

## DAFTAR PUSTAKA

- Afiifah, K., Azzahra, Z. F., & Anggoro, A. D. (2022). Analisis Teknik Entity-Relationship Diagram dalam Perancangan Database Sebuah Literature Review. *INTECH*, 3(1), 8–11. <https://doi.org/10.54895/intech.v3i1.1261>
- Akbar, I. S., & Haryanti, T. (2023). Pengembangan Entity Relationship Diagram Database Toko Online Ira Surabaya. *Computing Insight : Journal of Computer Science*, 3(2), 28–35. [https://doi.org/10.30651/comp\\_insight.v3i2.12002](https://doi.org/10.30651/comp_insight.v3i2.12002)
- Alaidaros, H., Omar, M., & Romli, R. (2021). The state of the art of agile kanban method: challenges and opportunities. *Independent Journal of Management & Production*, 12(8), 2535–2550. <https://doi.org/10.14807/ijmp.v12i8.1482>
- Al-Fedaghi, S. (2021). UML Sequence Diagram: An Alternative Model. *International Journal of Advanced Computer Science and Applications (IJACSA)*, 12(5), 635–645. <https://doi.org/10.14569/IJACSA.2021.0120576>
- Aliyah Aliyah, Nahrin Hartono, & Asrul Azhari Muin. (2024). Penggunaan User Acceptance Testing (UAT) Pada Pengujian Sistem Informasi Pengelolaan Keuangan Dan Inventaris Barang. *Switch : Jurnal Sains Dan Teknologi Informasi*, 3(1), 84–100. <https://doi.org/10.62951/switch.v3i1.330>
- Al-Saqqa, S., Sawalha, S., & Abdelnabi, H. (2020). Agile software development: Methodologies and trends. *International Journal of Interactive Mobile Technologies*, 14(11), 246–270. <https://doi.org/10.3991/ijim.v14i11.13269>
- Alviando, L., Bhawiyuga, A., & Kartikasari, D. P. (2023). Penerapan Websocket pada Sistem Live Chat berbasis Web (Studi Kasus Website Kwikku.com) (Vol. 7, Issue 2). <http://j-ptiik.ub.ac.id>
- Apriyanti, N., Fitri Ana Wati, S., & Rezha Efrat Najaf, A. (2024). PEMANFAATAN METODOLOGI PXP DAN PENGUJIAN USER ACCEPTANCE TESTING (UAT) DALAM PENGEMBANGAN WEBSITE E-KAVLING. *JATI (Jurnal Mahasiswa Teknik Informatika)*, 8(3), 3678–3686. <https://doi.org/10.36040/jati.v8i3.9766>
- Badgular, P. (2024). Implementing Event-Driven Architectures for Real-Time Insights. *Journal of Technological Innovations (JTI)*, 5(1). <https://doi.org/https://doi.org/10.93153/wmtbmr58>
- Badmus, E., & Licea, D. (2024). *EVENT-DRIVEN ARCHITECTURES FOR SCALABLE MICROSERVICES: THE EVENT SOURCING ADVANTAGE*. <https://www.researchgate.net/publication/383496110>
- Barde, K. (2023). Modular Monoliths: Revolutionizing Software Architecture for Efficient Payment Systems in Fintech. *International Journal of Computer Trends and Technology*, 71(10), 20–27. <https://doi.org/10.14445/22312803/ijctt-v71i10p103>

- Božić, V. (2023). *Microservices Architecture*.  
<https://doi.org/10.13140/RG.2.2.21902.84802>
- Chibuike Daraojimba, E., Nnamdi Nwasike, C., Oluwatoyin Adegbite, A., Alex Ezeigweneme, C., & Osheyor Gidiagba, J. (2024). COMPREHENSIVE REVIEW OF AGILE METHODOLOGIES IN PROJECT MANAGEMENT. *Computer Science & IT Research Journal*, 5(1), 190–218.  
