



**E-PERMIT INTEGRASI TELEGRAM BERBASIS
WEB MENGGUNAKAN PERANGKAT RFID**

UNDERGRADUATE THESIS

**Submitted as one of the requirements to
obtain
Sarjana Komputer (S.Kom)**

**By:
YOHANA BRILIANT CHRISTANTI
012201905005**

**FACULTY OF COMPUTING
INFORMATION SYSTEM STUDY PROGRAM**

CIKARANG

MARCH, 2023

PANEL OF EXAMINER APPROVAL

The Panel of Examiners declare that the undergraduate thesis entitled “**E-Permit Integrasi Telegram Berbasis Web Menggunakan Perangkat RFID**” that was submitted by Yohana Brilliant Christanti majoring in Information System from the Computing was assessed and approved to have passed the Oral Examination on 24th March 2023.

Panel of Examiner



.....

Genta Sahuri, M.Kom



.....

Dr.Hasanul Fahmi



.....

Hadi Suprayitno, S.Kom., MM

Copyright by
Yohana Brilliant Christanti
2023

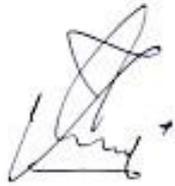
E-Permit Integrasi Telegram Berbasis Web Menggunakan Perangkat RFID

By

Yohana Brilliant Christanti

012201905005

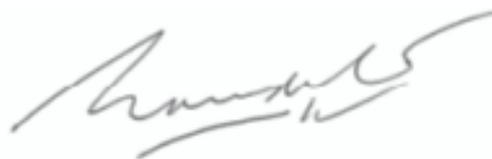
Approved:



Hadi Suprayitno, S.Kom., MM
Thesis Advisor



Ronny Juwono, S.Pd., M.T.
Program Head Information System



Ir. Rila Mandala, M. Eng , Ph.D.
Dean of Faculty of Computing

STATEMENT OF ORIGINALITY

In my capacity as an active student of President University and as the author of the undergraduate thesis/final project/business plan (underline that applies) stated below:

Name : Yohana Brilliant Christanti
Student ID number : 012201905005
Study Program : Information System
Faculty : Computing

I hereby declare that my undergraduate thesis/final project/business plan entitled **"E-Permit Integrasi Telegram Berbasis Web Menggunakan Perangkat RFID"** is, to the best of my knowledge and belief, an original piece of work based on sound academic principles. If there is any plagiarism, including but not limited to Artificial Intelligence plagiarism, is detected in this undergraduate thesis/final project/business plan, I am willing to be personally responsible for the consequences of these acts of plagiarism, and accept the sanctions against these acts in accordance with the rules and policies of President University.

I also declare that this work, either in whole or in part, has not been submitted to another university to obtain a degree.

Cikarang, March 2023



(Yohana Brilliant Christanti)

SCIENTIFIC PUBLICATION APPROVAL FOR ACADEMIC INTEREST

As a student of the President University, I, the undersigned:

Name : Yohana Brilliant Christanti

Student ID number : 012201905005

Study program : Information System

for the purpose of development of science and technology, certify, and approve to give President University a non-exclusive royalty-free right upon my final report with the title:

“E-Permit Integrasi Telegram Berbasis Web Menggunakan Perangkat RFID”

With this non-exclusive royalty-free right, President University is entitled to converse, to convert, to manage in a database, to maintain, and to publish my final report. There are to be done with the obligation from President University to mention my name as the copyright owner of my final report.

This statement I made in truth.

