1. **BUKTI SUBMIT JURNAL Riset Informatika**

Submission Library   View Metadata

Submissions

Extreme Programming Method for Integrated Service System Website Development in Rejosari Village
Eka Supriyati, Muhamad Azrino Gustalika

| Submission | Review | Copyediting | Production |

Submission Files   🔍 Search

▶ 📄 2458-1   muhammadazrino, Jurnal Riset Informatika Eka Supriyati.docx   Article Text

2. **BUKTI PROSES REVIEW**

[jri] Editor Decision

4 pesan

Dr. Foni Agus Setiawan, M.Kom <ejournal@kresnamediapublisher.com>   5 Mei 2023 pukul 14.28
Kepada: Eka Supriyati <azrino@ittelkom-pwt.ac.id>

Eka Supriyati, Muhamad Azrino Gustalika:

We have reached a decision regarding your submission to Jurnal Riset Informatika, "EXTREME PROGRAMMING METHOD IN INTEGRATED SERVICE SYSTEM WEBSITE DEVELOPMENT IN REJOSARI VILLAGE".

Our decision is: Revisions Required
Please log in using your account to check your revision. Revision of your manuscript, we provide for 1 week.
http://ejournal.kresnamediapublisher.com/index.php/jri/login

Note:
Use the file we sent for revision, don't use other files. We will not process your correction if you use another file.

Dr. Foni Agus Setiawan, M.Kom
Kresnamedia Publisher
ejournal@kresnamediapublisher.com

Reviewer A:
Recommendation: Revisions Required

Does the title of the article match the provisions in the template?

    Article Title in accordance with template terms

Abstract whether it is in accordance with the provisions (Background of the problem; Methods used; Research Objectives & Research Results)

    For abstracts it is better to present research results, and the impact of research results for the progress of the field of informatics science.

Materials and methods contain research design, data sources, data collection techniques, and data analysis that were actually carried out by researchers

    1. Explain the research flow based on the extreme programming stages in a more technically conical manner in this study, because it seems that the research flow is still theoretical.
    2. Data Collection, this section should be included in the methods section.

Does the Results and Discussion section show results that support the applied methodology and conclusions?

    - The results section has not shown the sequence of the methodology
    - It is better to add a more in-depth discussion of the findings in this study.
    - SYSTEM TESTING : Please fix it according to the template
    - Are the findings better than previous studies that are relevant to this research. Indicate the location of the novelty of this research.

Does the conclusion answer the research question, future research and contribute to the issues raised in the article?

The conclusion should contain a statement that answers the research problem formulation. And should include suggestions for further research.

This article is well structured and in accordance with the "Templates or Writing Guidelines"

Poor

The type of paper used is A4, the minimum number of pages is 6 and the maximum is 10

Good

Presentation of Articles, Formulas, Figures and Tables according to Templates or Writing Instructions

Poor

References used reflect the actuality of the article & References cited as per APA Style 6th edition. Using the Mendeley application for Citations and Libraries.

Good

This article is written in good English, relevant and interesting

Very Poor

Reviewer B:
Recommendation: Revisions Required

Does the title of the article match the provisions in the template?

YA

Abstract whether it is in accordance with the provisions (Background of the problem; Methods used; Research Objectives & Research Results)

Ya

Materials and methods contain research design, data sources, data collection techniques, and data analysis that were actually carried out by researchers

Ya

Does the Results and Discussion section show results that support the applied methodology and conclusions?

check the data calculation from respondents

Does the conclusion answer the research question, future research and contribute to the issues raised in the article?

Ya

This article is well structured and in accordance with the "Templates or Writing Guidelines"

Good

The type of paper used is A4, the minimum number of pages is 6 and the maximum is 10

Good

Presentation of Articles, Formulas, Figures and Tables according to Templates or Writing Instructions

Good

References used reflect the actuality of the article & References cited as per APA Style 6th edition. Using the Mendeley application for Citations and Libraries.