<https://doi.org/10.51594/csitrj.v5i.717>
- Claudiyap, J. M., & Saian, P. O. N. (2022). IMPLEMENTASI SISTEM BROADCAST MESSAGE MENGGUNAKAN PYTHON DAN REDIS PUB/SUB. *JUPI (Jurnal Ilmiah Penelitian Dan Pembelajaran Informatika)*, 7(3), 671–679. <https://doi.org/10.29100/jupi.v7i3.3014>
- Crispin, L., & House, T. (2003). *Testing Extreme Programming*. Addison-Wesley.  
<https://books.google.co.id/books?id=eTREaOEImsgC>
- Damayanti, D., & Nuzuli, A. K. (2023). STUDI PERBANDINGAN PENGGUNAAN MEDIA SOSIAL DAN FORUM DISKUSI DARING DALAM MENINGKATKAN INTERAKSI DAN KOLABORASI ANTAR MAHASISWA DI PERGURUAN TINGGI. *Edunomika*, 8(1), 1–13.  
<https://jurnal.stie-aas.ac.id/index.php/jie/article/view/10221>
- Dennen, V. P., & Bagdy, L. M. (2024). Transitions in social media use and social media use for transition. *Proceedings of the International Conference on Networked Learning*, 13. <https://doi.org/10.54337/nlc.v13.8546>
- Dubey, A. (2023). Enhancing Real Time Communication and Efficiency With Websocket. *International Research Journal of Engineering and Technology*, 10(8), 891–895. <https://issuu.com/irjet/docs/irjet-v10i8147>
- Eka Putra, F. P., Muslim, F., Hasanah, N., Holipah, Paradina, R., & Alim, R. (2024). Analisis Komparasi Protokol Websocket dan MQTT Dalam Proses Push Notification. *Jurnal Sistim Informasi Dan Teknologi*, 63–72.  
<https://doi.org/10.60083/jsisfotek.v5i4.325>
- Erinsyah, Moh. F., Sasmito, G. W., Wibowo, D. S., & Bakti, V. K. (2024). Sistem Evaluasi Pada Aplikasi Akademik Menggunakan Metode Skala Likert Dan Algoritma Naïve Bayes. *Komputa : Jurnal Ilmiah Komputer Dan Informatika*, 13(1), 74–82. <https://doi.org/10.34010/komputa.v13i1.10940>
- Farias, K., & Lazzari, L. (2023). Event-driven Architecture and REST Architectural Style: An Exploratory Study on Modularity. *Journal of Applied Research and Technology*, 21(3), 338–351.  
<https://doi.org/10.22201/icat.24486736e.2023.21.3.1764>
- Fitriani, Y., Pakpahan, R., Informasi, S., & Informasi, T. (2020). SISTEM INFORMASI FORUM DISKUSI ONLINE ANTAR MAHASISWA PADA

- SMARTPHONE. *JISAMAR (Journal of Information System, Applied, Management, Accounting and Research)*, 4(4), 92–101. <http://journal.stmikjayakarta.ac.id/index.php/jisamarTelp.+62-21-3905050>
- Gardenia, Y., & Hardaya, A. (2021). PERANCANGAN FORUM DISKUSI UNIVERSITAS SURYADARMA BERBASIS WEBSITE DAN APLIKASI ANDROID. *JURNAL SISTEM INFORMASI UNIVERSITAS SURYADARMA*, 8(1), 203–212. <https://doi.org/https://doi.org/10.35968/jsi.v8i1.617>
- Ghosh, R. K., & Ghosh, H. (2023). *Distributed Systems*. Wiley. <https://doi.org/10.1002/9781119825968>
- Google Classroom. (n.d.-a). *Google Classroom*. Retrieved February 12, 2025, from <https://sites.google.com/view/classroom-workspace/home?authuser=0>
- Google Classroom. (n.d.-b). *Google Classroom - Pros and Cons*. Retrieved February 12, 2025, from <https://sites.google.com/view/classroom-workspace/pros-and-cons?authuser=0>
- Gote, A. (2024). REAL-TIME INTERACTIVITY IN HYBRID APPLICATIONS WITH WEB SOCKETS. *International Research Journal of Modernization in Engineering Technology and Science*, 6(1), 2459–2463. <https://doi.org/10.56726/IRJMETS48494>
- Hamdulay, N. A. (2023). Framework Study for Agile Software Development Via Scrum and Kanban. *The Online Journal of Distance Education and E-Learning*, 11(2), 1388–1399. <https://doi.org/http://dx.doi.org/10.1142/S0219877020300025>
- Hamza, M. (2023). *Effectiveness of Scrum Master in Agile Projects*. <https://doi.org/10.20944/preprints202312.0046.v1>
- Husna, N. S., Octaviani, R., Sahara, Z., & Usiono, U. (2024). PENERAPAN METODE DISKUSI UNTUK MENINGKATKAN KEMAMPUAN KOMUNIKASI PESERTA DIDIK KELAS III DI MIS AL-WARDAH. *Khazanah Pendidikan*, 18(1), 53. <https://doi.org/10.30595/jkp.v18i1.20311>
- Ilyasa, R., Lelitasari, A., Satria, R. G., Vetian, R. A., Effendi, N., & Yudianta, M. R. (2024). APLIKASI FORUM DISKUSI DAN BELAJAR MANDIRI UNTUK SISWA MENGGUNAKAN METODE RAPID APPLICATION DEVELOPMENT (RAD). *JUTIM (Jurnal Teknik Informatika Musirawas)*, 9(1), 71–80.
