

IMPLEMENTATION OF ANGULAR JS FRAMEWORK IN DESIGN WEB-BASED ADMISSION SYSTEM APPLICATION

Eka Lia Febrianti^{1*}, Ilwan Syafrinal¹, Agus Suryadi²

¹Software Engineering , Universal University

²Informatics Engineering , Ibnu Sina University

email : ekalia88@gmail.com

Abstract: Technology is able to digitize human work that was originally manual to become automatic and of course takes less time and better accuracy compared to results done by humans. But there are still many companies that have not implemented this technology. The use of the AngularJS framework in web application development has proven to be effective in enhancing the user experience and ease of development. In addition, the application of Agile methods in the application development process can provide the flexibility and adaptability needed to deal with frequent changes in requirements. This study aims to investigate the implementation of the AngularJS framework in the design of a web-based acceptance system application using the Agile method. The results of the study show that the implementation of the AngularJS framework in the design of web-based acceptance system applications provides significant benefits. In conclusion, the implementation of the AngularJS framework in the design of web-based acceptance system applications using Agile methods can improve efficiency, quality, and user experience. Using AngularJS enables the development of responsive and interactive applications, while the Agile method facilitates adaptation to changing customer needs. Therefore, the use of AngularJS with an Agile approach should be carefully considered by organizations wishing to develop successful web-based acceptance system applications.

Keyword s: Admissions, Agile, AngularJS, Web

Abstract: Teknologi mampu mendigitalisasi pekerjaan manusia yang awalnya manual menjadi otomatis dan tentunya memakan waktu yang lebih singkat dan akurasi yang lebih baik dibandingkan dengan hasil yang dikerjakan oleh manusia. Tetapi masih banyak perusahaan perusahaan yang belum menerapkan teknologi ini. Penggunaan framework AngularJS dalam pengembangan aplikasi web telah terbukti efektif dalam meningkatkan pengalaman pengguna dan kemudahan pengembangan. Selain itu, penerapan metode Agile dalam proses pengembangan aplikasi dapat memberikan fleksibilitas dan adaptabilitas yang diperlukan untuk menghadapi perubahan persyaratan yang sering terjadi. Penelitian ini bertujuan untuk menginvestigasi implementasi framework AngularJS dalam desain aplikasi sistem penerimaan berbasis web menggunakan metode Agile. Hasil penelitian menunjukkan bahwa implementasi framework AngularJS dalam desain aplikasi sistem penerimaan berbasis web memberikan manfaat yang signifikan. Dalam kesimpulannya, implementasi framework AngularJS dalam desain aplikasi sistem penerimaan berbasis web menggunakan metode Agile dapat meningkatkan efisiensi, kualitas, dan pengalaman pengguna. Penggunaan AngularJS memungkinkan pengembangan aplikasi yang responsif dan interaktif, sementara metode Agile memfasilitasi adaptasi terhadap perubahan kebutuhan pelanggan. Oleh karena itu, penggunaan AngularJS dengan pendekatan Agile harus dipertimbangkan secara cermat oleh organisasi yang ingin mengembangkan aplikasi sistem penerimaan berbasis web yang sukses.

Keywords: Admisi, Agile, AngularJS, Web

INTRODUCTION

The current technological developments are so rapid that the digital revolution occurs where changes from analog mechanical and electronic technology to digital technology[1]. The impact of the digital revolution can be seen in the easy and fast dissemination of information, increasing business productivity and performance, changing the way individuals and companies interact, and creating a revolutionary business world[2].

The creation of a revolutionary business world because it is easy, cheap, practical, dynamic in communicating and obtaining information, and the large number of internet users. Based on the results of a survey from the Association of Indonesian Internet Service Providers (APJII) there were 171,176,716.8 internet users in 2018 where the growth of internet users increased by 27,916,716 which can be seen in [3] Image 1.



Image 1. Survey results from the Association of Indonesian Internet Service Providers (APJII)

Increased internet users make dissemination of information faster and easier. Business people see that as an opportunity because they can advertise their company quickly[4]. In addition to fast advertising, technology is also able to digitize human work that was originally manual to be automated and of course takes less time and better accuracy compared to results done by humans[5].

So in order to improve business performance and company productivity, the Wings company cooperates with PT. Intek Karya to build web-based applications used for Wings company management.

The usability of a web is the main factor that determines whether a web is successful or fails to be made [6]. Usability here is defined as the extent to which a product can be used by certain users to achieve specific goals with effectiveness, efficiency and satisfaction in the context of certain uses [7]. To meet the requirements for successful web-based applications created using the Angular JS framework[8].

AngularJS makes it possible to create easy-to-maintain and standardized web applications that make models use the same component [9]. Besides that, AngularJS can also synchronize data with HTML in real time or what is known as data binding, namely synchronization between models and views [10]. And most importantly, AngularJS can improve the User Interface, interactivity, usability, and user experience [11].