Good

This article is written in good English, relevant and interesting

Good

_____

Dr. Foni Agus Setiawan, M.Kom

Universitas Ibn Khaldun Bogor, Indonesia
email: ejournal@kresnamediapublisher.com
cc: jurnal.jri@gmail.com

2 lampiran

A-Artikel 6 - 10 April 2023.docx
883K

B-Review - Website.docx
884K

3. LoA / BUKTI DI TERIMA

Institut Teknologi Telkom Purwokerto

[jri] Editor Decision
4 pesan

Dr. Foni Agus Setiawan, M.Kom <ejournal@kresnamediapublisher.com>   30 Mei 2023 pukul 16.10
Kepada: Eka Supriyati <azrino@ittelkom-pwt.ac.id>

Dear Author
Eka Supriyati, Muhamad Azrino Gustalika:

We have reached a decision regarding your submission to Jurnal Riset Informatika, "EXTREME PROGRAMMING METHOD IN INTEGRATED SERVICE SYSTEM WEBSITE DEVELOPMENT IN REJOSARI VILLAGE".

Our decision is to: **Accept the Submission**

This journal charges the following author fees.

Article Processing Charge: 0 (IDR)
Review Fast-Track: 0.00 (IDR)
Article Publication: **500,527.00 (IDR)**

Transfer payment to BCA
No. Account: 3011112461 a / n Frieyadie

Payment term 3 days from notification
 If you have already transferred, please email **jurnal.jri@gmail.com** and attach your proof of transfer

Thank you,
Dr. Foni Agus Setiawan, M.Kom
Kresnamedia Publisher
ejournal@kresnamediapublisher.com

_____

Dr. Foni Agus Setiawan, M.Kom

Universitas Ibn Khaldun Bogor, Indonesia
email: ejournal@kresnamediapublisher.com
cc: jurnal.jri@gmail.com

2 lampiran

A-Artikel 6 - 10 April 2023.docx
883K

B-Review - Website.docx
884K

Redaksi Jurnal Kresnamedia Publisher <ejournal@kresnamediapublisher.com>   30 Mei 2023 pukul 16.11
Kepada: azrino@ittelkom-pwt.ac.id, 19102002@ittelkom-pwt.ac.id

Dear Author
Eka Supriyati, Muhamad Azrino Gustalika:

We have reached a decision regarding your submission to Jurnal Riset Informatika, "EXTREME PROGRAMMING METHOD IN INTEGRATED SERVICE SYSTEM WEBSITE DEVELOPMENT IN REJOSARI VILLAGE".

Our decision is to: Accept the Submission

This journal charges the following author fees.

Article Processing Charge: 0 (IDR)
Review Fast-Track: 0.00 (IDR)
Article Publication: 500,527.00 (IDR)

Transfer payment to BCA
No. Account: 3011112461 a / n Frieyadie

Payment term 3 days from notification
 If you have already transferred, please email jurnal.jri@gmail.com and attach your proof of transfer

Thank you,
Dr. Foni Agus Setiawan, M.Kom
Kresnamedia Publisher
ejournal@kresnamediapublisher.com

--
Redaksi Jurnal Kresnamedia Publisher
email: ejournal@kresnamediapublisher.com
Mobile: +62 878-8980-9891 (WA Only)

Redaksi Jurnal Kresnamedia Publisher <ejournal@kresnamediapublisher.com>   30 Mei 2023 pukul 16.12
Kepada: azrino@ittelkom-pwt.ac.id, 19102002@ittelkom-pwt.ac.id

[Kutipan teks disembunyikan]

EXTREME PROGRAMMING METHOD FOR INTEGRATED SERVICE SYSTEM WEBSITE DEVELOPMENT IN REJOSARI VILLAGE

Eka Supriyati[-1], Muhamad Azrino Gustalika[-2*)]