- Intern, D. (2021, May 19). *Contoh Use Case Diagram Lengkap dengan Penjelasannya*. <https://www.dicoding.com/blog/contoh-use-case-diagram/>
- Iovescu, D., & Tudose, C. (2024). Real-Time Document Collaboration—System Architecture and Design. *Applied Sciences*, 14(18), 8356. <https://doi.org/10.3390/app14188356>

- Jánki, Z. R., & Bilicki, V. (2023). Rule-Based Architectural Design Pattern Recognition with GPT Models. *Electronics (Switzerland)*, 12(15). <https://doi.org/10.3390/electronics12153364>
- Khan, S. M. A. (2023). *Popular Software Architecture Used In Software Development*. <https://www.researchgate.net/publication/370715656>
- Kholikirrojik, H., & Muliawati, A. (2023). Perancangan Sistem Informasi Penerimaan Siswa Baru pada Satuan Jenis Paud (SPS) TAAM Al-Muttaqin Berbasis Website. *Seminar Nasional Mahasiswa Ilmu Komputer Dan Aplikasinya (SENAMIKA)*.
- Khriji, S., Benbelgacem, Y., Chéour, R., Houssaini, D. El, & Kanoun, O. (2022). Design and implementation of a cloud-based event-driven architecture for real-time data processing in wireless sensor networks. *The Journal of Supercomputing*, 78(10), 3374–3401. <https://doi.org/10.1007/s11227-021-03955-6>
- Kondam, A. (2024). Event-Driven API Gateways: Enabling Real-time Communication in Modern Microservices Architectures Scalability and performance. *International Journal of Advanced Research and Emerging Trends (JARET)*, 1(2), 122–134. <http://creativecommons.org/licenses/by/4.0>
- Koundinya, C. K. (2024). Agile Software Development. *African Journal of Biomedical Research*, 73–78. <https://doi.org/10.53555/AJBR.v27i2S.1258>
- Laelah, N. A., & Aeni, M. H. (2022). PENGARUH KOMUNIKASI INTERPERSONAL TERHADAP PRESTASI BELAJAR PADA MAHASISWA. *Transitions in Social Media Use and Social Media Use for Transition: A Survey Study of the Shift from High School to College*, 2(2). <https://doi.org/10.15408/virtu.vxxx.xxxxx>
- Lazzari, L., & Farias, K. (2022). *Effects of Event-driven Architecture on Modularity Software: A Research Agenda*. <https://kleinnerfarias.github.io/publication/eda-agenda-2022/>
- Lazzari, L., & Farias, K. (2023). *Uncovering the Hidden Potential of Event-Driven Architecture: A Research Agenda*. <https://doi.org/https://doi.org/10.48550/arXiv.2308.05270>
- MDN. (2024, September 25). *The WebSocket API (WebSockets) - Web APIs*. [https://developer.mozilla.org/en-US/docs/Web/API/WebSockets\\_API](https://developer.mozilla.org/en-US/docs/Web/API/WebSockets_API)
- Microsoft. (n.d.-a). *Collaborate in Teams*. Retrieved February 26, 2025, from <https://support.microsoft.com/en-us/office/collaborate-in-teams-31e38b35-96ab-447a-acb2-97bb5c0716c0>

- Microsoft. (n.d.-b). *Event-driven architecture style*. Retrieved November 14, 2024, from <https://learn.microsoft.com/en-us/azure/architecture/guide/architecture-styles/event-driven>
- Microsoft. (n.d.-c). *What is Microsoft Teams? - Microsoft Support*. Retrieved February 26, 2025, from <https://support.microsoft.com/en-us/topic/what-is-microsoft-teams-3de4d369-0167-8def-b93b-0eb5286d7a29>
