



## HIFDZ: Partnership Application Based on Peer Teaching As A Platform For Qur'an Memorization

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### ABSTRACT

231,690,932 Muslims in Indonesia believe in protecting the Qur'an by memorizing or repeating it. However, they have difficulties because they are not tied to the institution of memorizing the Qur'an and need solutions to help memorize the Quran. This research aims to describe the development of the HIFDZ application as a peer teaching-based Al-Qur'an memorization platform. Research method The HIFDZ application uses the Waterfall method, which was first introduced by Winston Royce in 1970 and is often used for Software Engineering (SE) development, including (1) Analytic Needs, (2) Design, (3) Development, (4) Testing, (5) Maintenance. The Peer Teaching approach or peer tutoring is adequate regarding interest and achievement. The practicality of the HIFDZ application was tested on 3 Al-Qur'an memorizers, showing that HIFDZ can be used easily by Al-Qur'an memorizers. Interview results from the HIFDZ application trial with three practitioners who had memorized 30 chapters of the Qur'an showed that the application was excellent and suitable for memorizers of the Al-Qur'an.

**KEYWORDS:** Memorization Quran; HIFDZ; Application; Peer Teaching

### مستخلص البحث

هناك 231,690,932 مسلمًا في إندونيسيا يؤمنون بحماية القرآن عن طريق حفظه أو ترديده. ومع ذلك، فإنهم يواجهون صعوبات لأنهم غير مرتبطين بمؤسسة تحفيظ القرآن، ويحتاجون إلى حل للمساعدة في حفظ القرآن. الهدف من هذا البحث هو وصف تطور تطبيق HIFDZ باعتباره تطبيقًا قائمًا على التدريس النظير. منصة تحفيظ القرآن الكريم. طريقة البحث يستخدم تطبيق HIFDZ طريقة الشلال التي قدمها وينستون رويس لأول مرة في عام 1970 وغالبًا ما تستخدم لتطوير هندسة البرمجيات (SE)، بما في ذلك: (1) الاحتياجات التحليلية، (2) التصميم، (3) التطوير، (4) الاختبار، (5) الصيانة. يعتبر أسلوب تدريس الأقران أو تدريس الأقران فعالاً من حيث الاهتمام والإنجاز. تم اختبار التطبيق العملي لتطبيق HIFDZ على 3 من حفظة القرآن الكريم مما يدل على أنه يمكن لحافظي القرآن استخدام HIFDZ بسهولة. أظهرت نتائج المقابلة من تجربة تطبيق HIFDZ مع 3 ممارسين كانوا يحفظون 30 جزءًا من القرآن أن التطبيق كان جيدًا جدًا ومناسبًا للاستخدام من قبل حفظة القرآن.

الكلمات الرئيسية: تحفيظ القرآن؛ HIFDZ؛ طلب؛ تدريس الأقران

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## Introduction

Indonesia is a country with a society dominated by followers of the Islamic religion (Muhammad, 2022). Data released by the Data Center of the Ministry of Religion in 2021 shows that there are 231,690,932 adherents of Islam in Indonesia, which makes up 87% of Indonesia's population, with a percentage exceeding half of Indonesia's religious communities. Muslims believe in protecting the Qur'an by memorizing or repeating it (Rokim & Ni'mah, 2022).

The survey we conducted on 108 Al-Qur'an memorizers in Indonesia consisting of Al-Qur'an pesantren alumni, independent Al-Qur'an memorizers, and those who are not tied to Al-Qur'an institutions but want to memorize the Al-Qur'an 'an, shows that they have difficulty finding Al-Qur'an teachers for depositing Al-Qur'an memorization as well as losing an environment that is conducive to memorizing the Al-Qur'an during the process of maintaining Al-Qur'an memorization. For those not attached to the Al-Qur'an institution who want to succeed in memorizing the Al-Qur'an, a tahfidz learning strategy is needed because it is more vulnerable (Hidayah, n.d.).

The proper method is needed so that the memorization of the Qur'an is maintained (Sulastini & Moh. Zamili, 2019). Therefore, we conducted a survey of 124 memorizers of the Qur'an in Indonesia regarding the most effective method for keeping the memorization of the Qur'an. The survey results showed that 81% of Al-Qur'an memorizers said that the most effective method in strengthening Al-Qur'an memorization was by depositing memorization with partners compared to just memorizing it themselves. This reinforces that in maintaining the Qur'an's memorization, partners must listen to each other's memorization. However, memorizers of the Al-Qur'an, whom Al-Qur'an institutions do not bind, find it challenging to get "partner" points because they struggle alone in a heterogeneous environment.