Teknik Informatika[-1,-2]
Institut Teknologi Telkom Purwokerto
Purwokerto, Indonesia
19102002@ittelkom-pwt.ac.id[-1], *azrino@ittelkom-pwt.ac.id[-2]

*) Corresponding Author

Abstrak

The Rejosari Village Hall provides a manual letter submission service which is sometimes problematic, including when residents are about to submit an application letter, they have to come directly to the village hall office while the residents are still out of town. Apart from that, there was no media information which resulted when they were going to submit the requirements for the letters they brought were not in accordance, then from the data collection, and the letters were still in the books. Therefore we need a service system for the submission of letters. This integrated service system for residents of Rejosari Village is a web-based information system, the use of technology in the form of a website makes it easier to receive all forms of existing information. The Extreme Programming (XP) method is applied in developing this system, a software engineering process that refers to an object-oriented approach. The stages of this method start from the planning, design, coding and testing stages using black box testing with descriptive analysis techniques, which produce tests in the form of a proportion value of 96.42% and have a possible interpretation. In addition, this system can impact progress in the field of informatics in the form of information media as well as learning materials.

Keywords: Extreme Programming (XP); Information System; Integrated Services

Abstract

Balai Desa Rejosari menyediakan pelayanan pengaujuan surat masih bersifat manual yang terkadang bermasalah, diantaranya pada saat penduduk akan mengajukan surat permohonan harus langsung datang ke kantor balai desa dan sementara penduduk tersebut masih diluar kota. Selaian itu tidak adanya media informasi yang diberikan akibatnya ketika akan mengajukan surat persyaratan yang dibawa belum sesuai, kemudian dari pendataan suratnya masih dalam pembukuan. Oleh karena itu diperlukan suatu sistem pelayanan untuk pengajuan surat. Sistem pelayanan terpadu bagi warga Desa Rejosari ini merupakan sistem informasi berbasis web, pemanfaatan teknologi berupa website memudahkan dalam menerima segala bentuk informasi yang ada. Dalam proses pengembangan sistem ini diterapkan metode Extreme Programming (XP) yang merupakan proses rekayasa perangkat lunak yang mengacu pada pendekatan berorientasi objek. Tahapan metode ini dimulai dari tahap perencanaan, perancangan, pengkodean dan pengujian menggunakan pengujian blackbox dengan teknik analisis deskriptif yang menghasilkan pengujian berupa nilai persentase sebesar 96,42% dan memiliki interpretasi yang sangat layak. Selain itu sistem ini dapat memberikan dampak kemajuan dalam bidang ilmu informatika berupa media informasi sekaligus sebagai bahan pembelajaran.

Kata kunci: Extreme Programming (XP); Sistem Informasi; Pelayanan Terintegrasi

INTRODUCTION

In the era of revolution 4.0, digital technology is growing, for example, in information systems. According to the Ministry of Communication and Information of the Republic of Indonesia, developing information systems can provide many advantages in various fields. One of them is in the field of public services. Public service is an action that is needed by the community in all administration by public service providers (Bazarah & Pujiastuti, 2022). One type of public service is administrative service. The administration itself is a series of recording information in the form of information that is useful in action and facilitates a relationship (Wiryananta, K., Safitri, R., & Prasetyo, 2020). One of the forms of implementing administrative services is integrated

system services in the village. Based on Law Number 6 of 2014 concerning villages (Bender, 2016) states that the village government must carry out its duties properly to serve all the administrative needs of the village community.

Rejosari Village is in Bojong District, Pekalongan Regency, Central Java Province. Based on the Central Bureau of Statistics for Pekalongan Regency, the village has a population of around 1,972. The administrative service for application letters is still manual at the village hall, which must come to the village hall office with only one person in charge. Therefore, sometimes people experience problems. Based on the results of observations and interviews that have been conducted, some obstacles are often experienced, including when residents are still out of town and temporarily really need an application letter at an urgent time, so they cannot come directly to the village hall office. In addition, there are no information media provided. As a result, when residents are going to submit an application letter, the requirements needed are not suitable, so residents must complete the requirements first. It is less effective. Then for the data collection process, the application letter is still in the form of books which must be calculated first if you report the total in one year. Thus the need for a service system submission of application letters. The application letter submission service system will be designed as a website to solve existing problems. Technology can be accessed via a website on a browser via an internet connection to obtain all available information.