- Moisei, A. (2024). THE IMPACT OF THE INTERNET ON STUDENT COMMUNICATION DEVELOPMENT. *JOURNAL OF SOCIAL SCIENCES*, 7(2), 68–80. [https://doi.org/10.52326/jss.utm.2024.7\(2\).07](https://doi.org/10.52326/jss.utm.2024.7(2).07)
- Muhamad Saepuloh, A., & Ginting, S. (2022). PERANCANGAN SISTEM INFORMASI MANAJEMEN PROYEK DENGAN MENGGUNAKAN SOFTWARE NEST.JS BERBASIS WEB DI PT. MITRA PAJAKKU. *INFOKOM (Informatika & Komputer)*, 10(1), 1–9. <https://doi.org/10.56689/infokom.v10i1.818>
- NestJS. (n.d.). *Documentation | NestJS - A progressive Node.js framework*. Retrieved May 14, 2025, from <https://docs.nestjs.com/>
- Nistrina, K., & Sahidah, L. (2022). UNIFIED MODELLING LANGUAGE (UML) UNTUK PERANCANGAN SISTEM INFORMASI PENERIMAAN SISWA BARU DI SMK MARGA INSAN KAMIL. *Jurnal Sistem Informasi*, 4(1), 17–23. <https://ejournal.unibba.ac.id/index.php/j-sika/article/view/839>
- Olukunle, O. E., & Oyerinde, I. M. (2021). A REVIEW ON SOFTWARE ARCHITECTURAL PATTERNS. *Global Scientific Journals*, 9(8), 26–30. <https://www.researchgate.net/publication/358123051>
- Ononiwu, C. (2021). Role of online discussion forums in enhancing users' cognitive skills. *Journal of Teaching English for Specific and Academic Purposes*, 9(3), 307–320. <https://doi.org/10.22190/JTESAP2103307O>
- Panjaitan, S. M., Hendri, & Naibaho, R. (2022). Perancangan Forum Diskusi Mahasiswa Berbasis Website ( Studi Kasus Universitas Dinamika Bangsa Jambi). *Jurnal Informatika Dan Rekayasa Komputer(JAKAKOM)*, 2(2), 276–284. <https://doi.org/10.33998/jakakom.2022.2.2.156>
- Panwar, V. (2024). Web Evolution to Revolution: Navigating the Future of Web Application Development. *International Journal of Computer Trends and Technology*, 72(2), 34–40. <https://doi.org/10.14445/22312803/ijett-v72i2p107>
- Paradigm, V. (n.d.). *What is Sequence Diagram?* Retrieved May 27, 2025, from <https://www.visual-paradigm.com/guide/uml-unified-modeling-language/what-is-sequence-diagram/>
- Praniffa, A. C., Syahri, A., Sandes, F., Fariha, U., & Giansyah, Q. A. (2023). Pengujian Sistem Informasi Parkir Berbasis Web Pada UIN SUSKA RIAU

- Menggunakan White Box dan Black Box Testing. *Jurnal Testing Dan Implementasi Sistem Informasi*, 1(1), 1–16. <https://doi.org/10.55583/jtisi.v1i1.321>
- Pratama, I. P. A. E., & Arisna, I. W. G. (2022). FIGHTER PLANE ONLINE GAME BASED ON DESIGN SCIENCE RESEARCH METHODOLOGY USING SOCKET.IO AND NODEJS. *Indonesian Journal of Engineering and Science*, 3(2), 029–037. <https://doi.org/10.51630/ijes.v3i2.38>
- Prickett, S. (2024, February 21). *What is Redis?: An Overview*. <https://redis.io/learn/develop/node/nodecrashcourse/whatisredis>
- Purnama, I. (2023). Clinical Information System Using Extreme Programming Method. *International Journal of Science, Technology & Management*, 4(5), 1229–1235. <https://doi.org/10.46729/ijstm.v4i5.931>