Apart from partners, time is also an obstacle experienced by memorizers of the Qur'an. (Bakri, n.d.) This often happens due to the difference in activity between the teacher and the memorizer of the Qur'an. (Idayu, 2020) It turns out that besides being difficult to find teachers, finding teachers who can be used as a place to listen to the memorization of Al-Qur'an memorizers with flexible and conditional time is also a

problem in maintaining Al-Qur'an memorization. (Nasrowi & Yusuf, 2022) The difference in activities and priorities due to the age difference is too significant for the Al-Qur'an teacher, making the memorizer of the Al-Qur'an unable to deposit the memorization whenever and wherever freely, but must adjust the free time of the Al-Qur'an teacher.

We have summarized the above problems into one fundamental obstacle experienced by memorizers of the Qur'an, namely: As memorizers of the Qur'an, they have a responsibility to maintain their memorization because memorizing the Qur'an is lost very quickly (Hidayah, n.d.). However, for those memorizers of the Qur'an whom Al-Qur'an institutions do not bind, it is difficult to maintain their memorization because their environment is so heterogeneous. Meanwhile, to maintain the memorization of the Qur'an so that it is more robust, someone needs to listen to his memorization. (Partono & Rizqiyah, 2022) Difficulties finding teachers due to age differences, which impact daily activities, make it difficult for memorizers of the Qur'an to determine schedules. (Joni et al., n.d.) Therefore, we present an application to find partners for memorizing the Koran based on Peer Teaching or Peer Tutors.

Previous research conducted by Jasa and friends in 2023, with the title, "Development of an Android Application for Memorizing Al-Qur'an Surahs Using the Takrir Method," showed that the application developed was only limited to memorizing short letters (Prahata Jasa et al., 2023). At the same time, memorizing short letters is only focused on small children. So, there is no complete memorization of all 30 Juz in the Al-Qur'an for adult memorizers of the Al-Qur'an. So, the novelty of this research and development is that the HIFDZ application provides a platform for memorizers of the Al-Qur'an of all ages to memorize the entire 30 juz of the Al-Qur'an.

## Method

This research uses the Waterfall method, introduced by Winston Royce in 1970 and often used for Software Engineering (SE) development. (Wahid, 2020) The stages of the Waterfall method can be illustrated in the chart below:

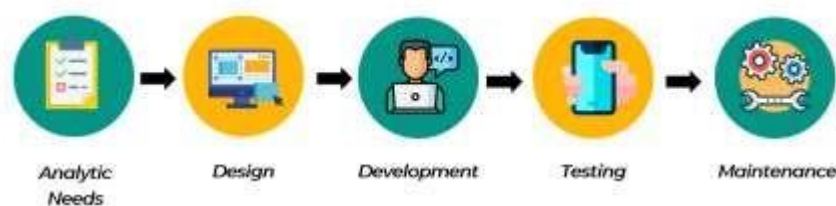


Figure 1. Waterfall method

### 1. Analytic Needs

Needs analysis includes literature study, synthesis, and needs analysis. A literature study is used to find the data needed for the HIFDZ application. (Purnia et al., n.d.) The data researchers get is used as material to see its relation to the problems. The needs analysis that the development team carried out was surveying through a questionnaire to memorize the Al-Qur'an regarding the need for memorizing the Al-Qur'an during the pandemic so that the functional and non-functional requirements for the HIFDZ application are obtained.

### 2. Design

At the design stage, the development team makes an overview of the application, including wireframe and HIFDZ application design using Adobe XD regarding functional and non-functional requirements that have been obtained at the needs analysis stage so that the application system architecture developed will follow the needs of Al-Qur'an memorizers (Wahid, 2020).

### 3. Development

At the development stage, the team develops front-end and back-end applications. At this stage, the application development team translates the visual language into the software program (Nur, 2019),

### 4. Testing

At the trial stage, the development team conducts a series of tests on the application to ensure that the application runs appropriately and as needed. The development team also conducted theoretical validation tests (validation by material experts in the field of Al-Qur'an and applications) and empirical (testing applications by practitioners memorizing the Al-Qur'an).