This research also applies the Extreme Programming (XP) method. The Extreme Programming (XP) method is an object-oriented approach in software engineering. In addition, this method is more efficient, adaptive and flexible in the system development process (Widiastuti & Cakranegara, 2022). That way, in making this system, there is involvement from the village as admin and residents as users. So that this system becomes adaptive to all changes that exist, and it is hoped that this research will make it easier for Rejosari Village Hall officers and residents of Rejosari Village to carry out service processes and administrative submissions in the form of application letters with more significant test results than previous studies from research conducted by Julisatya et al. regarding the development of a public service system with a test result of 88% and Noer Azni Septiani et al. regarding the creation of a village information system that applies the extreme programming (XP) method.

RESEARCH METHODS

Extreme Programming (XP) Method (Shrivastava et al., 2021) is one of the software engineering processes that refers to an object-oriented approach. In addition, this method is more efficient, adaptive and flexible in the system development process, and the core values of extreme programming include communication, courage, simplicity, feedback and hard work. Stages In Extreme Programming (Supriyatna & Puspitasari, 2021):
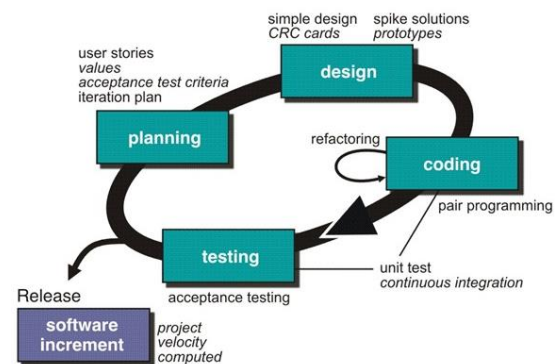

Figure 1. Extreme Programming

Planning

The initial stage of this method is planning. Several planning activities were carried out during this phase, including: Identifying problems, analyzing needs, and determining implementation schedules during system development (Hartawan et al., 2021). The results of this stage are based on data collection by conducting interviews and observations.

Design

Design is a system architectural modelling process in the form of creating wireframes or mockups with Figma tools while also designing databases using draw.io (Lamada et al., 2022)

Coding

Coding is a stage in implementing the design process using a programming language (Sudarsono, 2020). This stage uses visual studio code and xampp tools, which use a bootstrap framework while using PHP and JavaScript.

Testing

System testing is the final stage in this method, where the results of the implementation will be tested to determine the feasibility of the system being built or whether it is to the client's needs (Wanti et al., 2021), And at this final stage, it

uses the black box testing method which focuses on system functionality.

Data Collection

At the data collection stage (DEWI, 2022) observation process is carried out (Ahmadi et al., 2021) by monitoring directly the process of submitting a letter at the Rejosari Village Hall by aiming to know the conditions of the existing problems to provide appropriate solutions. In addition, it also conducts an interview process with related parties in the system creation process, which aims to obtain information regarding the process of submitting an application letter at the Rejosari Village Hall.

Blackbox Testing

The black box testing method (Supriyono, 2020) requires the lower and upper limits to be tested with the number of entry data fields or based on its functionality (Mahendra & Asmarajaya, 2022). The method of testing black box testing is inputting data on a form so that the output results are by the inputs (Purnama et al., 2022).