- Rachel, T., & Susetyo, Y. A. (2022). Implementasi Pengiriman Pesan Broadcast dengan Redis Pub/Sub dan Bahasa Pemrograman Nim. *INOVTEK Polbeng - Seri Informatika*, 7(1), 14. <https://doi.org/10.35314/isi.v7i1.2314>
- Rahmatulloh, A., Nugraha, F., Gunawan, R., & Darmawan, I. (2022). Event-Driven Architecture to Improve Performance and Scalability in Microservices-Based Systems. *2022 International Conference Advancement in Data Science, E-Learning and Information Systems (ICADEIS)*, 01–06. <https://doi.org/10.1109/ICADEIS56544.2022.10037390>
- Rajak, C. K., Soni, U., Biswas, B., & Shrivastava, A. K. (2021). Real-time web based Timing display Application for Test Range Applications. *2021 2nd International Conference on Range Technology (ICORT)*, 1–6. <https://doi.org/10.1109/ICORT52730.2021.9581663>
- Redis. (n.d.-a). *Low-latency message queue & broker software*. Retrieved November 11, 2024, from <https://redis.io/solutions/messaging/>
- Redis. (n.d.-b). *Pub/Sub*. Retrieved November 11, 2024, from <https://redis.io/glossary/pub-sub/>
- Redis. (n.d.-c). *Redis Pub/Sub*. Retrieved November 13, 2024, from <https://redis.io/docs/latest/develop/interact/pubsub/>
- Redis. (n.d.-d). *Redis sorted sets*. Retrieved November 11, 2024, from <https://redis.io/docs/latest/develop/data-types/sorted-sets/>
- Redis. (n.d.-e). *Redis Streams*. Retrieved November 11, 2024, from <https://redis.io/docs/latest/develop/data-types/streams/>
- Rindiani, D., & Izzah, L. (2023). THE EFFECTIVENESS OF USING QUORA WEBSITE IN IMPROVING STUDENTS' DESCRIPTIVE TEXT WRITING.

- Jurnal Pendidikan Dan Pembelajaran Khatulistiwa (JPPK)*, 12(10), 2577–2582. <https://doi.org/10.26418/jppk.v12i10.70611>
- Said, M. A., Belouaddane, L., Mihi, S., & Ezzati, A. (2024). Modulith Architecture: Adoption Patterns, Challenges, and Emerging Trends. *International Journal of Computing and Digital Systems*, 20, 189–203. <https://doi.org/10.12785/ijcds/XXXXXX>
- Saputra, U., Astrianda, N., Nasution, B. R., Anggara, A. A., Qaisa, R. S., & Jakfar, A. E. (2023). Analisa Pengujian Sistem Informasi Website E-Commerce Bali-Store Menggunakan Metode Black Box Testing. *Jurnal Teknologi Informasi*, 2(2), 95. <https://doi.org/10.35308/jti.v2i2.7847>
- Satria, F., Chasanah, N., & Iskandar, D. (2020). APLIKASI FORUM DISKUSI HIMPUNAN MAHASISWA TEKNIK UNIVERSITAS JENDERAL SOEDIRMAN MENGGUNAKAN LARAVEL. *Jurnal Teknik Informatika (Jutif)*, 1(1), 1–6. <https://doi.org/10.20884/1.jutif.2020.1.1.5>
- Satrio Wijaksono, D., Achmad Ismail, O., & Putri Pramitha, J. (2024). The Influence of Interpersonal Communication on Student Learning Motivation in Completing Final Projects. *Jurnal Ilmiah LISKI (Lingkar Studi Komunikasi)*, 10(1), 64–72. <http://journals.telkomuniversity.ac.id/liski64JurnalIlmiahLISKI>
- Seth, S. (2023). EVENT-DRIVEN ARCHITECTURES FOR REAL-TIME ANALYTICS AND DECISION-MAKING. *International Journal of Creative Research Thoughts*, 11(7), 279–282. [https://ijcrt.org/viewfull.php?&p\\_id=IJCRT2307857](https://ijcrt.org/viewfull.php?&p_id=IJCRT2307857)
