

Implementation of E-Voting in The Election of The OSIS Chairman of Smkn 2 Rancaekek

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Abstract. In a school organization called OSIS, in general, there must always be a leader or can be called the chairman of the organization, there is an OSIS organization chairman, which aims to promote and prosper the organization in junior high schools and vocational schools, they also must have leadership structures and when We need a leader who deserves to be elected. Therefore This study aims to implement E- VOTING in the selection of student council leaders at SMKN 2 RANCAEKEK because some of the schools are still elected directly or can also be called by voting using paper. To support the research, we use the waterfall method of software development. The sequence in the waterfall method is very serial starting from the planning process of analysis, design, and implementation of the system. results show that election chairman OSIS this use Besides Fulfill principles, we must follow development technology Information as well as speed up the results of the vote recapitulation. Electronic voting or E-Voting is something from collection voice which normally used election general using electronic media. E-Voting also makes elections easier for example: no eat the cost, speeds up recapitulation voice, honest, fair, happening transparency, and reduces fraud. Because that paper, discusses the application of E- Voting if it is applied to the field of school organization, namely in schools Vocational High School 2 RANCAEKEK.

1. Introduction

Voting is a term that refers to a decision-making mechanism or gift mandate to somebody which can be held open or closed [1]. Sometimes there are so many frauds committed in the voting itself that can be done by committees, supervisors, and the voters themselves [2]. Therefore, to minimize fraud, we need a technology that can reduce fraud [3]. E-Voting is a system that utilizes electronic devices and processes digital information to create letters vote, vote, and count votes [4]. This system is very helpful to speed up the process collection voice, calculation voice, reduce risk error and fraud, save expenses and will fulfill the principles of general elections, namely: direct, general, free, and secret [5].

SMKN 2 RANCAEKEK every year certainly conducts the OSIS Chair Election. The selection process for SMKN 2 RANCAEKEK is still being implemented by direct voting by all students. However, the voting conducted at SMKN 2 RANCAEKEK is still conventional or in the form of paper, the calculations are still manual, so knowing the results of the process is quite long and also because there are too many students.

This research uses the waterfall method, a sequential development process that flows like a waterfall through all phases of the project. With each phase completely completed before the next phase begins. The purpose of this research is to design a web-based system that functions as the general election for OSIS chairman at SMKN 2 RANCAEKEK because there are still many organizational elections, namely OSIS still using the old method, and this new method, namely the web-based election, is very effective so that the election can be carried out very well and safely. Study this is descriptive analysis with approach qualitative.

2. Method

The method used in the process of designing an information system for the election of the Osis chairman of SMKN 2 RANCAEKEK by E-Voting this with the use method Waterfalls. Method this is conducted with a systematic approach, starting from the system requirements stage and then moving on to the analysis, design, coding, testing/verification, and maintenance. And the following is a picture diagram stages of the Method Waterfall [6,7]:

