be used by certain users to achieve the specified goals with effectiveness, efficiency and satisfaction in the context of certain uses" [7]. One method or tool for measuring usability is the System Usability Scale (SUS), which is a fairly reliable and frequently used method and its use is quite easy because the questions tested and the procedures for its use are available. SUS rating scale from 1 - 5 (from strongly disagree to strongly agree). The calculation procedure in SUS is as follows:

1) For every odd question (1,3,5,7,9), the respondent's answer is reduced by one.
2) For every even question (2,4,6,8,10), five is reduced by the respondent's answer.
3) From process number 1 and 2, it will produce a scale of strongly disagree to strongly agree 0 – 4.
4) Add up all the answers from respondents who have done processes 1 and 2, multiply by 2.5 and divide by the number of respondents. This will return a value from 0 – 100.
5) The resulting SUS score is divided into five grades, namely A (90 - 100), B (80 - 90), C (70 - 80), D (60 - 70), and F (score < 60).

The following are 10 questions that were distributed to fill out the questionnaire:

1) I find it helpful in using this platform.
2) I see the features in this platform bother me.
3) I don't feel confused in navigation on this platform.
4) This system is quite difficult to use, so I need a tutorial to use it.
5) In my opinion, this CV / job application letter creation system is quite complex in terms of features and usability.
6) I found several features that were lacking or not as they should be.
7) I can quickly make a CV / job application letter using this platform.
8) I feel confused in registering and logging in.
9) I will suggest using this platform to my friends who want to apply for work.
10) I don't like the look of this platform.

Testing the validity of a questionnaire must be carried out to test whether or not the questionnaire is valid and whether the questionnaire can be forwarded or reused in research. The conclusion of the validity questionnaire test that has been carried out on 30 respondents with the results of the accumulation of all questions 1 (0.73922 = High), Second Question (0.5899 = Moderate), Third Question (0.782 = High), Fourth question (0.6978 = High), and the fifth question (0.65 = High) which means this questionnaire can be used repeatedly because the validity test of the questionnaire has a high average.

The following are the results of the SUS (System Usability Scale) test:

No	Responden	Usia	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
1	1	21	5	4	2	2	5	2	3	3	5	1
2	2	21	5	1	5	1	4	2	5	1	4	2
3	3	21	5	2	4	2	5	1	5	1	5	2
4	4	20	3	4	3	2	4	3	5	2	3	2
5	5	21	5	1	5	2	5	2	2	4	4	1
6	6	20	4	2	2	2	2	2	4	3	3	2
7	7	26	5	2	4	1	5	2	5	1	4	2
8	8	25	5	2	3	3	5	1	5	1	5	3
9	9	21	5	1	5	1	5	1	5	1	5	1
10	10	22	5	3	4	3	4	1	4	1	4	1
11	11	25	5	2	4	1	5	2	5	2	5	2
12	12	21	5	3	4	1	4	2	5	1	5	2
13	13	20	5	1	5	1	5	1	5	1	5	1
14	14	21	5	2	5	1	4	1	5	2	5	1
15	15	23	5	2	3	1	4	2	5	1	5	2
16	16	27	4	2	1	3	5	2	5	2	5	1
17	17	22	5	2	5	1	5	1	5	1	5	1
18	18	19	5	1	5	1	2	1	5	1	5	1
19	19	20	5	1	5	4	5	1	4	2	4	2
20	20	24	5	4	2	1	2	1	5	1	5	1
21	21	22	5	2	4	4	5	1	5	3	4	1
22	22	19	5	1	4	1	5	1	5	1	5	1
23	23	19	5	2	5	1	5	1	4	2	3	1
24	24	25	4	3	4	2	5	1	5	4	2	1
25	25	20	5	1	5	1	5	1	5	1	5	1
26	26	22	4	4	3	4	3	4	2	5	2	5
27	27	28	5	3	3	1	5	1	5	1	5	3
28	28	25	5	1	5	1	5	1	5	1	5	1
29	29	24	5	2	4	2	4	2	5	4	2	3
30	30	18	5	1	5	1	5	1	5	1	5	1
31	31	21	5	1	5	1	5	1	5	1	5	1