- Shablii, T., & Tytenko, S. (2023). MODULAR MONOLITH AS A MICROSERVICES PRECURSOR. *Modern Engineering and Innovative Technologies*, 29–01, 25–32. <https://doi.org/10.30890/2567-5273.2023-29-01-038>
- Shadiq, J., Safei, A., & Loly, R. W. R. (2021). Pengujian Aplikasi Peminjaman Kendaraan Operasional Kantor Menggunakan BlackBox Testing. *INFORMATION MANAGEMENT FOR EDUCATORS AND PROFESSIONALS: Journal of Information Management*, 5(2), 97. <https://doi.org/10.51211/imbi.v5i2.1561>
- Shore, J., & Warden, S. (2021). *The Art of Agile Development* (2nd Edition). O'Reilly Media. <https://books.google.co.id/books?id=kXZIEAAAQBAJ>
- 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>
- Sismadi, W., Martono, B. A., Susanto, Y., & Muzaeni, A. (2024). IMPLEMENTASI ARSITEKTUR MICROSERVICES PADA WEB APLIKASI PENERIMAAN

- MAHASISWA BARU. *EDUTECH: Jurnal Inovasi Pendidikan Berbantuan Teknologi*, 4(2), 105–114. <https://doi.org/10.51878/edutech.v4i2.3062>
- Socket.IO. (2024, August 22). *Introduction*. <https://socket.io/docs/v4/>
- Stack, M. (2022). *Event-Driven Architecture in Golang: Building complex systems with asynchronicity and eventual consistency*. Packt Publishing. <https://books.google.co.id/books?id=ovKZEAAAQBAJ>
- Su, R., & Li, X. (2024). *Modular Monolith: Is This the Trend in Software Architecture?* <http://arxiv.org/abs/2401.11867>
- Suthendra, J. A., & Pakereng, M. A. I. (2020). Implementation of Microservices Architecture on E-Commerce Web Service. *ComTech: Computer, Mathematics and Engineering Applications*, 11(2), 89–95. <https://doi.org/10.21512/comtech.v11i2.6453>
- Syabania, R., & Rosmawarni, N. (2021). PERANCANGAN APLIKASI CUSTOMER RELATIONSHIP MANAGEMENT (CRM) PADA PENJUALAN BARANG PRE-ORDER BERBASIS WEBSITE. *Jurnal Rekayasa Informasi*, 10(1), 44–49. <https://ejournal.istn.ac.id/index.php/rekayasainformasi/article/view/951>
- Tukaram Patange, J. T. P. (2024). Web learning: Opportunities and challenges. *IP Indian Journal of Library Science and Information Technology*, 9(1), 37–41. <https://doi.org/10.18231/j.ijlsit.2024.006>
- Unhelkar, B. (2017). *Software Engineering with UML*. Auerbach Publications. <https://doi.org/10.1201/9781351235181>
- Uriawan, W., Herdiyanto, R. F., Imam, R., Millah, S., Irhamnillah, S., & Gunawan, S. N. (2024). *Real-Time Chatbot: Microservices Implementation in Distributed System Architecture*. <https://doi.org/10.20944/preprints202407.0028.v1>
- Wahyuni, R. (2024). Pengaruh Komunikasi Interpersonal pada Kinerja Organisasi - Sebuah Meta-Analisis. *Journal of Administration and Educational Management*, 7(2). <https://doi.org/10.31539/alignment.v7i2.10066>
- Widiyatmoko, A. (2021). The effectiveness of google classroom as a tool to support online science learning: a literature review. *Journal of Physics: Conference Series*, 1918(5), 052069. <https://doi.org/10.1088/1742-6596/1918/5/052069>
- Zhekova, M., Kehayov, T., & Gaftandzhieva, S. (2024). A Real-Time Web-Based Academic Discussion Platform. *TEM Journal*, 13(1), 590–604. <https://doi.org/10.18421/TEM131-62>