Cikarang, March 2023



(Yohana Brilliant Christanti)

ADVISOR'S APPROVAL FOR PUBLICATION

As a lecturer of the President University, I, the undersigned:

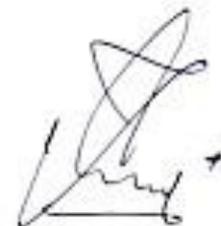
Advisor's Name : Hadi Suprayitno
NIDN : 201901784
Study program : Information System
Faculty : Computing

declare that following thesis:

Title of undergraduate thesis :E-Permit Integrasi Telegram Berbasis Web
Menggunakan Perangkat RFID
Undergraduate Thesis author :Yohana Brilliant Christanti
Student ID number :012201905005

will be published in **journal / institution's repository / proceeding / unpublsh**

Cikarang. March 2023



(Hadi Suprayitno, S.Kom., MM)

Final Draft_YohanaBriliantChr

ORIGINALITY REPORT

7 %	7 %	1 %	0 %
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

PRIMARY SOURCES

1	123dok.com Internet Source	1 %
2	docplayer.info Internet Source	1 %
3	repository.dinamika.ac.id Internet Source	<1 %
4	www.scribd.com Internet Source	<1 %
5	repository.its.ac.id Internet Source	<1 %
6	id.123dok.com Internet Source	<1 %
7	nanopdf.com Internet Source	<1 %
8	es.scribd.com Internet Source	<1 %
9	pt.scribd.com Internet Source	<1 %

10	www.perpusnas.go.id Internet Source	<1 %
11	idr.uin-antasari.ac.id Internet Source	<1 %
12	inwepo.co Internet Source	<1 %
13	fr.scribd.com Internet Source	<1 %
14	kc.umn.ac.id Internet Source	<1 %
15	widuri.raharja.info Internet Source	<1 %
16	eprints.radenfatah.ac.id Internet Source	<1 %
17	lib.unnes.ac.id Internet Source	<1 %
18	repository.president.ac.id Internet Source	<1 %
19	dspace.uii.ac.id Internet Source	<1 %
20	fr.slideshare.net Internet Source	<1 %
21	library.binus.ac.id Internet Source	<1 %

22	repository.usd.ac.id Internet Source	<1 %
23	repository.upstegal.ac.id Internet Source	<1 %
24	smpn2mentayahulu.blogspot.com Internet Source	<1 %
25	www.ojs.amikom.ac.id Internet Source	<1 %
26	www.pst.informatik.uni-muenchen.de Internet Source	<1 %
27	www.sistemphp.com Internet Source	<1 %

Exclude quotes Off

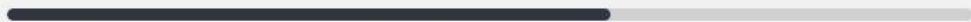
Exclude matches Off

Exclude bibliography On

GPTZERO REPORT

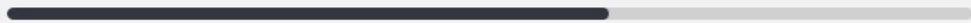
Stats

Average Perplexity Score: 624.096



A document's perplexity is a measurement of the randomness of the text

Burstiness Score: 623.482



A document's burstiness is a measurement of the variation in perplexity

Your sentence with the highest perplexity, "*Teknik ini memungkinkan bagi*", has a perplexity of: 3056

ABSTRAK

Kemenperin telah menetapkan tujuh sektor prioritas dalam transformasi Indonesia, salah satunya adalah sektor manufaktur. Sektor manufaktur dituntut bertransformasi menggunakan teknologi digital dalam setiap proses nilai industri sehingga menghasilkan peluang pekerjaan baru dan mengakomodasi jumlah tenaga kerja yang besar. Oleh karena itu PT Trimitra Chitrahasta mengeksekusi pengajuan dan persetujuan izin karyawan secara efektif dan efisien. Proyek Akhir ini akan membahas tentang pengembangan sistem aplikasi *E-Permit* berbasis website untuk mengelola data izin karyawan dan memastikan persetujuan atasan departemen tidak melebihi waktu tenggang yang telah ditentukan. Aplikasi ini akan mengelola izin karyawan yang dikirimkan menggunakan kartu karyawan berbasis RFID, *progress* persetujuan dari atasan masing-masing departemen, notifikasi pengingat bahwa izin telah dikirim dan menunggu persetujuan, serta mempercepat pengolahan data laporan sehingga tidak menimbulkan terlambatnya laporan absensi karyawan yang akan digunakan sebagai acuan perhitungan gaji karyawan.

Kata Kunci : *Human Resource*, Integrasi RFID, Elektronik Absensi, *Industri 4.0*.

DEDIKASI

Tugas akhir ini saya persembahkan untuk rekan-rekan saya di PT Trimitra Chitrahasta, semoga aplikasi ini dapat bermanfaat bagi perusahaan dan dapat dikembangkan lebih baik lagi kedepannya.

