

Job Training Information System at the Sidoarjo Regency Manpower Office

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Abstract. The use of information technology at the Sidoarjo Regency Manpower Office has had a positive impact on job training services. Computerized systems are currently the most important part of advances in information technology. Therefore, the author wishes to develop a computer system that can facilitate the work of the Sidoarjo Regency Manpower Office in meeting the needs of the Manpower Office and the community regarding the job training system in the city of Sidoarjo. The objective of this job training information system is to eliminate the need for people to come to the Manpower Office to manually register for training in the Sidoarjo area. The techniques used in this application are the waterfall method and the CodeIgniter framework.

Keywords: CodeIgniter, Information System, Job Training

1 Introduction

Technological developments greatly assist the government in carrying out its duties[1] . Currently, an information system for workforce training is greatly needed by the Sidoarjo Regency Manpower Office and the general public.

Vocational training is an area of competence undertaken by the Sidoarjo Regency government in developing the existing skills of the community[2]. This vocational training can provide significant benefits to the community and the government[3] of Sidoarjo Regency.

The creation of this job training application is a form of[4] completion for the Sidoarjo Regency Manpower Office to make it easier for the community to register for job training so that they have competent job training certification[5].

Individuals who are currently unemployed can register for the job training programs offered by the Labor Department. There are numerous training programs available for the public to participate in, such as pastry training, air conditioning service training, heavy machinery operation training for the industry, and many others.[6]

Based on the researcher's observations, it appears that until now, registration for job training has been done offline at[7] . People must come to the Sidoarjo Regency Manpower Office[8] . Therefore, the researcher's goal is to create a job training information system website that makes it easier for people to register online and update available training courses.[9]

In realizing a prosperous society, the Sidoarjo Regency Government, through the Manpower Office, has implemented various programs in its policy to build community welfare, one of which is by creating a job training program[10] so that people who do not yet have or want to obtain a skill certification can use it in the industrial world to start a business or apply for a job for those who do not yet have a job.

Given the existing challenges regarding the availability of internet and Wi-Fi in the Sidoarjo Regency Government's Department of Labor, the research to be conducted will be titled "Vocational Training Information System."

2 Method

Waterfall is a method that enables a systematic sequential approach to serve as the foundation for developing technology. Below is an illustration of software development using the waterfall method.

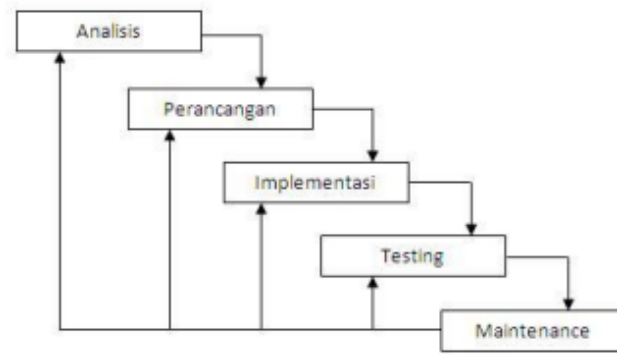


Figure 1. Waterfall Method

Based on the above explanation, there are several steps required to develop the system, including:[5]

- a. Analysis.
- b. Planning
- c. Implementation
- d. Testing
- e. Maintenance

2.1 System Design

The system uses UML diagrams, namely flowcharts diagrams, use case diagrams, and sequence diagrams.

2.1.1 Flowchart

A flowchart is a graphical representation of system resources. Flowcharts can address problems into simpler fragments and help analyze different options in activities.[12]

2.1.1.1 User Flowchart

The user flowchart begins with logging into the login menu, then entering a username or email and password. If you do not have an email address, please register first. The username or email will be verified; if correct, the user can access the menu according to their access rights. If the information entered is incorrect, repeat the process of entering the username/email and password until it is correct, then go to the main page to access the menu options. After that, select the barista training and sewing , then send the training data, then select, announce pass/fail, then verify acceptance/rejection, then announce the training date and implementation of the training. The following is an image of the flowchart.