Descriptive Analysis Techniques

Descriptive analysis functions to produce percentage values from test respondents (Rombey et al., 2019) and is usually used in testing the functionality of a system with the formalities of the calculation as follows(Sopian, 2018) :

$$\frac{Observed\ Score}{Expected\ Score} \times 100\ \% \dots\dots\dots\dots\dots(1)$$

Table 1. Eligibility Percentage

Presents	Eligibility Level
81% - 100%	Very Worth it
61% - 80%	Worthy
41% - 60%	Enough
21% - 40%	Not feasible
≤ 20%	Very Unworthy

Based on the table above, there are four categories of system testing feasibility from the results of descriptive analysis calculations.

RESULTS AND DISCUSSION

The results of this study can be seen from the data collection stage to the system website testing stage according to the flowchart in Figure 2. At the data collection stage, based on the results of observations, interviews, and literature study then, proceed with the system development stage, which starts with planning in the form of identifying problems and analyzing needs, so that it can be continued with the design stage in the form of system modelling, system UI and database, from the design stage directly implemented into the coding stage as well as system testing.
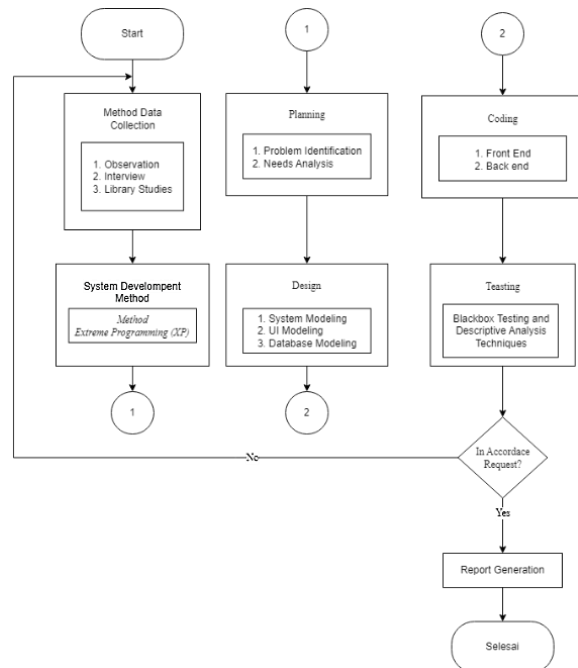

Figure 2. Research Flowchart

System Development

In developing the system using the Extreme Programming (XP) stage, which produces the following system implementation design:

Admin Implementation Results (Village Officials)

Dashboard Page, figure 3, is the admin dashboard page menu which contains information on total incoming and outgoing data based on user submissions. In addition, there is also a letter format that can be downloaded.
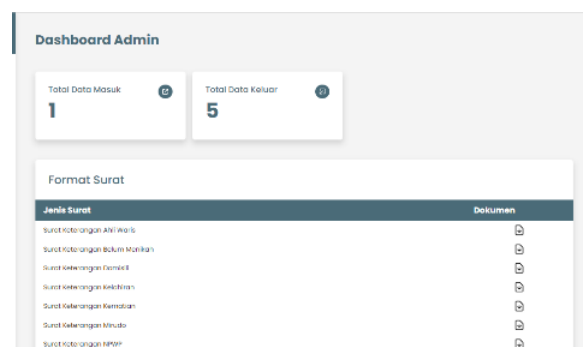

Figure 3. Dashboard Page

JURNAL RISET INFORMATIKA
Vol. 5, No. 3 June 2023

Entry Page, data Then Figure 4 is the admin login data page menu which contains information from the user who submitted. Besides that, the admin can also use the data search feature. And the admin can find out whether the user's submission has been processed.
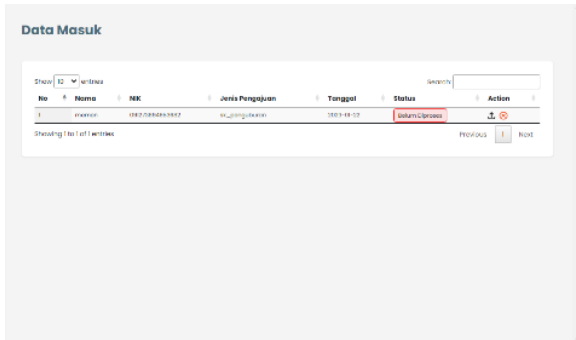