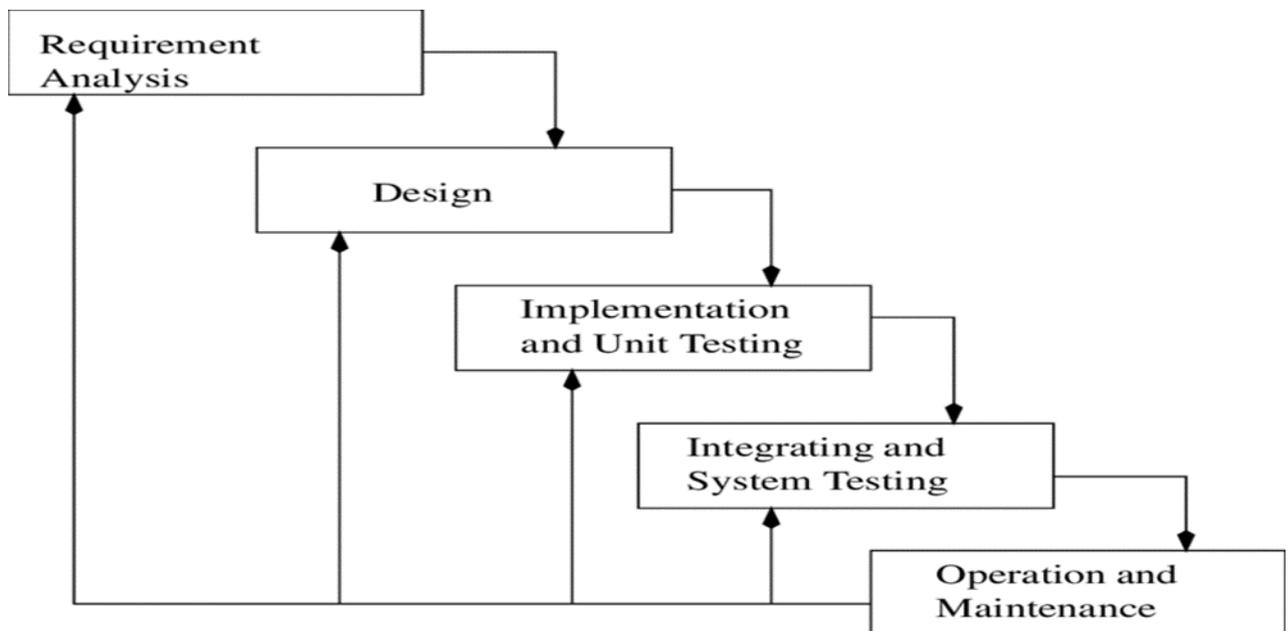


Figure 1. Diagram Stages of the Waterfall

3. Results and Discussion

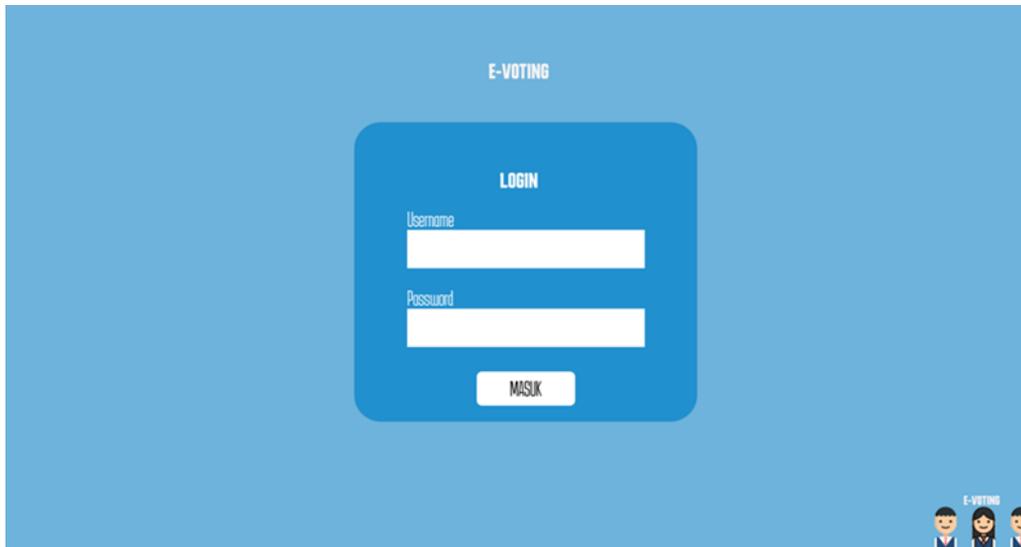


Figure 2. Page Form Login E- Voting

An example of an e-voting login page design can be seen in the image above first containing form login and then enter the username and password aim so that para user could come in, with a user account which has provided by the school, using their name and password in the form of date of birth, so that could help monitor user which already select, then when you have entered your username and password, you will be redirected to the next page [8,9].

