Designing a Web-Based Career System Using the Laravel Framework using the waterfall method

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ABSTRACT

Rapid advancements in data and communication technology are evident, especially when it comes to data's crucia role in modern life. The internet serves as the primary medium for data transmission, facilitating easy access to information like job vacancies through specialized websites. Without data, securing desirable opportunities, such as employment, would prove exceedingly challenging. As professions significantly impact individuals' lives, obtaining relevant professional data can be arduous for some, while simultaneously, industries may struggle to swiftly find suitable employees possessing the required skills. To address this issue, a web-based job vacancy application called a web search program was developed using the waterfall method, utilizing PHP programming language and MySQI database. This application aims to simplify the process of job seekers finding relevant job vacancy data while assisting industries in promptly identifying skilled candidates who match their requirements.

Keywords: PHP, MySQL, Laravel, Information System, job vacancy

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1. INTRODUCTION

In the present era, there is still a significant number of individuals without a profession due to the difficulty in accessing information about job vacancies. Traditionally, job seekers resort to manual methods, such as visiting industries to check for vacancy notices, searching through print media like newspapers, magazines, and circulars, or relying on word of mouth. Similarly, candidates seeking event information also use manual approaches, like visiting places to check notice boards displaying event opportunities or filling out paper forms found in papers, magazines, brochures, or relying on information shared by others through conversations. These manual methods have their drawbacks, as they involve significant paper usage, and the information may get lost, damaged, or diluted when shared with others.

To address these problems, various solutions exist, and one of the most promising ones is leveraging internet technology. The internet offers quick and precise data delivery. Utilizing the web, several websites already display job vacancies, but few of them cater to both job seekers and companies seeking to recruit employees. To bridge this gap, a "Web-Based Activity Search Data System" was developed[1], aiming to provide a solution to the aforementioned issues.

Recognizing that professional vacancy data requires frequent updates, researchers conceptualized a job search data system integrated with maps to display the locations of industries offering job vacancies, along with their profiles. These professional vacancies would be visible on maps or charts, enhancing the job-seeking experience by making job vacancy information readily available and simultaneously showcasing companies that have listed job openings.



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2. RESEARCH METHOD

In the preparation of Web Platform Activity Search Applications Using Laravel, use the waterfall system development form [2]. There are several levels of research used in the Development of Applications Search for Web Platform Activities Using Laravel. The research level can be observed in Figure 1.



Figure 1. Research stage

The description of the stages of the research is as shown in Figure 1 as follows: The initial step is the introduction of the problem. In this step, an in-depth analysis of the level of the system to be made and what kind of system will work behind it will be attempted, so that you can understand well the process that takes place. After that, carry out an introduction to the system that you want to use, from the results of the introduction of the system that will be made in the form of a web using the Laravel framework as the basis for the system, besides using the Laravel framework because it already has a mail gateway feature[3].

In the System step and the website concept, a concept or form arrangement for the activity search application will be attempted and a method arrangement will be carried out that is intertwined in the application in the form of Use Case Charts and Activity Charts from the activity search system[4]. In the Application and Part Testing steps, you will try to create a website in the form of coding or create a program for the system from the application search program and use the existing concept or form from the previous step[5]. In this coding method, try using the Visual Studio Code compiler, the result of this coding step will be in the form of a web search program[6].

In the Integration and System Testing steps, web testing will be carried out, web testing will be attempted to find out if the website is in accordance with the concept and all functions are running well[7].

The last step is Activity and Maintenance, in this step there will be several things that can be done so that the program that has been made can be used properly, in particular by writing all the information about the program, following the program that has been made and accumulating results in the program that already contains the type of information [8]. Use Case Chart is a description of the capacity of the activity framework in accordance with the perspective of the consumer's activity framework. Using a CaseDiagram works by using an atmosphere, which is a description of the stage setting that describes how the customer carries out the activity framework or vice versa[9]. Use Case The chart made is shown in Figure 2.



Figure 2. Company and Employee Use Case Diagrams

The use case chart on the left shown in Figure 2 has 2 actors, namely the industry and candidates who carry out activities on the Activity Search website. In this use case it describes industrial activities that want to recruit an employee, the gist of the use case above is that the industry must have an account first to be able to use the job search website after that it is required to load industry information so that it can appear on the activity tracking page and the industry has a feature for recruiting employees with an estimated CV or resume from the profile of the tracker of recruitment activities to be sent via email[10].

