

FSTP Welfare Club System

Muhammad Izzat Irfan Noordin^{1,*}, Suhaila Ismail², Nurhafizah Moziyana Mohd Yusop³, and Kamaruzaman Maskat⁴

¹ National Defense University Malaysia; izzatirfansem@gmail.com

² National Defense University Malaysia; suhaila@upnm.edu.my;  0000-0003-4236-2758

³ National Defense University Malaysia; moziyana@upnm.edu.my;  0000-0003-0394-7710

⁴ National Defense University Malaysia; kamaruzaman@upnm.edu.my;  0000-0002-0975-1009

* Correspondence: izzatirfansem@gmail.com; 013-4704723

Abstract: The purpose of the charity club is to safeguard the welfare and foster the spirit of cooperation between the club members. In addition, the welfare club is also able to strengthen the relationship between the club members so that the club atmosphere is more conducive and productive. In addition, the charity club also performs various activities to club members as an example of sports and recreational activities. With it, club members can adopt a healthy lifestyle. The FSTP Welfare Club system is implemented to provide a platform for all club members to more easily access the latest information presented by the club committee. Thus, members of all important information can be communicated more easily and efficiently to the club members. In addition, the system can also provide an online monthly payment platform to make it easier for all club members to make monthly payments thus reducing the club's arrears. With this system, the monthly payment of the club will be much easier compared to providing an account number to a club member. Next, the FSTP Welfare Club System provides a fund application platform to club members who need help who receive an appreciation as a sign of concern by the club. Prior to this system, a questionnaire session was held with the Head of FSTP Welfare Club, Lt. Kdr. Ts. Mohd Najib bin Abdul Ghani Yolhamid TLDM (Retired). In this questionnaire, a lot of information was obtained from him to facilitate the journey in the development of the FSTP Welfare Club System. In this system the methodological method used is the Prototype Model.

Keywords: Information System; Prototype; welfare system



Copyright: © 2023 by the authors. Submitted for open access publication under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

1. INTRODUCTION

In the aspect of safeguarding the welfare of lecturers and staff of the Faculty of Defence Technology Sciences, this faculty has established a club called the FSTP welfare club where it aims not only to safeguard the welfare and help club members in need, but the club is also able to foster closer ties between other members of the club. In addition, the club also attaches importance to a healthy lifestyle. The FSTP Welfare Club has organised various sports and recreational activities, for example, hill climbing, club sports and so on. Therefore, in addition to being able to strengthen the relationship between the club members, they can also carry out activities that benefit their body health. The weaknesses of the existing FSTP-UPNM Welfare Club System are not systematic. This is because, the club does not have a medium among all members of the club to interact and know all the information about the activities in the club. This has led to many club members not being aware of the information within the club especially about the monthly payments that should be made by all club members. In

addition, the existing system does not provide notification regarding arrears payments to club members.

Therefore, the club members are unable to find out about the arrears which causes their monthly payments to be higher. As such, this weakness will result in the payment of arrears by club members increasing due to club members who are not aware of this matter and may be due to notification of arrears payment not reaching the club members. In addition, the FSTP Club payment system also does not have an online payment platform that makes it difficult for all club members to pay online. With this online payment system, all club members who want to make monthly payments will be easier and more efficient. In turn, it can also make it easier for the club treasurer to update and manage all payments made by club members.

2. METHOD & MATERIAL

The scope of the project study developed is as follows:

2.1 Admin (Club Committee)

This admin ensures that all club members pay all club fees with the time set. The Chairman is also responsible for all the welfare of the club members and all activities carried out within the club.

2.2 Club Members

Club members should pay all club fees to facilitate the management of the club's budget and ensure the welfare of all club members who need assistance is secured. Club members should also ensure that all activities within the club can be carried out successfully. Club members should cooperate with other club members so that all management of the club's activities does not have problems. Figure 1 shows the architecture diagram of FSTP Welfare Club System.