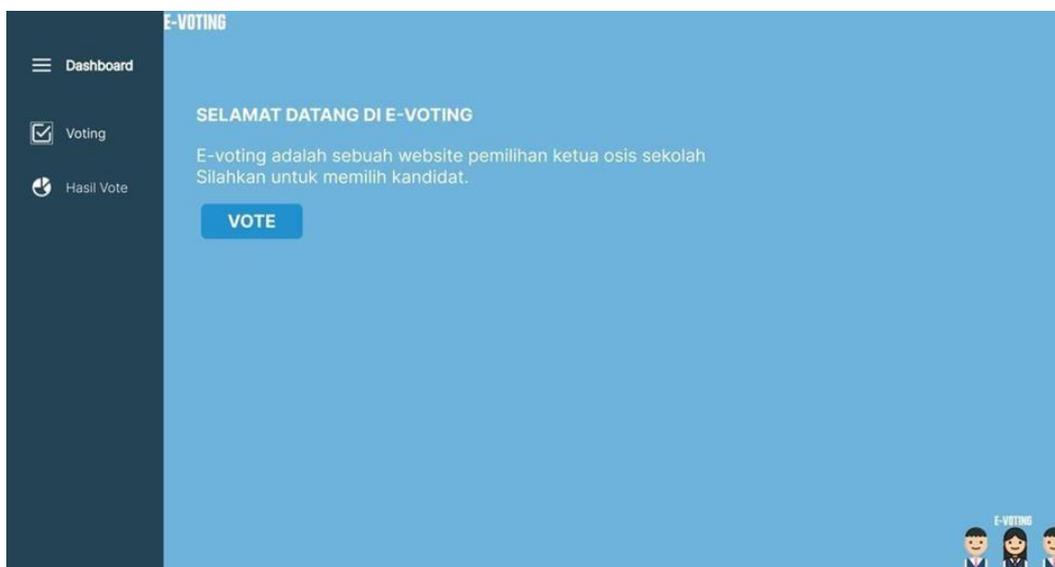


Figure 3. Page Dashboard E- Voting

An example of an e-voting dashboard design can be seen in Figure 2 above shows the start page of the e-voting application, in which there is a menu dashboard, voting, and voting results. In the dashboard, there is also a button to direct the user to the page vote directly and will go to the next page [10-12]. The dashboard is a visual display of all data, all display

information provides information at a glance, when we click the vote button, a different view or contents of the menu will appear.

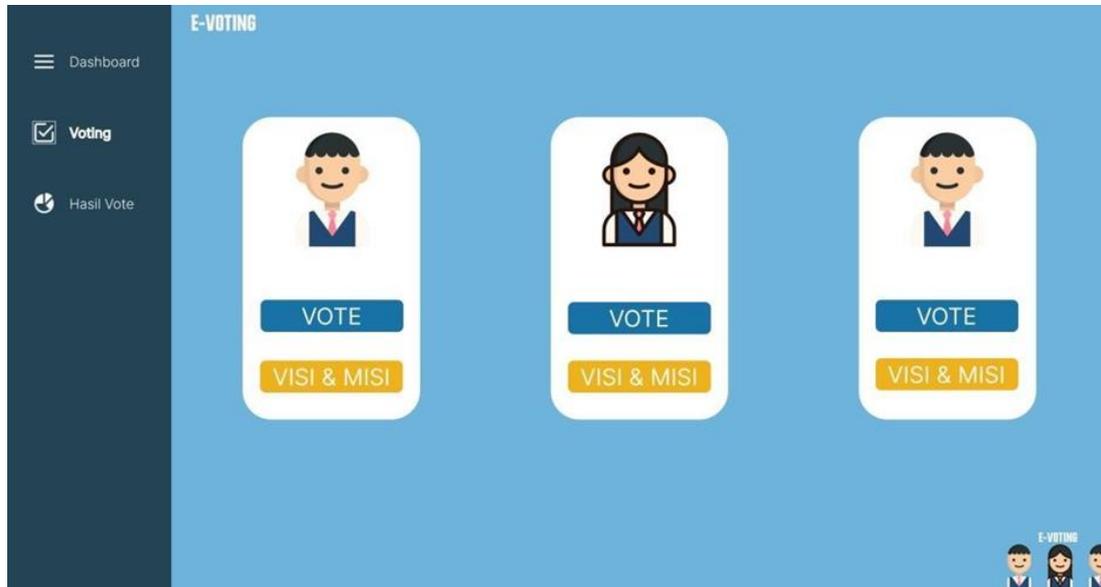


Figure 4. E-Voting Page

An example of the voting design can be seen on the third page, which is the page for selecting the candidates for the student council chair, there are 3 choices of candidates. Where is the way to choose it with push knob blue written "votes", besides that there is the knob for seeing how vision & mission from on the candidate chairman osis with method push the yellow menu button. In the vote button menu, we choose who we will vote for by pressing the vote button. There is candidate pair 1, there also candidate pair number 2, and candidate pair number 3, then in the second menu there are the visions and missions of the three candidates and before we choose it would be nice to see which vision and mission are suitable for us to choose, then the vision and mission what missions they build and plan in school. The picture above is to make it easier for students to choose what they choose via a browser or application so that there is no cheating when choosing and not having to queue or wait for their turn to vote and this election is free and anytime before the announcement of who the most chosen.