Figure 4. Entry Page Data

Data Page Out, in Figure 5, is the data page menu. On this page, submit an application that the admin has processed. Besides that, the admin can also use the data search feature.
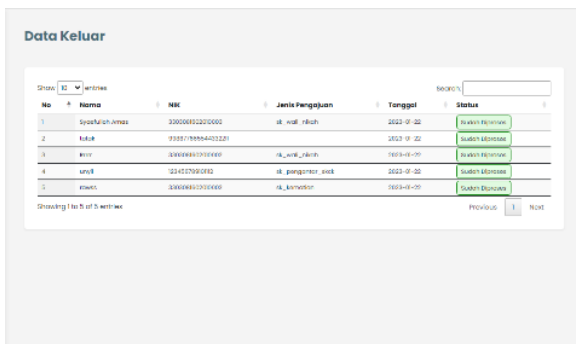

Figure 5. Data Page Out

User Implementation Page (Resident)

The list Page in Figure 6 is a list page menu. On this page, the user inputs the appropriate personal data so they can register and input their ID card and family card in JPG, JPGE and PNG formats with a maximum size of 2MB.
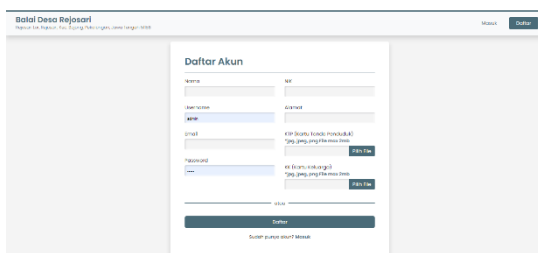

Figure 6. List Page

Dashboard Page, Figure 7, is the user dashboard page menu. This page displays information about the types of requirements and how to use the system.

Figure 7. Dashboard Page

Page, Figure 8, is the Form page menu. On this page, a user submitting a certificate must input data along with the required pdf document of less than two mb.
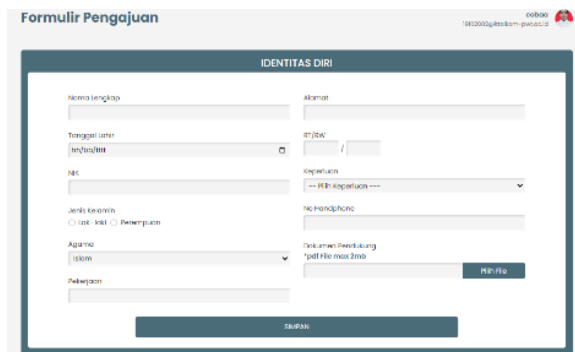

Figure 8. From Page

History Page, then in Figure 9 is the submission history page menu. This page displays information regarding submission information that has been carried out, whether the admin has processed it or not.
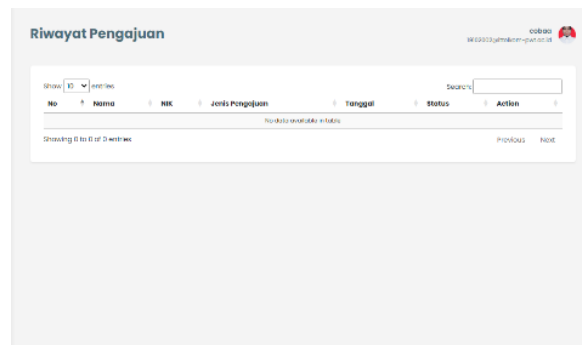