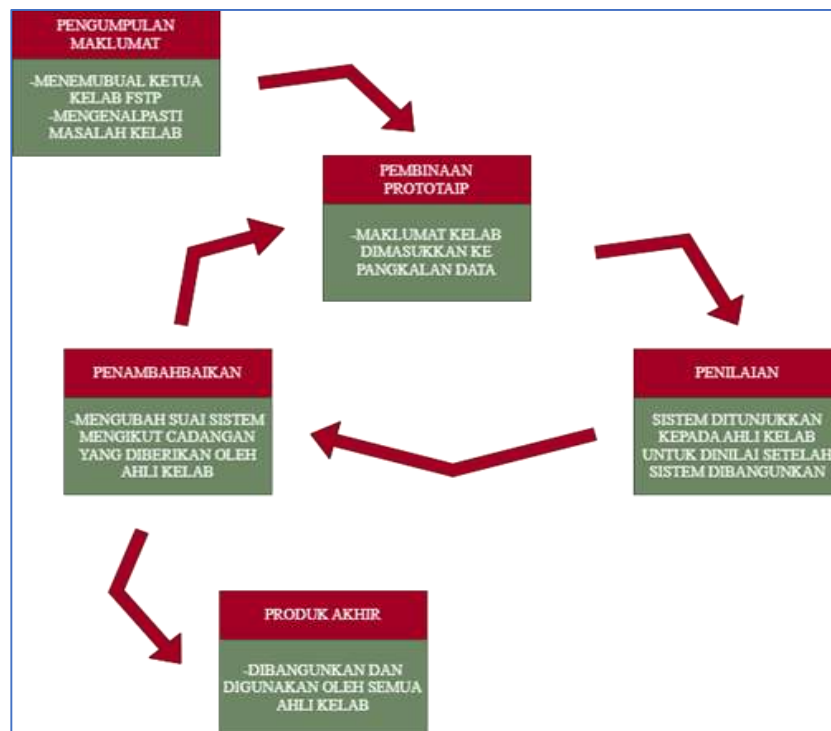


Figure 1. Architecture Diagram of FSTP Welfare Club System

3. FINDINGS

The analysis phase in general refers to the method of developing the system by examining the requirements of the system. In this phase there are also four main processes which are need modeling, data modeling, system modeling and system design. In the modeling phase of the need, an investigation is required that is carried out on the current state of the system and to find solutions to the problems that arise. Various techniques can be performed in this phase for the collection and search of facts i.e., questionnaires, designs, and observations. Data modeling is a design process concept. Data modeling focuses more on the data that will be entered into the database and the function of that data will see how it is processed in the database. The Context Diagram is the first procedure in the development of the Data Flow. It is a diagram showing the external entities involved in the system.

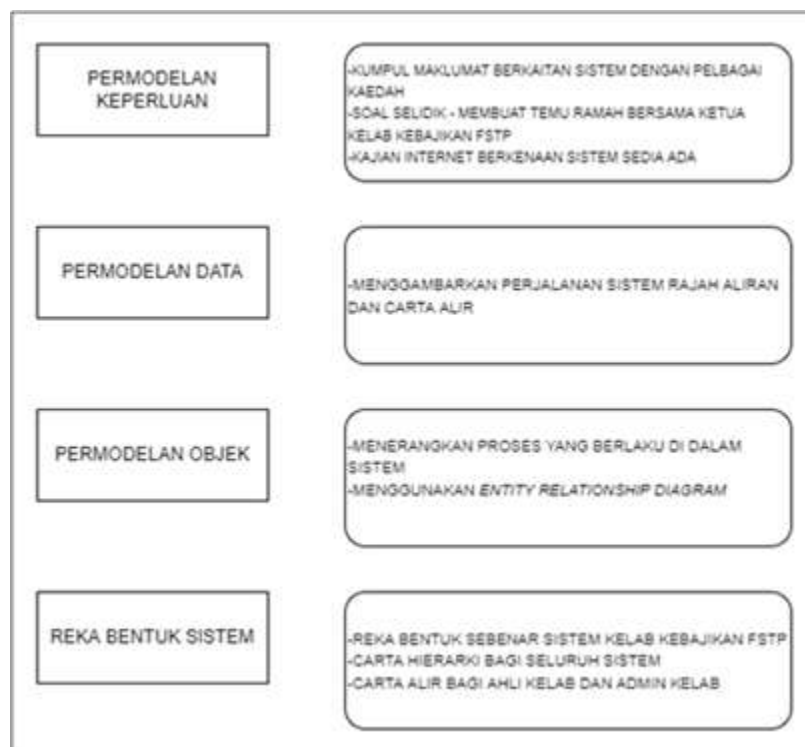


Figure 2. Process in Analysis Phase

Figure 3 shows the context diagram, and the data flow diagram of FSTP Welfare Club System is shown in Figure 4.