Figure 5. Results Page E- Voting

Examples of designs can be seen on page four this could see results from an election and see how many people which already vote and see the total votes entered, the total votes, and users, in order not to occur number error incoming sound and which choose it. Application e-voting this made to help para student in election chairman OSIS easily so you don't have to choose in turns so you can choose to use the application directly through your laptop or cellphone, application this made also that chairman election OSIS can run well and efficient, as well get results the best.

4. Conclusion

After going through several stages of research to create an e-voting web-based application for elections, the OSIS chairman by conducting requirements analysis, system and software design, implementation and unit testing, integration and system testing as well as operation and maintenance, so that the system that has been built can simplify the process processing data for support election the head of the organization, namely OSIS. With the e-voting application for the election of the chairman of the web-based student council, hopefully, with this e-voting you can minimize fraud in the process of selecting the student council president and making it easier for students to choose the chairman student council and with E-Voting this will can realization principles election general that is: direct, general, free, and of course Secret.

References

- [1] Ikhwan, Y. (2018). Analisis Dan Rancangan Sistem E-Voting Pemilihan Ketua Osis. *Technologia: Jurnal Ilmiah*, 9(3), 138-143.
- [2] Yulianto, A., & Yusuf, D. H. (2019). Penerapan E-Voting Untuk Pemilihan Ketua Osis Pada SMP PGRI Parung Panjang Bogor. *REMIK: Riset dan E-Jurnal Manajemen Informatika Komputer*, 3(2), 66-73.
- [3] Hermaliani, E. H., & Utami, D. Y. (2019). Sistem Informasi E-Voting Untuk Pemilihan Ketua Osis Di SMK Strada II Jakarta. *INFORMATION MANAGEMENT FOR EDUCATORS AND PROFESSIONALS: Journal of Information Management*, 4(1), 1-10.

- [4] Purwati, N. (2015). Perancangan sistem e-voting untuk pemilihan kepala daerah (pilkada). *Bianglala Informatika*, 3(1).
- [5] Priyono, E., & Dihan, F. N. (2015, July). E-Voting: Urgensi Transparansi dan Akuntabilitas. In *Seminar Nasional Informatika (SEMNASIF)* (Vol. 1, No. 5).
- [6] Wulansuci, R., Rakhman, A., & Salamah, I. (2018). Perancangan Alat E-voting Untuk Pemilihan Umum. *Prosiding SENIATI*, 65-69.
- [7] Yulianto, A., & Yusuf, D. H. (2019). Penerapan E-Voting Untuk Pemilihan Ketua Osis Pada SMP PGRI Parung Panjang Bogor. *REMIK: Riset dan E-Jurnal Manajemen Informatika Komputer*, 3(2), 66-73.
- [8] Putra, R. R. (2021). PERANCANGAN SISTEM E-VOTING DALAM PEMILIHAN OSIS PADA SMK YAPIM TARUNA MARELAN. *Jurnal Abdi Ilmu*, 14(2), 23-31.
- [9] Amiruddin, D., Ruhawati, I. Y., & Murnati, M. (2021). RANCANG BANGUN APLIKASI E-VOTING KETUA OSIS DI SMA PGRI 1 KOTA SERANG. *Jurnal Sistem Informasi dan Informatika (SIMIKA)*, 4(1), 14-25.
- [10] Hermaliani, E. H., & Utami, D. Y. (2019). Sistem Informasi E-Voting Untuk Pemilihan Ketua Osis Di SMK Strada II Jakarta. *INFORMATION MANAGEMENT FOR EDUCATORS AND PROFESSIONALS: Journal of Information Management*, 4(1), 1-10.
- [11] Mulyana, A., Rusmana, D., & Rafdhi, A. A. (2021, February). Application platform for e-reservation system in traditional show. In *Journal of Physics: Conference Series*, 1764(1), p. 012197.
- [12] Ikbali, I., Nurdiana, L., Luckyardi, S., & Rafdhi, A. A. (2021). Development of Menstrual Multimedia Learning Applications and Its Issues for Muslim Women on Mobile-Based. *Jurnal Teknologi Informasi dan Pendidikan*, 14(2), 185-191.