### 5. Maintenance

At the maintenance stage, maintenance is carried out on the application to monitor problems that arise when the application is published on the Google Play store platform.

### *Analysis Method*

The researcher's analysis used a quantitative method from interviews with Koran memorizers to determine the amount and percentage as a database for HIFDZ application development needs. These were managed and collected via Google Forms with more than 150 respondents who memorized the Koran.

The HIFDZ Application media experts and the development team used a Likert Scale assessment in the validation test. According to (Hudin & Budiani, 2021), the advantages of a questionnaire instrument that uses a Likert scale with five scales are that the questionnaire can accommodate respondents' neutral or hesitant answers. Respondents will answer the questionnaire whether they agree or disagree (Naresh, 2021); easy to use and easy to understand by respondents (Mcdaniel & Gates, 2013).

The Likert scale is a measurement scale developed by Likert in 1932. The Likert scale combines four or more question items or indicators to produce a score/value representing individual traits or other things being addressed, such as knowledge, attitude responses, and behavior. Data analysis uses a composite score of all question items, usually the sum or average. The sum of all question items is valid because each indicates the variable it represents (Budiaji, 2018).

Rating or concluding five scales (1-5) shows the results outlined in the Qualification column. This assessment depends on the average number of scores on one indicator, which is then taken by the closest value and given a description of the qualifying scores, such as very less, less, good, and very good.

## Results and Discussion

The Peer Teaching approach or peer tutoring is considered adequate regarding interest and achievement (Santoso et al., 2018). According to Prayitno (n.d.), peer tutoring is a procedure in which a student teaches other students. Peer tutors are divided into several types. The first type is teachers and students of the same age. The second type is the teacher, who is older than the learner. Another type is sometimes raised by changing the teacher's age (Kusanti, 2022). In this HIFDZ application, peer tutors are meant to be partners of the same age, where the reciters of memorizing the Al-Qur'an and those who memorize the Al-Qur'an are fellow Al-Qur'an memorizers. Peers, in this case, are equivalent to fellow Al-Qur'an memorizers.

The HIFDZ application development team is trying to explore similar applications, such as applications for memorizing the Qur'an through the Google Play Store. Our search results found more or less ten applications similar to the Al-Qur'an memorization application. However, some of them are more inclined to memorize privately, not an application that is present as a search platform for deposit partners for memorizing the Qur'an.



Figure 2. Similar Qur'anic Application

Filter results from the ten applications, the comparison is narrowed down to 3 applications close to the HIFDZ application. We compare these three applications from various aspects of the main features of the need for memorizing the Qur'an. The comparison results show that the HIFDZ application is a breakthrough with complete features following the portion that must exist in the Al-Qur'an memorization deposit application. The other three applications are considered lacking in the availability of crucial features. Our application digitizes the Al-Qur'an Tahfidz institution into a partnership application for memorizing the Al-Qur'an.

Available application names				
Indicator	STUAH	Memo Qur'an	Hafalan Quran	HIFDZ
Reminder feature	–	-	–	√
Peer Teaching System	–	-	-	√
Memorization Journal Features	√	√	–	√
Voice Call feature	-	-	-	√
Select Gender feature	-	-	-	√
Motivational Features	-	√	-	√
Free Apps	√	–	√	√



Figure 3. Comparison of HIFDZ and Similar Applications

The advantages of the HIFDZ application compared to several similar existing applications when viewed from the aspect of existing features are that the HIFDZ application excels in the completeness of the features needed by memorizers of the Qur'an. The innovation of the HIFDZ application lies in the Peer Teaching system or

peer tutoring and depositing the Qur'an's memorization using Voice and Video Calls or voice and video telephones. Peer tutor-based Al-Qur'an memorization deposit application is a digital innovation that society needs.

There are so many applications for depositing Al-Qur'an memorization that we found users can only deposit Al-Qur'an memorization via Voice Notes or voice messages, which is considered ineffective in providing direct feedback or corrections [16] for users of listeners. So, the Qur'an memorization deposit application must be visualized as realistically as possible using Voice and Video Calls.