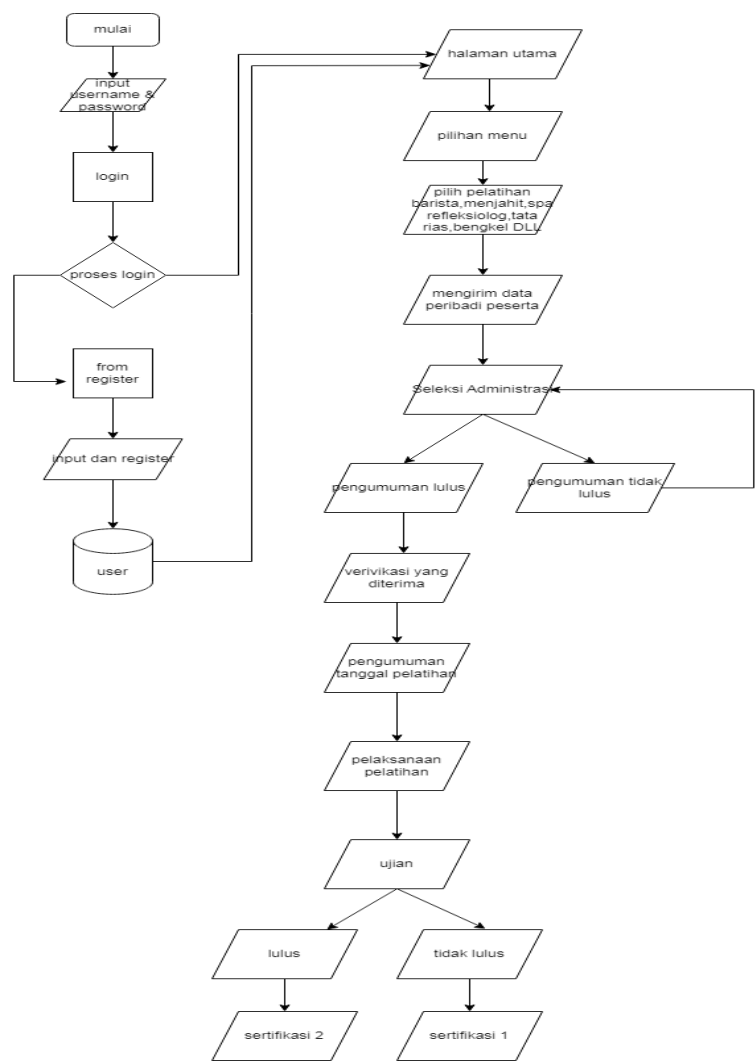


Figure 2. User Flowchart

2.1.2 Use Case Diagram

A use case is a type of diagram that shows the elements of a framework. In a use case diagram, the emphasis is on "what" the system does, not "how." The interaction between the actor and the system is represented by the use case. The image shows that *the user* can view the home page or dashboard, pass or fail announcements, selection, training list, training date announcements, and implementation.

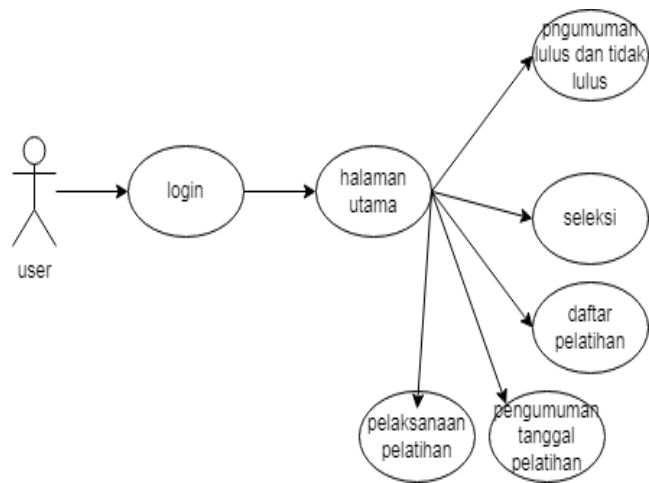


Figure 3. User Use Case

2.1.3 Sequence Diagram

In a web-based job training information system, it is explained that the sequence diagram for the admin will start when the login page appears. The admin needs to enter their username and password, then press the login button. The login page will check the username and password entered. If the username or password is incorrect, the system will display a message to try again. However, if both are correct, the admin will be directed to the admin page display. In the activity page menu, the admin can view the job training registrations from users. Additionally, the admin can also log out of the admin page through the logout menu. The sequence diagram design for the admin is shown in Figure 4 below.