METHOD

The method for developing application designs with Angular JS uses agile, seen from <https://www.replicon.com/polaris-psa/what-is-agile-project-management/> where the system design process will be carried out in several stages. The design stages of the admissions application for the application of the Agile method are shown in Image 2 [12].

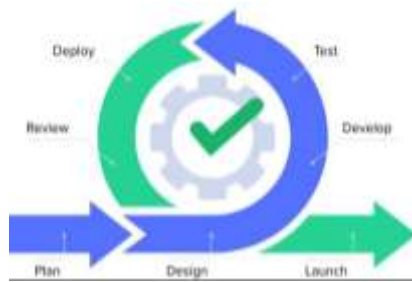


Image 2. Agile Stages

From Image 2 above the first step is [13]:

- **Planning (Plan) :**
Identification of needs: Identification and in-depth understanding of the needs of users and stakeholders regarding the admissions application .
Product backlog creation: Create a list of features and functionalities required in the application, based on identified needs. Arrange the product backlog in order of priority.
- **Design and Prototyping:**
Create intuitive and responsive user interface (UI/UX) designs. Create interactive prototypes to validate designs and get feedback from users.
- **Development**
At this Development stage or also called the software development stage is a series process of developing software. Software development requires the precautionary principle both at the design stage, as well as the execution stage according to the objectives to be achieved . The development process is not just writing program code, but it certainly includes the stages of preparing software requirements, the software design stage, and the software testing stage.
- **testing**

At this testing stage is the process of executing all parts of the software with the intention of finding errors. This stage is a critical element in the software development series, because from this testing the features and tasks have been developed and are as expected.

- **Deployments**
At this stage, it is the stage where activities occur that aim to deploy applications that have been worked on by the developer. Deployment can be done in various ways depending on the type of application.
- **Reviews**
The complete process of examining software products, this process will produce a good product, this stage will also determine the positive and negative aspects of the program.

RESULTS AND DISCUSSION

Home view

The Home display does not contain much information, on the home page there are only pictures of activities carried out by the Wings company. For more details, it can be seen in Image 5.



Image 5. Home view

Registration View

In this view the user is asked to enter their personal data. In this view, users can choose whether they want to use their email or cellphone number as their username. And also users can create their own passwords or generated by the system. Can be seen in Image 6.



Image 6. Registration Display

User Profile View

Users can view their information on this page and they can also change that information. Here users can also change their username. This display can be seen in Image 7.

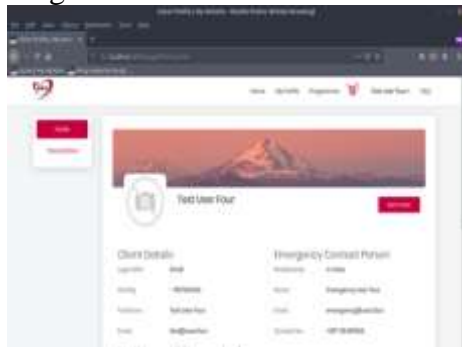


Image 7. Display User Profile

Transaction view

This view contains transaction information that has been carried out by the user. The information is displayed in tabular form and details can be seen. This display can be seen in Image 8.

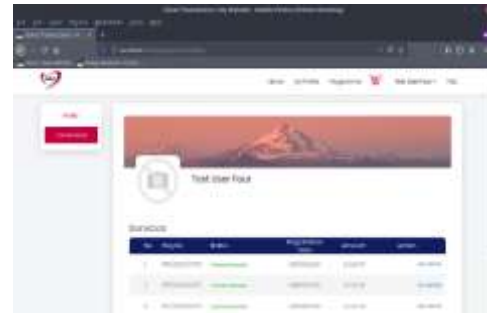


Image 8. Display Transactions

Display Transactions Details

This page details the selected transaction. These details are in the form of programs that have been registered along with prices and time. The results can be seen in Image 9.

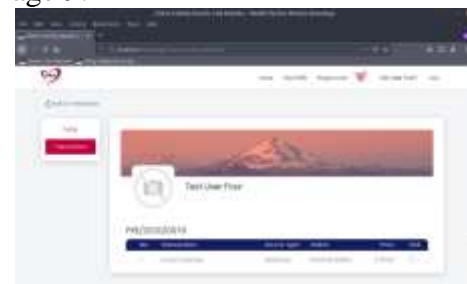


Image 9. Display Transactions Details.

Program View

The program display is a display that contains the programs in Wings. Starting from those that have not started to those that have been completed. The information displayed includes the start time of the program, registration time, the name of the trainee, and the registration price. Can be seen in Image 10

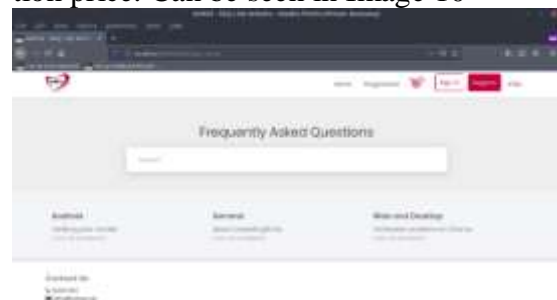


Image 10. Display Program
Program Details View

This display contains more detailed program information. Starting from the description, to the sessions available in the program. Can be seen in Image 11.