Figure 12. Respondents Response

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Jumlah	Nilai (Jumlah x 2.5)
4	1	1	3	4	3	2	2	4	4	28	70
4	4	4	4	3	3	4	4	3	3	36	90
4	3	3	3	4	4	4	4	4	3	36	90
2	1	2	3	3	2	4	3	2	3	25	63
4	4	4	3	4	3	1	1	3	4	31	78
3	3	1	3	1	3	2	2	3	3	24	60
4	3	3	4	4	3	4	4	3	3	35	88
4	3	2	2	4	4	4	4	4	2	33	83
4	4	4	4	4	4	4	4	4	4	40	100
4	2	3	2	3	4	3	4	3	4	32	80
4	3	3	4	4	3	4	3	4	3	35	88
4	2	3	4	3	4	4	4	3	3	34	85
4	4	4	4	4	4	4	4	4	4	40	100
4	3	4	4	3	4	4	3	4	4	37	93
4	3	2	4	3	4	4	3	3	3	33	83
3	3	0	2	4	3	4	3	4	4	30	75
4	3	4	4	4	4	4	4	4	4	39	98
4	4	4	1	4	4	4	4	4	4	37	93
4	4	4	1	4	4	3	3	3	3	33	83
4	1	1	4	1	4	4	4	4	4	31	78
4	3	3	1	4	2	4	3	3	4	31	78
4	4	3	4	4	4	4	4	4	4	39	98
4	3	4	2	4	4	3	3	2	4	33	83
3	2	3	3	4	4	1	1	4	4	29	73
4	4	4	4	4	4	4	4	4	4	40	100
3	2	3	2	3	3	4	3	4	4	31	78
4	2	2	4	4	4	4	4	4	2	34	85
4	4	4	4	4	4	4	4	4	4	40	100
4	3	3	3	3	3	4	1	1	2	27	68
4	4	4	4	4	4	4	4	4	4	40	100
4	4	4	4	4	4	4	4	4	4	40	100
Skor Rata-rata (Hasil Akhir)											**85**

Figure 13. The result added up and Multiplied by 2.5

The conclusion of the SUS test that has been carried out on 31 respondents with an overall accumulated result of 85 points, which means this system has a grade "B", it can be concluded that the Development Of Website-Based Curriculum Vitae And Job Application Letter Using The Laravel Framework that have been made properly according to the needs and desires of the user.

V. CONCLUSION

The Development Of Website-Based Curriculum Vitae And Job Application Letter Using The Laravel Framework have been successfully produced. With this platform, it can help the community, especially prospective job applicants, in making CVs and job application letters. This system is designed using DFD (Data Flow Diagram), and database design using ERD (Entity Relationship Diagram), Conceptual Database and also table structure. This platform has features that can help customers in making CVs such as an inspiration button that can help customers who are confused in making a background on their CV and a description of their work. System testing has been carried out using Blackbox Testing and ensuring the system runs as expected. The conclusion of the SUS (System Usability Scale) test that has been carried out on 31 respondents with an overall accumulated result of 85 Points, which means this system has a grade of "B", it can be concluded that the CV (Curriculum Vitae) Making Platform and Job Application Letters have been made properly according to the needs and desires of users.

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AUTHORS

First Author – I Ketut Dedy Suryawan, Computer Science, dedymeng@stikom-bali.ac.id
Second Author – Dw Ayu Agung Indra Swari, Computer Information System, indraswari@stikom-bali.ac.id
Third Author – Gede Herdian Setiawan, Computer Science, herdian@stikom-bali.ac.id
Fourth Author – Cokorda Gde Agung Surya Pramana, Computer Information System, cokdefajus99@gmail.com

Correspondence Author – Dw Ayu Agung Indra Swari,
dewaayuagung97@gmail.com , indraswari@stikom-bali.ac.id ,
+62 87783872027.