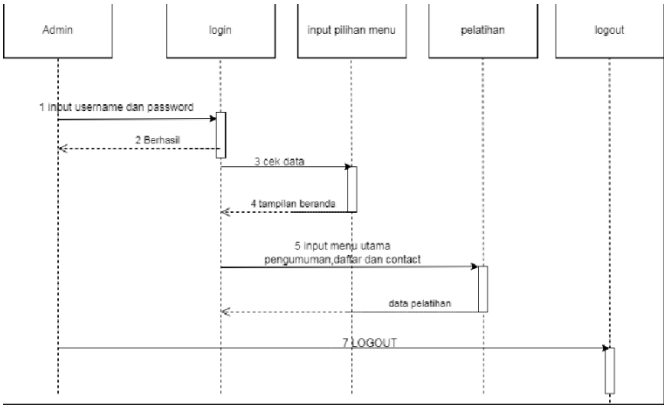


Figure 4. Admin Sequence Diagram

3 Results and Discussion

3.1 User

A. User Initial Display

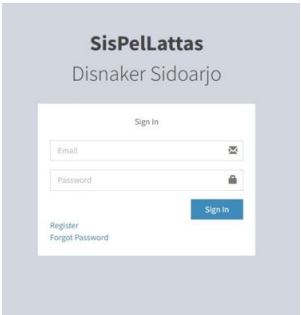


Figure 5. Initial Page of the Job Training Website

- User home screen when logging in.
- B. Registration Page

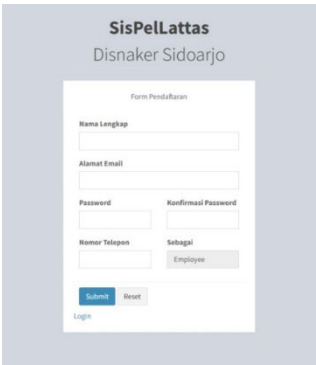


Figure 6. Registration

Before entering the training website, users must first register an account by filling in their full name, email address, password, and phone number.

C. Sign-in Page Display

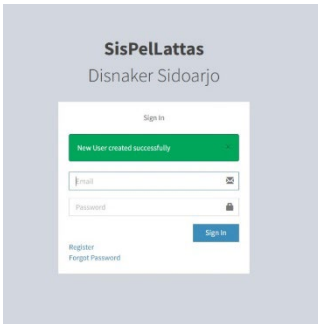


Figure 7. User Sign-In Page

Once the user has successfully created an account, they will be directed to the login page where they can enter their email address and password they have created.

D. User Dashboard Display

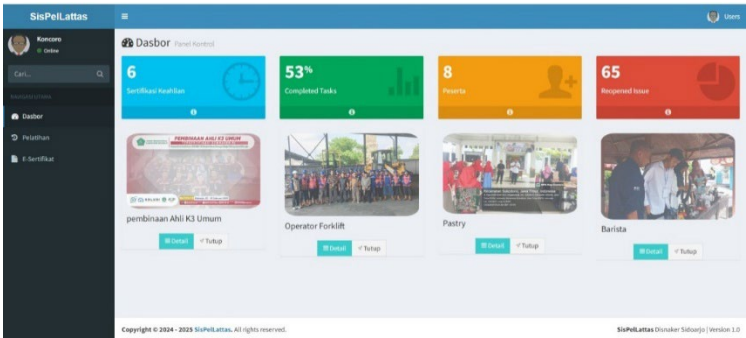


Figure 8. Shows the User Dashboard

Upon successful login, the page will immediately redirect to the user dashboard. Users can select the training menu, and e-certificates.

E. Training Details Page



Figure 9. User Training Details Page

The user training details display shows the training description, location, training conditions, and the training registration schedule.

F. Registration Form Page

Figure 10. Participant Registration Form Page

Users fill in their personal data on the registration form created by the admin so that the admin can know the personal data of the training participants.

G. Question Page

Figure 11. Question Page

On the question page, users answer multiple-choice questions to determine whether they pass or fail based on the criteria for passing passed, they will continue to the training.

H. Test Results Page

Figure 12. Test Score Results Page

The test score results page shows the user's score after completing the multiple-choice questions with a passing score of 50 or above. below 50, they fail the test. If they score 50 or above, they can participate in job training.

I. Download E-Certificate Page.



Figure 13. Download e-certificate after completing job training

The e-certificate download page is the final page for users who have completed the job training.