The use case chart on the right that is rejected in Figure 2 is a use case for employees who want to submit applications to industry. In the use case there are 2 film stars, namely employees and companies, here the way it works is almost the same as the use case for the industry chart in Figure 2, the first time you have an account and load your personal information after that upload your CV or Resume. sent via e-mail [11].

Activity Chart describes a niche activity by means of stages for stages in a system[12]. There are 2 Activity Charts that are made to show how the recruitment process and the applications that occur in the system. The Industry Activity Chart is shown in Figure 3 on the left and the Employee or Candidate Activity Chart is shown in Figure 3 on the right[13].



Figure 3. Company and Employee / Candidate Activity Diagrams

In figure 3 to the left of the Activity Chart from the web[14], look for activities that prove the activity involved in the industry's recruitment process for candidates via the web. Initially, the company must have an account to be able to log in, if you don't have an account, you must register first[15]. After logging in, the industry must contain industry information to define the industry and which aspects are still in need of employees, instead of waiting to receive an application from a candidate, the company can recruit employees if the candidate's personal information and skills match what the industry requires. After that, to send recruitment, candidates who wish to receive recruitment records must first have a CV or resume, if a candidate does not have a CV or resume then the job search website will automatically make the candidate unable to receive recruitment records from the industry.

However, if you already have a CV or industry resume, you can send recruitment records, the recruitment records will be sent by the Kejra search web to the relevant candidate's email[16].

In figure 3 to the right of the Activity Chart from the web search for activities that prove the activity that is intertwined with how to apply to the industry via the web search for activities. Initially, a candidate must log in to the website looking for activities, to log in requires an account and if you don't have an account, you must register first. After that, after logging in, the candidate must load personal information and upload a CV or resume, both of which must be carried out in order to be able to apply to an industry. After that the candidate can choose the desired industry and submit an application by pressing the existing propose button, after that the candidate can write an application message and send it.

3. RESULTS AND DISCUSSION

This section describes the results of the preparation of the system and the application of the program. System preparation using Use Case Chart and Chart activity. The result of coding should be in the form of a web page interface that uses the laravel framework. The result of the coding that has been tried is to take the form of web search activities, in this web is used the Laravel framework. The use of the Laravel framework is because in the Laravel framework there is already a mail gateway system so there is no need to add third-party applications anymore. The laravel framework is also used as a form of web page, its use is there.

Important pages are pages that are very early visible and accessed by users or consumers in the websitesystem of activity search data. In important pages there are menus such as the Home menu, activity vacancies, Registration, and Loginwhich appear as such in Figure 4.



Figure 1. Main Page

The form of the vacancy page that has been inputted in the data system and some menus that can be selected to search for existing vacancy data as shown in Figure 5.

One million suc	ccess j	job stories. Start yours today.
Enter Skills or job title		
Save Job Alert		Showing Jobs : 1 - 16 Total 19
Upload Your Resume		Present Marketing Manager Required \$
Jobs By Title		Full Time/Permanent - Tonga
IOS Developer	1	Lorem ipsum dolor sit amet, consectetur adipiscing elit. Sed pretium nunc non justo placerat pulvinar. Vestibulum ac ullamcorper sapien, nec scelerisq
Electrical Engineer	1	
Laravel Developer	1	SEO Expert Multimedia Desian
Jobs By Country		Full Time/Permanent - Casas Adobes
United States of America	18	Lorem ipsum dolor sit amet, consectetur adipiscing elit. Sed pretium nunc non justo placerat pulvinar. Vestibulum ac ullamcorper sapien, nec
		sceiensq

Figure 2. Job Vacancy Information Page

The registration page where on this page there are 2 options is whether the user records as an industry or can also be said to be a facilitator of activity vacancies and the user records as an activity tracker where the activity tracker can log into the activity search data system and so it is with the industry. The shape is the kind shown in figure 6.