Figure 9. History Page

Requirements Page, next in Fig 10, is the submission requirements page menu. This page displays information on various types of requirements that need to be prepared by the user for each type of submission made.
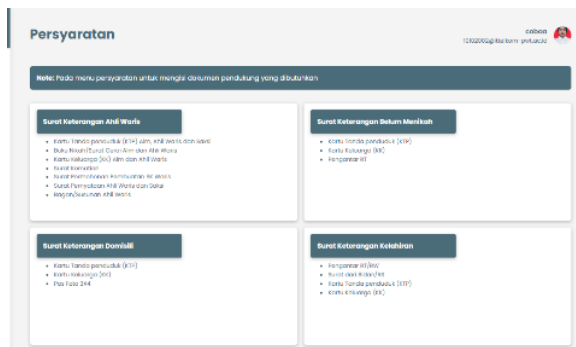
Figure 3. Requirements Page

System Testing Techniques

Figure 11 is the final stage of making the system using the Extreme Programming method, which is the testing stage of the entire system's appearance. At this stage, black box testing is used to determine whether the system can be used in the calculations using descriptive analysis techniques. And 17 testers tested this system with details of 6 testers from institutions by lecturers five testers from the expert field of the system in the form of a website with 58 scenarios consisting of 42 scenarios for user pages then 14 scenarios for admin pages. For three village device testers, it consisted of 17 scenarios from the admin page and three testers from villages in the youth, adult and elderly categories consisting of 45 user page scenarios and 14 scenarios from the admin page.

Figure 4. System Testing

The following is the result of black box theatre testing using descriptive analysis technique calculations:

$$Yes = \frac{783}{812} \; x \; 100 \; \% = 96{,}42\%$$

$$No = \frac{29}{812} \; x \; 100 \; \% = 3{,}57\%$$

The calculation results above can be interpreted when converted to the feasibility percentage table in the black box testing test with a value of 96.42%.

CONCLUSIONS

Based on the results of implementing the method and creating an integrated server system website. It can be concluded as follows: This study applies the extreme programming (XP) method to produce an integrated service system website that can provide information about the requirements for submitting letters and making letters so that they can carry out data collection and archiving. And testing this website system uses black box testing, which is taken into account in descriptive analysis techniques with a result of 96.42% and has a possible interpretation. Based on the system website design method and the test results, various suggestions can be obtained so that it can be developed in further research, including creating a system website that is expected to provide additional features in the form of coded signatures, complaint services and additional notifications that go directly to WhatsApp, then test the black box testing website. This system is expected to reach 100% and can add more types of testing to make it more complex, such as white box testing to analyze bugs based on the program's components and usability testing that can give a responsive impression to users.

REFERENCES

Ahmadi, A., Darni, & Yulianto, B. (2021). International Journal of Multicultural and Multireligious Understanding The Techniques of Qualitative Data Collection in Mapping Indonesian Litterateurs in East Java : An Initial Design. *International Journal of Multicultural and Multireligious Understanding*, *8*(8), 19–29.

Bazarah, J., & Pujiastuti, N. (2022). Concept of Public Service in Indonesia (Literacy Analysis of Public Service Implementation in Indonesia). *Budapest International Research and Critics Institute-Journal*, *5*, 6256–6262. https://doi.org/https://doi.org/10.33258/birci.v5i1.4345

Bender, D. (2016). Optimization of variable structure Modelica models using custom annotations. *ACM International Conference Proceeding Series*, *18-April-2*(1), 45–54. https://doi.org/10.1145/2904081.2904088

DEWI, I. G. A. A. O. (2022). Understanding Data Collection Methods in Qualitative Research: The Perspective Of Interpretive Accounting Research. *Journal of Tourism Economics and Policy*, *1*(1), 23–34.

https://doi.org/10.38142/jtep.v1i1.105

Hartawan, P. N., Sudarma, M., & Widyantara. (2021). Extreme Programming for Developing Additional Employee Income System(Case Study: Karangasem Regency Government). *International Journal of Engineering and Emerging Technology*, *6*(2), 117–121. https://ojs.unud.ac.id/index.php/ijeet/article/view/IJEET.2021.v06.i01.p21/39900