3.2 Admin

3.2.1 Admin Dashboard Page

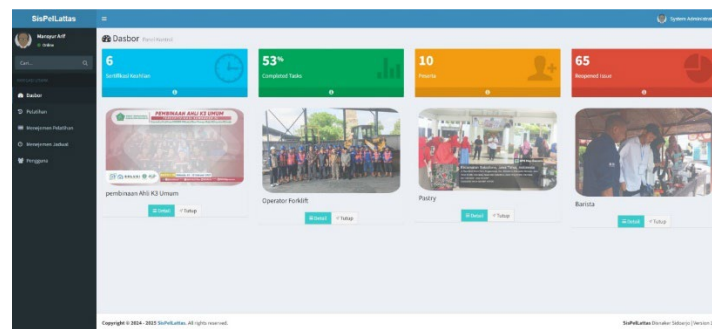


Figure 14. Admin Dashboard Page

The initial view of the Admin dashboard after successfully logging in with the password created by the website administrator.

3.2.2 Admin Training Page

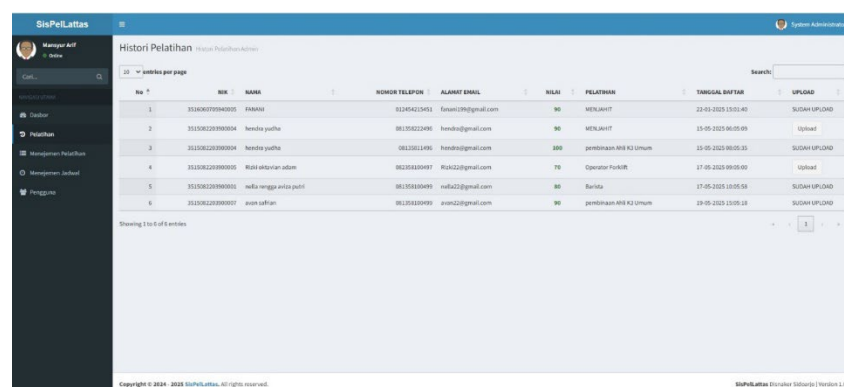


Figure 15. Admin Training Menu Page

The Admin Training Page includes user training history, accounts created by training participants/users, and the E-certificate upload page.

3.2.3 Training Management Page

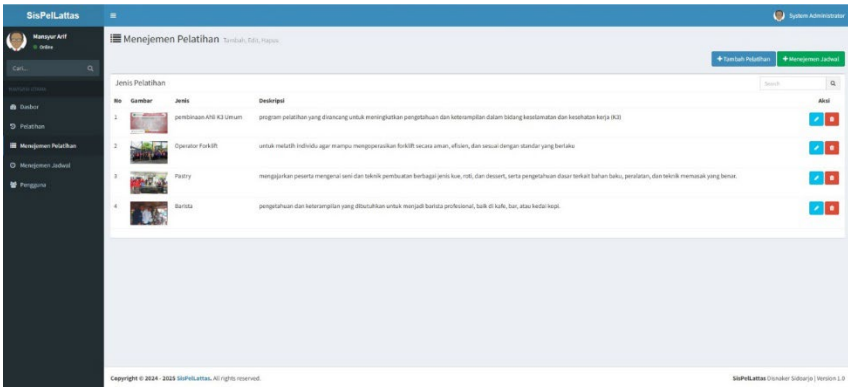


Figure 16. Training Management Page

The training management page includes images, training types, training descriptions, and training management editing.