The HIFDZ application was assessed by three experts in media, materials, and UI/UX. The results of the assessment are presented through a Likert scale rating table. The results of the expert assessment showed an average score of material between 3.5-4 (Table 1). Expert assessment by three experts in the field of Al-Qur'an shows that the HIFDZ application is classified as safe.

**Table 1. Data of Expert Appraisal of Material**

Criteria of validity	Expert 1	Expert 2	Expert 3	Qualification
Al-Qur'an Memorization System	4	3,5	4	Good
Supporting Features Memorizing the Qur'an	4	4	4	Very Good
Sema'an Listener Criteria	4	3,5	3,5	Good

Referring to Hardanti's research in 2021, where the strength of memorizing an Al-Qur'an memorizer is generally influenced by two things, namely the partner and the system for memorizing the Al-Qur'an used (Hartanti et al., 2021). So, from the validation test results in the field of HIFDZ application material, the first indicator, namely the memorization system, got a score of 4 or "Good." The third indicator, the partner criteria, scored 3.5 or "good."

The results of the expert assessment showed an average media score between 3-5 (Table 2). Expert assessment by three experts in the field of application shows that the HIFDZ application is considered feasible to use. Similar to Wedayanti's research in 2019, the aspects that must be considered for the success of an application to be declared suitable for mass use are Usability, Functionality, and User Experience (Wedayanti et al., 2019).

**Table 2. Data of Expert Appraisal of Media**

Criteria of validity	Expert 1	Expert 2	Expert 3	Qualification
Restorability	5	5	4	Very Good
Easy to Use	3	4	4	Good
Function Understandability	4	5	5	Very Good
Hardware Environmental Adaptability	5	5	4	Very Good

The assessment results of practitioners who memorize the Al-Qur'an show an average score of material between 4.5-5 (Table 3). Expert assessment by three practitioners in the field of Al-Qur'an shows that the HIFDZ application is considered very good. Based on the validation test results of the HIFDZ application in the practitioner field, the results show an average of "very good," therefore the usability aspect is based on criteria that follow the need to memorize the Al-Quran through the application (Syaf, 2022).

**Table 3. Data of Practitioner of Material**

Criteria of validity	Practitioner 1	Practitioner 2	Practitioner 3	Qualification
Al-Qur'an Memorization System	5	5	4,5	Very Good
Supporting Features for Memorizing the Qur'an	5	5	5	Very Good
Listener Criteria	5	4,5	4,5	Very Good

The practicality of the HIFDZ application was tested on 3 Al-Qur'an memorizers, showing that HIFDZ can be used easily by Al-Qur'an memorizers. The memorizer of the Qur'an looks enthusiastic about the Al-Qur'an memorization system offered by the HIFDZ application. Memorizers of the Qur'an, when interviewed to give their opinion regarding this application, generally expressed appreciation:

**Table 4. Analysis of Practitioner Interview Results**

No.	Initials	Review	Points of the App
1.	(FA)	<i>"The concept of the application is fun, the color selection is very good, the placement of</i>	- <b>Application is fun</b>

		<i>the icons is very precise, and this application will definitely be very helpful for memorizing the Qur'an."</i>	<ul style="list-style-type: none"> <li>- Color selection is very good</li> <li>- Icons is very precise</li> <li>- Very helpful for memorizing the Qur'an.</li> </ul>
2.	(JA)	<i>"Masha Allah, to be honest, I was surprised by the application. It's a great concept, no kidding. Memorization and Muroja'ah become one, the complete package as it should be. I'm sure there must be a lot of Al-Qur'an memorizers out there who are really helped by the presence of this HIFDZ application. Truly innovative, intelligent and makes things easier."</i>	<ul style="list-style-type: none"> <li>- Great concept</li> <li>- Memorization and Muroja'ah become one package</li> <li>- Innovative</li> <li>- Intelligent</li> <li>- Memorizers helped by HIFDZ</li> <li>- Makes things easier</li> </ul>
3.	(RK)	<i>"Excellent application. It is great that there is a difference between brothers and sisters, so it feels safer when using the application. Moreover, the application can be used anytime, so you can keep listening to each other."</i>	<ul style="list-style-type: none"> <li>- Excellent application</li> <li>- Difference between brothers and sisters</li> <li>- It feels safer when using</li> <li>- It can be used at any time</li> <li>- Can keep on listening to each other</li> </ul>