▲ Not secure folprojob.com/register	ෙල් 🛪 🔚 🕻
Candidate Employer	
First Name	
Middle Name	
Last Name	
Email	
Password	
Password Confirmation	
Subscribe to Newsletter	
I accept Terms of Use	
ERROR untuk pemilik situs: Domain tidak valid untuk kunci situs	

Figure 3. Registration page

The login page is a page used by activity trackers and industries to enter the system with different access rights. By entering the correct username and password, the login form can be observed in Figure 7 below.

Jobs Portal		Home	Jobs Cor	npanles About	Js Blog	Contact us	Sign in	Register	10
W ONLINE JOBS FINDER									
Candidate	Employer								
Login wit	h Social		-	<i>.</i>	-	0.			
G Or login with yo	Dur account					1			
Email Address					-				
Password									
Forgot Your Password? Click here			1						
LOGI	N		1		11				
💄 New User? R	egister Here								

Figure 4. Login page

Industry Profile Page In the industry profile page there are several implications of information are industry nicknames, descriptions of industries, uploading industry profile pictures, determining the city or district where the industry is located.



Activity vacancies in the industry, in this activity vacancy page there is one bonus button of the kind that appears in Figure 9.

About Company Lorem ipsum dolor sit amet, consectetur adipiscing elit. Proin fermentum condimentum mauris, non posuere urna consectetur quis. Suspendisse semper eu eros eget convalils. Etam mattis blandit nulla, non venenatis risus varius vel. Mordi fringilla dignissim elit id blandit. Pellentesque vel luctus felis. Yestibulum eros nibh, consequat ut felis in, vehicula lobortis quam. Duis diam mauris, convaliis in risus in, gravida hendreri lacus. Donce euismod accumsan sem et alquam. Duis a veli (eget urna mattis ultricies. Aliquam nibh ipsuru, alquet nec sollicitudin non, fermentum nec diam. Vestibulum ac urna vehicula, dapibus dui quis, alquet neque. Sed ac tristique purus. Vestibulum tempor, erat eu porta tempor, erat ipsum cursus dui, eu tempus mauris leo id mi. Sed ultrices sollicitudin vehicula. Proin in ullantcorper massa.	Is Email Verified No Total Employees 301-600 Established in 2002 Current jobs 2
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Figure 6. Job page on the company

4. CONCLUSION

The conclusion of the preparation of the application is to find web platform activities using the Laravel framework as well as by waterfall. By using this application there are many uses that are owned, such as easier to obtain data about industries that are opening vacancies, distributing waivers for applicants for activities without being obliged to bring a lot of archives and requirements in the form of hardcopy, professional applicants can directly apply to the desired industry without being obliged to set an agenda with industry officials, applicants can also get direct recruitment from the industry if the industry is hooked, then from the security field the sending record has been completed with encryption. for further research to conduct comparative studies with similar existing applications to determine the advantages and disadvantages of existing applications. From this comparative study, new innovations can be found that can be applied to the applications being developed

REFERENCES

- [1] S. Supiyandi, C. Rizal, M. Zen, and M. Eka, "PENGEMBANGAN SISTEM INFORMASI DESA UNTUK E-GOVERNMENT DESA TOMUAN HOLBUNG KECAMATAN BANDAR PASIR MANDOGE KABUPATEN ASAHAN," JURNAL PENGABDIAN AL-IKHLAS UNIVERSITAS ISLAM KALIMANTAN MUHAMMAD ARSYAD AL BANJARY, vol. 8, no. 2, 2022.
- [2] N. Zahira, A. Z. Azran, N. Wahid, and S. Arshad, "Design and Development of a Web-Based System using Laravel Framework: A Competition Management System," *Applied Information Technology And Computer Science*, vol. 3, no. 2, pp. 514–532, 2022, doi: 10.30880/aitcs.2022.03.02.033.
- [3] Maryanah Safitri, Faridi, K. Maulidia, and L. Indriyani, "Penerapan Model Prototype pada Sistem Informasi Penerimaan Karyawan Lingkungan Hidup Berbasis Web," SATIN - Sains dan Teknologi Informasi, vol. 6, no. 1, pp. 1–9, Jun. 2020, doi: 10.33372/stn.v6i1.574.
- [4] R. Saini and G. Mussbacher, "Towards Conflict-Free Collaborative Modelling using VS Code Extensions," in 2021 ACM/IEEE International Conference on Model Driven Engineering Languages and Systems Companion (MODELS-C), IEEE, Oct. 2021, pp. 35–44. doi: 10.1109/MODELS-C53483.2021.00013.
- [5] A. Herdiansah, R. I. Borman, and S. Maylinda, "Sistem Informasi Monitoring dan Reporting Quality Control Proses Laminating Berbasis Web Framework Laravel," *Jurnal Tekno Kompak*, vol. 15, no. 2, p. 13, Aug. 2021, doi: 10.33365/jtk.v15i2.1091.
- [6] T. Bin Tahir, Muh. Rais, and Moch. Apriyadi HS, "Aplikasi Point OF Sales Menggunakan Framework Laravel," *JIKO (Jurnal Informatika dan Komputer)*, vol. 2, no. 2, pp. 55–59, Oct. 2019, doi: 10.33387/jiko.v2i2.1313.
- [7] Y. Kurnia and G. Aditya, "Online Learning Service Application Design Using Flutter and Laravel Framework," *bit-Tech*, vol. 4, no. 3, pp. 109–115, Jun. 2022, doi: 10.32877/bt.v4i3.423.