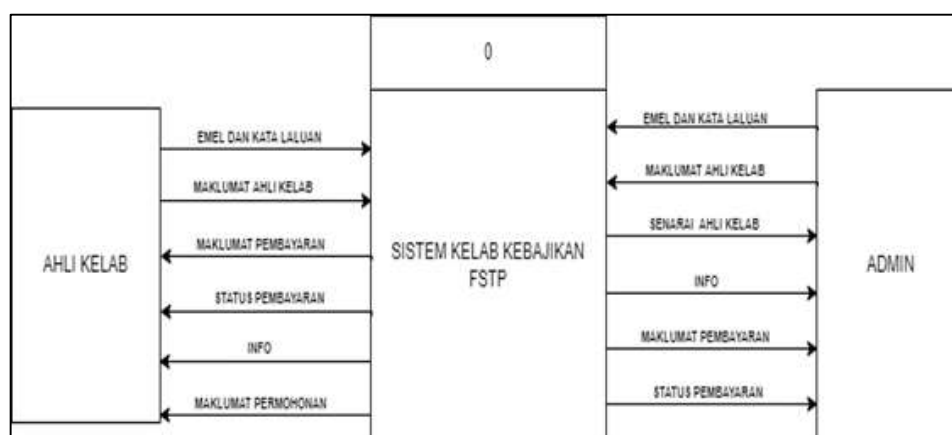


Figure 3. Context Diagram of FSTP Welfare Club System

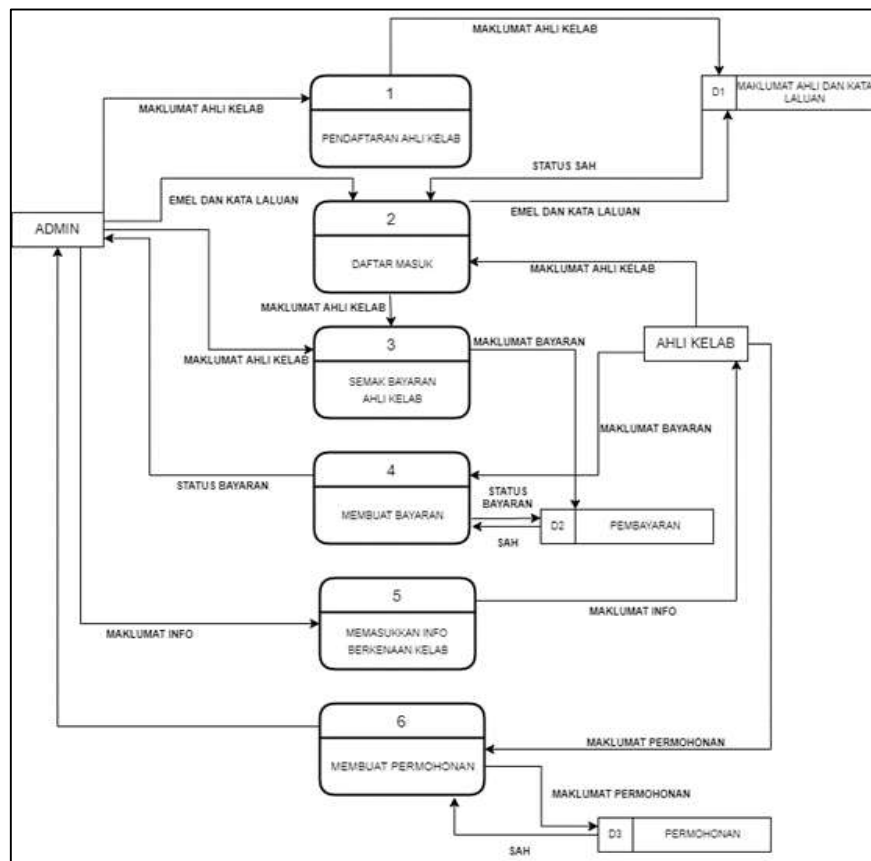


Figure 4. Data Flow Diagram of FSTP Welfare Club System

Figure 5 shows the hierarchy diagram for FSTP Welfare Club System.