Lamada, M., Bakry, A., & Ifani, A. Z. (2022). Development of Web-Based Project Tender Documents Application Using Extreme Programming Methods. *Electronics, Informatics, and Vocational Education*, *7*(November), 101–111. https://doi.org/https://doi.org/10.21831/elinvo.v7i2.49863 Development

Mahendra, G. S., & Asmarajaya, I. K. A. (2022). Evaluation Using Black Box Testing and System Usability Scale in the Kidung Sekar Madya Application. *Sinkron*, *7*(4), 2292–2302. https://doi.org/10.33395/sinkron.v7i4.11755

Purnama, E. D., Putra, F. A., Bangsa, U. B., & Serang-banten, K. (2022). Design and Implementation of Web-Based Registration System in Klinik Medika Antapani Bandung Using. *Jurnal Simasi*, *2*(1), 1–12.

Rombey, T., Allers, K., Mathes, T., Hoffmann, F., & Pieper, D. (2019). A descriptive analysis of the characteristics and the peer review process of systematic review protocols published in an open peer-review journal from 2012 to 2017. *BMC Medical Research Methodology*, *19*(1), 1–9. https://doi.org/10.1186/s12874-019-0698-8

Shrivastava, A., Jaggi, I., Katoch, N., Gupta, D., & Gupta, S. (2021). A Systematic Review on Extreme Programming. *Journal of Physics: Conference Series*, *1969*(1). https://doi.org/10.1088/1742-6596/1969/1/012046

Solfema, S., Bartin, T., & Sunarti, V. (2020). Descriptive Analysis of Students' Empathy Ability Padang State University (UNP). *Digital Press Social Sciences and Humanities*, *6*, 00022. https://doi.org/10.29037/digitalpress.46387

Sopian, I. (2018). Implementasi dan Pengujian Sistem Informasi Tracer Study Berbasis Web Menggunakan Standard ISO/IEC 9126 (Studi Kasus: Fakultas Pendidikan Matematika dan Ilmu Pengetahuan Alam - UPI). *FIKI - Jurnal Teknologi Informasi Dan Komunikasi*, *VIII*(2), 116–127. https://doi.org/https://doi.org/10.56244/fiki.v8i2.314

Sudarsono, B. G. (2020). Using an Extreme Programming Method for Hotel Reservation System Development. *International Journal of Emerging Trends in Engineering Research*, *8*(6), 2223--2228. https://doi.org/10.30534/ijeter/2020/01862020

Supriyatna, A., & Puspitasari, D. (2021). Implementation of Extreme Programming Method in Web Based Digital Report Value Information System Design. *IJISTECH (International Journal of Information System & Technology)*, *5*(1), 67. https://doi.org/10.30645/ijistech.v5i1.116

Supriyono, S. (2020). Software Testing with the approach of Blackbox Testing on the Academic Information System. *IJISTECH (International Journal of Information System and Technology)*, *3*(2), 227–233. https://ijistech.org/ijistech/index.php/ijistech/article/view/54

Wanti, L. P., Somantri, O., Romadloni, A., & Tripustikasari, E. (2021). Optimization of Extreme Programming Methods in Plastics Waste Management Company Websites. *JISA(Jurnal Informatika Dan Sains)*, *4*(2), 144–148. https://doi.org/10.31326/jisa.v4i2.1018

Widiastuti, I., & Cakranegara, P. A. (2022). Development Of The Public Service Management Information System through Extreme Programming In Sukarame District, Bandar Lampung. *International Journal of Multidisciplinary Research and Literature*, *1*(3), 284–292. https://doi.org/10.53067/ijomral.v1i3.29

Wiryananta, K., Safitri, R., & Prasetyo, B. D. (2021). (2020). A new decade for social changes. *Technium Social Sciences Journal*, *7*, 312–320. https://techniumscience.com/index.php/socialsciences/article/view/332/124