KATA PENGANTAR

Pertama, saya ingin berterima kasih kepada Tuhan Yesus Kristus, yang telah memberi saya kekuatan, pengetahuan, kemampuan dan kesempatan untuk melakukan final proyek ini. Tanpa berkat dan hikmat-Nya pencapaian ini tidak akan mungkin terjadi. Kemudian, saya ingin menyampaikan rasa terima kasih yang luar biasa kepada pihak-pihak yang telah mendukung saya sehingga final proyek ini dapat terlaksana,

1. Sumber kekuatan terbesar saya, keluarga saya. Dukungan, berkat dan cinta kasih sayang dari mamah papah saya yang memberikan saya kekuatan sehingga saya bisa mencapai tahap ini dalam hidup saya.
2. Bapak Hadi Suprayitno, S.Kom., MM, yang telah memberikan dukungan dan bimbingannya yang tulus setiap saat dan telah memberikan bimbingan, inspirasi dan saran yang tak ternilai dalam pencarian saya akan pengetahuan.
3. Bapak Genta Sahuri, Bapak Imron, dan seluruh dosen Sistem Informasi serta seluruh staff di President University yang telah begitu membantu saya.
4. Bagas, Moko, Roni, Bayu dan seluruh teman-teman Sistem Informasi angkatan 2019 night class karena telah menjadi pendukung terbaik dan membuat setiap hari di kampus menjadi lebih menyenangkan.
5. Dimas Wildan, Riyanti, Silvi dan Galih yang selalu membantu saya, setia mendengarkan semua masalah saya dan membuat saya tetap waras selama beberapa bulan terakhir.

2.5 Karya Sejenis	Error! Bookmark not defined.
2.5.1 Rancang Bangun Sistem Absensi Karyawan Menggunakan RFID di CV Fokus Abadi.....	Error! Bookmark not defined.
2.5.2 Software Absensi Mekari Talenta.....	Error! Bookmark not defined.
2.5.3 Kumpulan Atribut	Error! Bookmark not defined.
BAB III	Error! Bookmark not defined.
ANALISA SISTEM.....	Error! Bookmark not defined.
3.1 Gambaran Sistem	Error! Bookmark not defined.
3.1.1 Garis Besar <i>Existing</i> Proses	Error! Bookmark not defined.
3.1.2 Bisnis Proses To Be.....	Error! Bookmark not defined.
3.2 Analisa Kebutuhan Sistem	Error! Bookmark not defined.
3.2.1 Kebutuhan Interface.....	Error! Bookmark not defined.
3.2.2 Kebutuhan Data	Error! Bookmark not defined.
3.2.3 Kebutuhan Fungsional	Error! Bookmark not defined.
3.2.4 Kebutuhan Hardware	Error! Bookmark not defined.
3.2.5 Kebutuhan Software	Error! Bookmark not defined.
3.3 Use Case Diagrams	Error! Bookmark not defined.
3.4 Use Case Narratives	Error! Bookmark not defined.
3.5 Activity Diagram	Error! Bookmark not defined.
3.5.1 Karyawan - Add Permit.....	Error! Bookmark not defined.
3.5.2 Karyawan - Edit Permit	Error! Bookmark not defined.
3.5.3 Karyawan - Delete Permit	Error! Bookmark not defined.
3.5.4 Admin - Add Karyawan	Error! Bookmark not defined.
3.5.5 Admin - Edit Karyawan	Error! Bookmark not defined.
3.5.6 Admin - Delete Karyawan	Error! Bookmark not defined.
BAB IV	Error! Bookmark not defined.
DESAIN SISTEM.....	Error! Bookmark not defined.
4.1 Desain User Interface.....	Error! Bookmark not defined.
4.1.1 Login Page	Error! Bookmark not defined.
4.1.2 Page Master Data Employee	Error! Bookmark not defined.
4.1.3 Page Report E-Permit.....	Error! Bookmark not defined.
4.1.4 Modal Add New Employee.....	Error! Bookmark not defined.
4.1.5 Modal Edit Employee	Error! Bookmark not defined.