- [8] M. Antunes, M. Maximiano, and R. Gomes, "A Customizable Web Platform to Manage Standards Compliance of Information Security and Cybersecurity Auditing," *Procedia Comput Sci*, vol. 196, pp. 36– 43, 2022, doi: 10.1016/j.procs.2021.11.070.
- [9] A. S. Perdana and E. Mailoa, "Perancangan Website Penjualan Cupang Menggunakan Laravel(Studi Kasus Salatiga Betta Genetic)," *JATISI (Jurnal Teknik Informatika dan Sistem Informasi)*, vol. 9, no. 2, pp. 1343– 1354, Jun. 2022, doi: 10.35957/jatisi.v9i2.2095.
- [10] Y. Yusran, L. S. Lesmana, F. Putra, and E. Yandani, "Rancang Bangun Sistem Informasi Lowongan Kerja Berbasis WEB," Jurnal Ilmiah Teknologi Informasi Asia, vol. 14, no. 2, p. 119, Feb. 2021, doi: 10.32815/jitika.v14i2.454.
- [11] M. I. Alhari, M. Lubis, and F. Budiman, "Information System Management of Palm Agriculture using Laravel Framework," in 2022 International Conference on Informatics, Multimedia, Cyber and Information System (ICIMCIS), IEEE, Nov. 2022, pp. 478–483. doi: 10.1109/ICIMCIS56303.2022.10017918.
- [12] Baenil Huda and Saepul Apriyanto, "APLIKASI SISTEM INFORMASI LOWONGAN PEKERJAAN BERBASIS ANDROID DAN WEB MONITORING (Penelitian dilakukan di Kab. Karawang)," BUANA ILMU, vol. 4, no. 1, pp. 11–24, Nov. 2019, doi: 10.36805/bi.v4i1.808.
- [13] P. I. Dharma and S. Sumarno, "Website-Based Sales Reporting Information System with the Laravel Framework (Case Study of Pramana Agency)," *Proceedia of Engineering and Life Science*, vol. 2, no. 2, Sep. 2022, doi: 10.21070/pels.v2i2.1278.
- [14] S. Supiyandi, C. Rizal, M. Zen, and M. Eka, "PELATIHAN PERANGKAT DESA DALAM PENERAPAN METODE WATERFALL PADA SISTEM INFORMASI DESA," JMM (Jurnal Masyarakat Mandiri), vol. 6, no. 3, pp. 2346–2356, 2022.
- [15] E. Arrieta Rodriguez et al., "A Platform for Inpatient Safety Management Based on IoT Technology," Inventions, vol. 7, no. 4, p. 116, Dec. 2022, doi: 10.3390/inventions7040116.
- [16] Q. Hu, "Optimization of Online Course Platform for Piano Preschool Education Based on Internet Cloud Computing System," *Comput Intell Neurosci*, vol. 2022, pp. 1–10, Jun. 2022, doi: 10.1155/2022/6525866.