Image 11. Program detail display

Frequently Asked Question (FAQ) display

This is a display that contains information that can help the user if they have difficulty using this application. Can be seen in Image 12.



Image 12. Frequently Asked Question (FAQ) display

FAQ list view

In this view, information is displayed per category and is more complete. so users can more easily find the information they need. The appearance of this page can be seen in Image 13.



Image 13. FAQ list display

FAQ Detail View

This view contains complete in-

formation about the topic selected by the user. Here is explained in detail how to solve the problem or the steps for use. The appearance of this page can be seen in Image 14.



Image 14. FAQ Detail Display

CONCLUSION

Based on the results of the research that has been done, it is concluded that the design of a web-based admissions application made using the AngularJS framework with the application development used is the agile method proven to produce applications that look more attractive, easy to use and help better digitize the admissions system. In addition, the system that has been built is also proven to be able to help companies increase productivity, business performance and simplify data collection.

BIBLIOGRAPHY

- [1] Adinegoro, A. L. T., Rokhmawati, R. I., & Az-Zahra, H. M. (2018). Analisis Pengalaman Pengguna pada Website E-commerce Dengan Menggunakan Usability Testing dan User Experience Questionnaire (UEQ)(Studi pada Lazada. co. id, Blibli. com dan JD. id). *Jurnal Pengembangan Teknologi Informasi*

- dan Ilmu Komputer e-ISSN, 2548, 964X.*
- [2] Sulistianingrum, EW, Rusdianto, DS, & Wihandika, RC (2021). Development of an Order Management System and Delivery of Goods for a Web-based Trading Company (Case Study: PT Arista Semesta Alam). *Journal of Development of Information Technology and Computer Science e-ISSN* , 2548, 964X.
 - [3] Rahmidani, R. (2015). Penggunaan e-commerce dalam bisnis sebagai sumber keunggulan bersaing perusahaan. *Pengguna. E-Commerce dalam bisnis sebagai sumber keunggulan bersaing Perusah., no. c*, 345-352.
 - [4] Juairiyah, O. (2020). Analisis Mengenai Alasan Penggunaan Internet Masyarakat Sumatera Selatan. *Multitek Indonesia, 13*(2), 81-85.
 - [5] Kamelta, E. (2013). Pemanfaatan internet oleh mahasiswa jurusan teknik sipil fakultas teknik universitas negeri padang. *Jurnal CIVED ISSN 2302, 3341*(1), 2.
 - [6] SE Rosenbaum, "Passage of drugs through membranes," in *Basic Pharmacokinetics and Pharmacodynamics: An Integrated Textbook and Computer Simulations* , John Wiley & Sons, 2016.
 - [7] EL Febrianti and T. Christi, "Implementation of Forward Chaining for Diagnosing Malaria and Web-Based Prevention," *Jurteksi* , vol. 4, no. 1, pp. 93–100, 2017.
 - [8] Firda, R. A. (2018). KUB Perancangan Sistem Administrasi Pada Kelompok Usaha Bersama Berbasis Web Menggunakan Framework AngularJS. *Jurnal Ilmiah Informatika, 6*(01), 49-53.
 - [9] Suryanto, I., Suhery, C., & Brianor-man, Y. (2017). Pengembangan aplikasi chat messenger dengan metode advanced encryption standard (aes) pada smartphone. *Coding Jurnal Komputer dan Aplikasi, 5*(2).
 - [10] N. Nurwati, "Noise Level Detector and Rating in Arduino-Based Libraries," in *Royal National Seminar (SENAR)* , 2018, pp. 295–298.
 - [11] J. Hutahaean, *Concept of Information Systems* . Yogyakarta: Deepublish, 2015.
 - [12] D. Sutrisno, SN Gill, and S. Suseno, "The development of spatial decision support system tools for marine spatial planning," *Int. J. Digits. Earth* , vol. 11, no. 9, pp. 863–879, 2018.
 - [13] Km. Syarif Haryana, " Application of Agile Development Methods With the Scrum Framework in the Design of Qr-Code Based General Meeting Attendance Software " *Journal of Computech & Bisnis, Vol. 13, No. 2, December 2019*, 70-79
 - [14] Burhan, MI, Nawir, F., & Salam, KN (2022). Development of a Tracer Study System Using Agile Development Methods on IbK Nitro. *JURSIMA (Journal of Information and Management Systems)* , 10 (3), 160-170.
 - [15] Muliadi, M., Andriani, M., & Irawan, H. (2020). Website-Based (Web) Hotel Room Booking Information System Design Using Data Flow Diagrams (Dfd). *JISI: Journal of Industrial System Integration* , 7 (2), 111-122.