4.1.6 Dashboard User.....	Error! Bookmark not defined.
4.1.7 Form Pengajuan Izin.....	Error! Bookmark not defined.
4.1.8 Form Check Izin dan Cuti.....	Error! Bookmark not defined.
4.2 Desain Data	Error! Bookmark not defined.
4.2.1 Entity-Relation Diagram	Error! Bookmark not defined.
4.2.2 Perancangan Database	Error! Bookmark not defined.
BAB V.....	Error! Bookmark not defined.
IMPLEMENTASI SISTEM.....	Error! Bookmark not defined.
5.1 User Interface (UI) Development	Error! Bookmark not defined.
5.1.1 Dashboard E-Permit	Error! Bookmark not defined.
5.1.2 Halaman Pengajuan Cuti dan Izin Sakit	Error! Bookmark not defined.
5.1.3 Halaman Check Pengajuan Cuti & Izin Sakit.....	Error! Bookmark not defined.
5.1.4 Halaman Login Administrator	Error! Bookmark not defined.
5.1.5 Halaman Registrasi Administrator.....	Error! Bookmark not defined.
5.1.5 Halaman Dashboard Administrator	Error! Bookmark not defined.
5.1.6 Halaman Master Data Karyawan	Error! Bookmark not defined.
5.1.7 Halaman Approval Izin Level 1	Error! Bookmark not defined.
5.1.8 Halaman Approval Izin Level 2	Error! Bookmark not defined.
5.2 Pengembangan Aplikasi.....	Error! Bookmark not defined.
5.2.1 Administrator - Master Data Karyawan..	Error! Bookmark not defined.
5.2.2 Administrator - Laporan Izin Karyawan .	Error! Bookmark not defined.
5.2.3 User - Pengajuan Izin Cuti E-Permit	Error! Bookmark not defined.
BAB VI.....	Error! Bookmark not defined.
PENGUJIAN SISTEM	Error! Bookmark not defined.
6.1 Testing Environment	Error! Bookmark not defined.
6.2 Skenario Testing dan Hasil.....	Error! Bookmark not defined.
6.2.1 Fitur Admin	Error! Bookmark not defined.
6.2.2 Fitur Approval Izin Cuti & Sakit	Error! Bookmark not defined.
6.2.3 Fitur User.....	Error! Bookmark not defined.
BAB VII.....	Error! Bookmark not defined.
KESIMPULAN & SARAN	Error! Bookmark not defined.
7.1 Kesimpulan	Error! Bookmark not defined.

7.2 Saran	Error! Bookmark not defined.
REFERENSI	Error! Bookmark not defined.

DAFTAR TABEL

Table 2.1 Kumpulan Atribut	Error! Bookmark not defined.
Tabel 3.1 Tabel Kebutuhan Fungsional	Error! Bookmark not defined.
Tabel 3.2 Use Case Narrative Login Administrator.....	Error! Bookmark not defined.
Tabel 3.3 Use Case Narrative Manage User dari sisi Administrator	Error! Bookmark not defined.
Tabel 3.4 Use Case Narrative Manage Permit dari sisi Administrator	Error! Bookmark not defined.
Tabel 3.5 Use Case Narrative Manage Permit dari sisi User.....	Error! Bookmark not defined.
Tabel 4.1 Tabel Master Data Karyawan	Error! Bookmark not defined.
Tabel 4.2 Tabel Cuti Karyawan	Error! Bookmark not defined.
Tabel 4.3 Tabel Izin Sakit Karyawan.....	Error! Bookmark not defined.
Tabel 4.4 Tabel leaves_admin_log	Error! Bookmark not defined.
Tabel 4.5 Tabel leaves_sick_log	Error! Bookmark not defined.
Tabel 6.1 Testing Environment Spesifikasi	Error! Bookmark not defined.
Tabel 6.2 Skenario Testing Fitur Admin.....	Error! Bookmark not defined.
Tabel 6.3 Tabel Skenario Testing Fitur Approval .	Error! Bookmark not defined.
Tabel 6.4 Tabel Skenario Testing Fitur User	Error! Bookmark not defined.