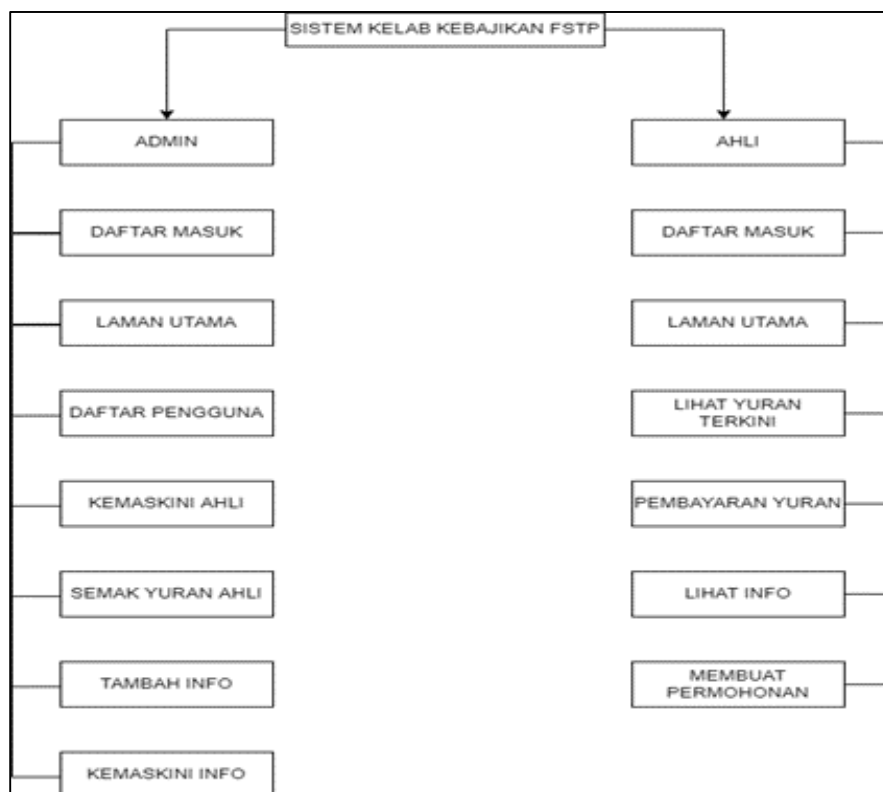


Figure 5. Hierarchy Diagram for FSTP Welfare Club System

Figure 6 shows the dashboard for FSTP Welfare Club System.

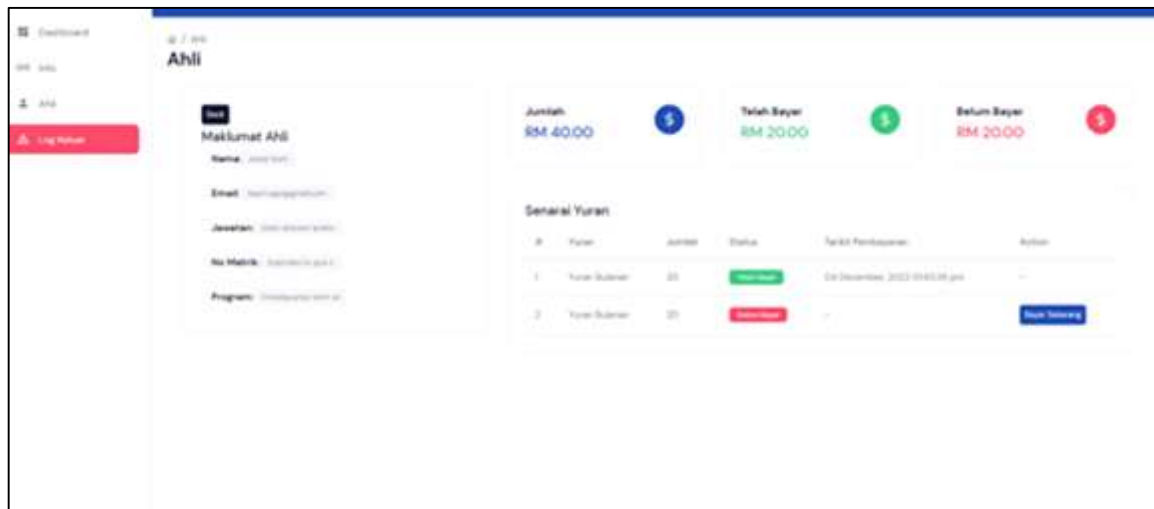


Figure 6. Dashboard of FSTP Welfare Club System

Figure 7 shows the FSTP Welfare Club System Main page.



Figure 7. Front Page of FSTP Welfare Club System Web Page

4. DISCUSSION

4.1 The Importance of the Project

The FSTP Welfare Club system has been successfully developed. There are several achievements that can be measured through the objectives set out in Chapter 1. The objectives of this system are achieved successfully:

- i. The FSTP Welfare Club System becomes a platform where members of the FSTP welfare club can find out all the information regarding the club and the activities organized by the club more easily.

- ii. There is an FSTP Welfare Club system that can be used by club members to check the amount of monthly fees and arrears as well as upload payment receipts online.
- iii. The system also has a platform for club members to make any claims from the FSTP Club with certain conditions.