The results of interviews with three practitioners who are hafiz of the 30 chapters of the Qur'an show that the HIFDZ application has several main good points of advantage, namely: Fun, the Color selection is good, Helpful for memorizing, Great concept, One package for memorizing and muroja'ah, Innovative, Intelligent, Portable, Difference man and woman, and Safer for users. Following what was expressed by Wahyuningrum in 2022, the choice of application as a medium for memorizing the Al-Qur'an was considered appropriate because the application can make it easier for users to use it only via telephone and can be used anywhere and at any time, so this is relevant to the results interviews obtained, where the HIFDZ application was said to be portable, and a portable application is following the needs of memorizing the Al-Qur'an (Wahyuningrum & Herfiati, 2022).

The impact that memorizers feel after using the HIFDZ application is that HIFDZ helps memorizers. Suppose the application, after being tested by a practitioner who is a hafiz of 30 juz, says that the application can help memorize the Al-Qur'an. In that case, the application has been deemed feasible and successful. This is also in line with the results of validation tests in the fields of media and materials as well as design, which show good results. This shows that the Al-Qur'an memorization application can provide convenience for Al-Qur'an memorizers in memorizing the Al-Qur'an (Syaf, 2022).

## Conclusions

HIFDZ is an innovation designed to bring together peer teaching-based Al-Qur'an memorizers. Using the peer teaching system will make memorizing deposits more flexible because it will adjust the time between partners. HIFDZ is designed with several excellent features, including the Memorization Journal Digitization feature, which is a feature that serves as a note to correct an error that occurs when depositing the memorization of the Qur'an, Select Gender feature where with this feature, the memorizers of the Qur'an will only find same-sex partners so that they can increase security in using the application and reducing the possibility of unwanted things happening, the Voice Call feature is a feature that is used for memorizing deposits and has been validated by experts as the most effective way to deposit memorization of the Qur'an, as well as the Reminder feature which will remind the user when there is a schedule in Ziyadah or Muroja'ah memorizing the Qur'an.

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## References

- Bakri, M. S. (n.d.). Strategi Guru Tahfidz dalam Meningkatkan Semangat Hafalan Al-Qur'an Santri di Pesantren Al-Ainy Kertosono Nganjuk.
- Budiaji, W. (2018). Skala Pengukuran dan Jumlah Respon Skala Likert [Preprint]. INA-Rxiv. <https://doi.org/10.31227/osf.io/k7bgy>