3.2.4 Add Training Schedule

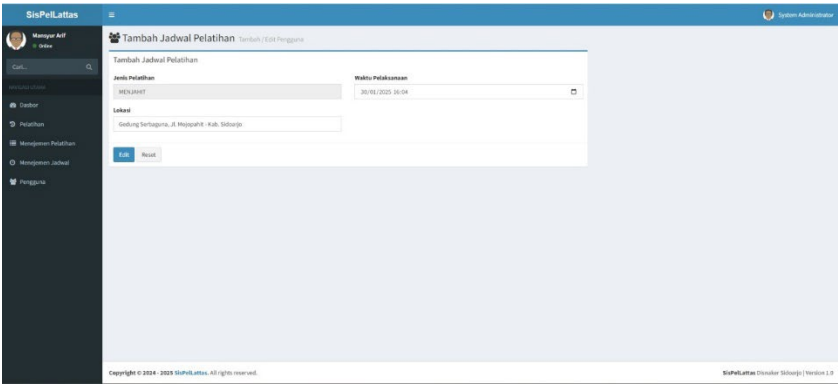


Figure 17. Training Schedule Settings Page

Display of the settings page for adding schedules by the administrator

3.2.5 Schedule Management Page

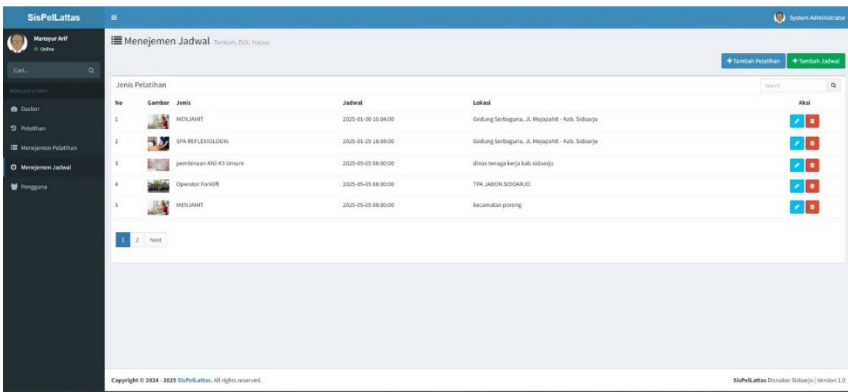


Figure 18. Training Management Page

Administrator's schedule management page display Training type image, training schedule, training location, and add training location schedule

3.2.6 Training Schedule Edit Page Display

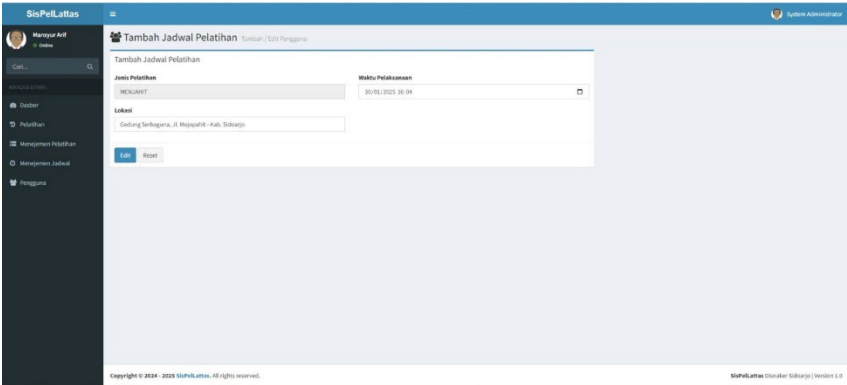


Figure 19. Training Schedule Edit Page

Administrator settings for training schedule, training location, and training time.

3.2.7 User Page Display

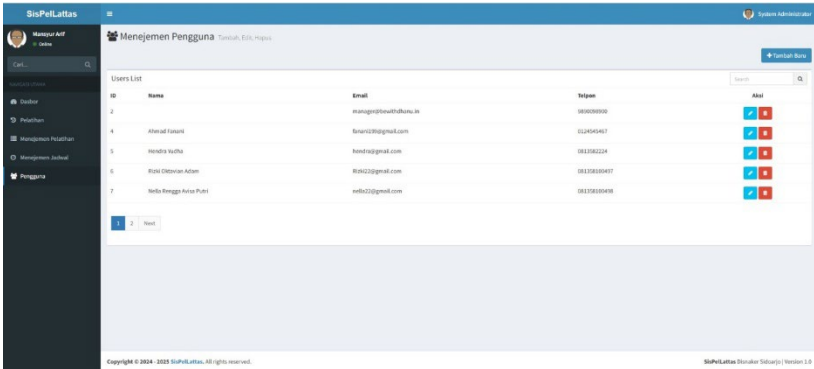


Figure 20. User Page

The user page display includes the user's name, email, and phone number. The user page also functions as an account addition page for users or admins.