The FSTP Welfare Club system provides many benefits and advantages to the users of the system as the system is developed to overcome the existing system problems. Among the advantages are:

- i. The system is more efficient and user-friendly as it is easy to operate and can reduce paper consumption. This is because all records of payment and application of club funds can be viewed by accessing the system that has been developed.
- ii. The system has security features on the check-in process and register new club members to prevent the system from being breached.
- iii. This system keeps monthly payment information and records more securely than previous management. This is because all information and monthly payment records will be stored in the MySQL database.
- iv. The system has security features such as no repetition of the use of the same staff number, email, and identity card number to prevent errors in the club members' information.

5. CONCLUSION

It can be concluded that the FSTP Welfare Club System has achieved the objectives as mentioned earlier. Although there are still constraints in this system, modifications should be carried out to ensure that the system always meets the needs of users. It is hoped that the system that has been developed can be adopted and implemented in the implementation of the activities of FSTP Welfare club members. Based on the observations that have been made, there are several recommendations that can be adopted for the improvement of this system in the future. Among the proposed improvements are:

- i. The system can be upgraded to the use of applications in Android and iOS.
- ii. This system can be upgraded by creating an online payment system on its own website which is in the form of fpx to make it easier for every user i.e., a member of the FSTP welfare club to make monthly payments.
- iii. This system can be upgraded by creating a space for club members to interact with other club members such as the WhatsApp app to make it easier for all club members to interact with other club members, especially those that cause things about the club.

The recommendations highlighted are important so that the system improvement process can be implemented comprehensively and from time to time. This allows the developed system to be used by users over a long period of time as system improvements are carried out on a regular basis. This makes the system remain relevant and continue to be used.

Acknowledgments: The head project member acknowledges financial support from the Department of Computer Science, Faculty of Science and Defense Technology, and the Student Affairs Department of National Defense University Malaysia for financial support in publication of this research in journal and proceeding.

References

- Creately.com. (2019). *Carta Hierarki, Rajah Hierarki*. Retrieved from: <https://creately.com/ms/usage/carta-hierarki/>
- Creately.com. (2021). *Cara mencipta carta alir*. Retrieved from: <https://creately.com/ms/diagram-type/carta-alir/#:~:text=Apakah%20Carta%20Alir%3F%20Carta%20alir%20merupakan%20gambar%20raja,mereka%20bentuk%20sistem%2C%20serta%20sebagai%20suatu%20alat%20pendidikan.>
- Ekrut.com. (2021, September 21). *Apa itu prototype? Kenali pengertian, tujuan, manfaat, dan 3 contohnya*. Retrieved from: <https://www.ekrut.com/media/prototype>
- Fakulti Sains & Teknologi Pertahanan, UPM. (2021, April 24). *Super User*. Retrieved from: <https://upm.edu.my/index.php/fakulti/fakulti-sains-teknologi-pertahanan>
- Ijul Lke. (2022, April 13). *Pengertian Kamus Data*. Retrieved from: <https://www.mediainformasionline.com/2022/04/pengertian-kamus-data.html#:~:text=Kamus%20data%20%28data%20dictionary%29%20adalah%20suatu%20penjelasan%20tertulis,sama%20tentang%20input%2C%20output%2C%20dan%20komponen%20data%20store>
- Lopez, V. (2022, December 6). *Complete guides on how to create a Data Flow Diagram*. Retrieved from: <https://www.mindonmap.com/ms/blog/create-a-data-flow-diagram/>
- Mohd Nazri Awang. (2020, May 6). *Pembinaan dan pengujian model berfungsi & Prototaip*, 1-24. Retrieved from: <https://anyflip.com/xdwde/seuu/basic>
- Morales, J. (2022, April 19). *What is Context Diagram: Definition and guidelines to create*. Retrieved from: <https://www.mindonmap.com/ms/blog/context-diagram/#:~:text=Satu%20faedah%20besar%20raja%20konteks%20sistem%20ialah%20keupayaannya,tengah%20juga%20boleh%20dikaitkan%20dengan%20entiti%20dan%20persekitaran.>
- Ustazkenali. (2013, June 30). *Apakah maksud metodologi?* Retrieved from: <https://ustazkenali.wordpress.com/2013/06/30/apakah-maksud-metodologi/#:~:text=Metodologi%20penyelidikan%20merupakan%20kaedah%20dan%20teknik%20mereka-bentuk%2C%20mengumpul,dan%20sebab%20sesuatu%20kaedah%20dan%20teknik%20tertentu%20digunakan.>