- Fenty Sulastini & Moh. Zamili. (2019). Efektivitas Program Tahfidzul Qur'an dalam Pengembangan Karakter Qur'ani. *Jurnal Pendidikan Islam Indonesia*, 4(1), 15–22. <https://doi.org/10.35316/jpii.v4i1.166>
- Hartanti, A. D., Abdurrahmansyah, A., & Adil, M. (2021). Tahfiz Qur'an dengan Metode Tasmi' dan Sambung Ayat (Strategi Pengorganisasian, Penyajian, dan Pengelolaannya di Pondok Pesantren Al-Lathifiyyah Palembang). *Al-Fikru: Jurnal Ilmiah*, 15(2), 97–112. <https://doi.org/10.51672/alfikru.v15i2.42>
- Hidayah, N. (n.d.). STRATEGI PEMBELAJARAN TAHFIDZ AL-QUR'AN DI LEMBAGA PENDIDIKAN.
- Hudin, A. M., & Budiani, M. S. (2021). Hubungan antara Workplace Well-Being dengan Kinerja Karyawan pada PT. X di Sidoarjo. 8.
- Idayu, H. (2020). Bimbingan Dan Konseling Belajar: Managemen Waktu Penghafal Al Qur'an Dalam Meraih Prestasi Akademik. *KONSELING EDUKASI "Journal of Guidance and Counseling,"* 4(1). <https://doi.org/10.21043/konseling.v4i1.7306>
- Joni, R., Rahman, A., & Yanuarti, E. (n.d.). STRATEGI GURU AGAMA DESA DALAM MENINGKATKAN KEMAMPUAN MEMBACA AL-QUR'AN WARGA DESA.
- Kusanti, S. (2022). PENINGKATAN PEMAHAMAN KONSEP SISTEM KOORDINAT MELALUI METODE TUTOR SEBAYA PADA SISWA KELAS VI SDN BENDOGERIT 2 KOTA BLITAR.
- Luh Putri Ari Wedayanti, N., Kadek Ayu Wirdiani, N., & Ketut Adi Purnawan, I. (2019). Evaluasi Aspek Usability pada Aplikasi Simalu Menggunakan Metode Usability Testing. *Jurnal Ilmiah Merpati (Menara Penelitian Akademika Teknologi Informasi)*, 113. <https://doi.org/10.24843/JIM.2019.v07.i02.p03>
- Malhotra, & Naresh, K. (2021). *Basic Marketing Research*. New Jersey: Pearson Education. Inc., 4th ed.
- Mcdaniel, C. J., & Gates, R. (2013). *Marketing research essentials (8th Ed.)*. New York: John Wiley And Sons.
- Muhammad, M. (2022). Yahudi di Indonesia: Analisis Interpretasi Nawawi al-Bantani dalam Kitab Marāḥ Labīd. *AL QUDS: Jurnal Studi Alquran dan Hadis*, 6(2), 887. <https://doi.org/10.29240/alquds.v6i2.4298>
- Nasrowi, B. M., & Yusuf, M. (2022). Pendidikan Berbasis Ruang Sosial: Studi Penghafal Al-Qur'an pada Anak Usia Dini di Dalam Keluarga. 2.
- Nur, H. (2019). Penggunaan Metode Waterfall Dalam Rancang Bangun Sistem Informasi Penjualan. *Generation Journal*, 3(1), 1. <https://doi.org/10.29407/gj.v3i1.12642>
- Partono, P., & Rizqiyah, S. U. (2022). Penerapan Metode Tasmi' dalam Meningkatkan Kualitas Hafalan Al-Qur'an di Pondok Pesantren Putri Tahfidz Al-Ghurobaa' Tumpangkrasak Jati Kudus. *MA'ALIM: Jurnal Pendidikan Islam*, 3(02), 133–144. <https://doi.org/10.21154/maalim.v3i2.4927>
- Prahata Jasa, Y., Andrianto, S., & Josi, A. (2023). Pengembangan Aplikasi Android Hafalan Surah Al-Qur'an Menggunakan Metode Takrir. *JSITIK: Jurnal Sistem Informasi dan Teknologi Informasi Komputer*, 1(2), 77–93. <https://doi.org/10.53624/jsitik.v1i2.160>

- Prayitno, M. A. (n.d.). Gerakan Siswa Mengajar (GSM) Implementasi Metode Tutor Sebaya Di SMPN 1 Mejayan Kabupaten Madiun.
- Purnia, D. S., Rifai, A., & Rahmatullah, S. (n.d.). Penerapan Metode Waterfall dalam Perancangan Sistem Informasi Aplikasi Bantuan Sosial Berbasis Android.
- Rokim, R., & Ni'mah, F. (2022). PENGARUH MENGHAFAL AL-QUR'AN TERHADAP KECERDASAN EMOSIONAL SANTRI KOMPLEK DARUL AMIN DI PP ROUDLOTUL QUR'AN TLOGOANYAR LAMONGAN. *Akademika*, 16(1). <https://doi.org/10.30736/adk.v16i1.913>
- Santoso, H., Riyanto, P., & Haris, I. N. (2018). PENGARUH MODEL PEMBELAJARAN TUTOR SEBAYA (PEER TAECHING) TERHADAP MOTIVASI BELAJAR PENDIDIKAN JASMANI SISWA. 4(02).
- Syaf, M. N. (2022). TINJAUAN TERHADAP ALQURAN DIGITAL DALAM PERSPEKTIF HUKUM ISLAM.
- Wahid, A. A. (2020). Analisis Metode Waterfall Untuk Pengembangan Sistem Informasi.
- Wahyuningrum, R., & Herfiati, H. (2022). Pembuatan Aplikasi Al-Qur'an Sebagai Alat Bantu Menghafal Al-Qur'an Juz 30 pada Mi.Asya-fi'iyah 03. *Jurnal Esensi Infokom : Jurnal Esensi Sistem Informasi dan Sistem Komputer*, 6(1), 35–45. <https://doi.org/10.55886/infokom.v6i1.454>