3.2.8 Add User Page

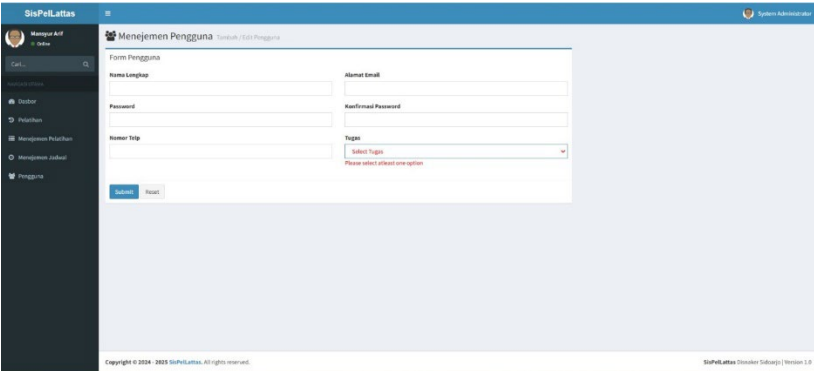


Figure 21. User Add Page for Users or Admins

User Add Page Display for admin or user.

4 Conclusion

The final conclusion that can be drawn from this observation is that the application of the job training information system at the Sidoarjo District Manpower Office allows people who want to participate in job training to register online without having to go to the Manpower Office. This system makes it easier for people in Sidoarjo who are unemployed to participate in job training so that they can obtain skill certification to register for jobs according to the skills they have acquired.

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References

- [1] U. Nurhasan, B. Fajrin, D. F. Abdillah, and F. V. Y. Ughay, "Implementation of the MVC Method for the Development of a Job Training Information System: A Case Study of the Singosari Job Training Technical Implementation Unit," *J. Eksplora Inform.*, vol. 10, no. 1, pp. 20–31, 2020, doi: 10.30864/eksplora.v10i1.250.
- [2] A. Nurkholis, E. R. Susanto, and S. Wijaya, "Application of Extreme Programming in the Development of Public Service Management Information Systems," *J-SAKTI (Journal of Science ...)*, vol. 5, pp. 124–134, 2021, [Online]. Available: <http://www.tunasbangsa.ac.id/ejurnal/index.php/jsakti/article/view/304%0Ahttp://www.tunasbangsa.ac.id/ejurnal/index.php/jsakti/article/viewFile/304/282>
- [3] T. Arianti, A. Fa'izi, S. Adam, and ..., "Designing a Library Information System Using UML (Unified Modeling Language) Diagrams," *J. Ilm. Komput. ...*, vol. 1, no. 1, pp. 19–25, 2022, [Online]. Available: <http://journal.polita.ac.id/index.php/politati/article/view/110>
- [4] W. Darmalaksana, "Qualitative Research Methods: Literature Review and Field Study," *Pre-print Digit. Libr. UIN Sunan Gunung Djati Bandung*, pp. 1–6, 2020.
- [5] Y. Irawan, "Testing the Work Training Management Information System of the Kudus Regency BLK UPT using the Whitebox Testing Method," *Engineering and Education Research Center*, vol. 9, no. 3, pp. 59–63, 2017.
- [6] S. C. Wijaya, A. A. Mahendra, T. N. Hamdan, H. Ramdan, and R. Aditya, "Development of a Public Service Information System for Local Governments," vol. 3, no. 1, pp. 40–51, 2024.
- [7] L. P. Dewi, U. Indahyanti, J. T. Informatika, F. T. Industri, and U. K. Petra, "BUSINESS PROCESS MODELING USING UML ACTIVITY DIAGRAM AND BPMN (CASE STUDY: FRS ONLINE)."
- [8] B. Fachri and R. W. Surbakti, "System Design and Digital Invitation Design Using the Website-Based Waterfall Method (Case Study: Asco Jaya)," *J. Sci. Soc. Res.*, vol. 4, no. 3, p. 263, 2021, doi: 10.54314/jssr.v4i3.692.
- [9] M. Pelayanan, P. Di Smk, A. Mayasari, Y. Supriani, and O. Arifudin, "Implementation of Information Technology-Based Academic Management Information Systems in Improving," *JiIP-Journal of Educational Sciences*, vol. 4, no. 5, p. 340, 2021, [Online]. Available: <http://jiip.stkipyapisdompu.ac.id>
- [10] A. A. Fajriansyah, N. L. Azizah, and A. Eviyanti, "City park monitoring information system at the Sidoarjo district environmental and sanitation agency," *J. TEKINKOM*, vol. 6, no. 2, p. 318, 2023, doi: 10.37600/tekinkom.v6i2.909.