DAFTAR GAMBAR

Gambar 1.1 Rapid Application Development (RAD) Model **Error! Bookmark not defined.**

Gambar 2.1 Tampilan Menu Absensi CV Fokus Abadi **Error! Bookmark not defined.**

Gambar 2.2 Tampilan Dashboard Jadwal Karyawan..... **Error! Bookmark not defined.**

Gambar 3.1 Diagram Swimlane Existing Proses Pengajuan dan Persetujuan Izin **Error! Bookmark not defined.**

Gambar 3.2 Diagram Swimlane Proses Pengajuan dan Persetujuan E-Permit TCH **Error! Bookmark not defined.**

Gambar 3.3 Use Case Administrator - Departemen HR **Error! Bookmark not defined.**

Gambar 3.4 User Case Users **Error! Bookmark not defined.**

Gambar 3.5 Aktivitas Karyawan - Add Permit **Error! Bookmark not defined.**

Gambar 3.6 Aktivitas Karyawan - Edit Permit **Error! Bookmark not defined.**

Gambar 3.7 Aktivitas Karyawan - Delete Permit .. **Error! Bookmark not defined.**

Gambar 3.8 Aktivitas Administrator - Add Karyawan **Error! Bookmark not defined.**

Gambar 3.9 Aktivitas Administrator - Edit Karyawan **Error! Bookmark not defined.**

Gambar 3.10 Aktivitas Administrator - Hapus Karyawan... **Error! Bookmark not defined.**

Gambar 4.1 Halaman Login Administrator**Error! Bookmark not defined.**

Gambar 4.2 Master Data Karyawan.....**Error! Bookmark not defined.**

Gambar 4.3 Halaman Report E-Permit Format Ms. Excel .. **Error! Bookmark not defined.**

Gambar 4.4 Halaman Report E-Permit Format PDF **Error! Bookmark not defined.**

Gambar 4.5 Modal Add New Employee.....**Error! Bookmark not defined.**

Gambar 4.6 Modal Edit Employee.....**Error! Bookmark not defined.**

Gambar 4.7 Dashboard E-Permit**Error! Bookmark not defined.**

Gambar 4.8 Tampilan Form Pengajuan Izin**Error! Bookmark not defined.**

Gambar 4.8 Tampilan Check Izin & Cuti**Error! Bookmark not defined.**

Gambar 4.9 ERD E-Permit TCH**Error! Bookmark not defined.**

Gambar 5.1 Dashboard E-Permit**Error! Bookmark not defined.**

Gambar 5.2 Pengajuan Izin Cuti Karyawan.....**Error! Bookmark not defined.**

Gambar 5.3 Pengajuan Izin Sakit Karyawan**Error! Bookmark not defined.**

Gambar 5.4 Halaman Check Izin Cuti Karyawan..**Error! Bookmark not defined.**

Gambar 5.5 Halaman Check Izin Sakit Karyawan **Error! Bookmark not defined.**

Gambar 5.6 Halaman Login Administrator HR.....**Error! Bookmark not defined.**

Gambar 5.7 Halaman Register Administrator HR .**Error! Bookmark not defined.**

Gambar 5.8 Dashboard Administrator**Error! Bookmark not defined.**

Gambar 5.9 Halaman Master Data Karyawan**Error! Bookmark not defined.**

Gambar 5.10 Halaman Approval Izin Cuti Level 1 **Error! Bookmark not defined.**

Gambar 5.11 Halaman Approval Izin Level 2**Error! Bookmark not defined.**

Gambar 5.12 Employee Controller - Function List Master Data Karyawan **Error! Bookmark not defined.**

Gambar 5.13 Employee Controller - Function Menyimpan Data Karyawan **Error! Bookmark not defined.**

Gambar 5.14 Employee Controller - Function Edit Update Data Karyawan **Error! Bookmark not defined.**

Gambar 5.15 Employee Controller - Function Delete Data Karyawan **Error!**

Bookmark not defined.

Gambar 5.16 Report Controller - Function Laporan Format Excel **Error!**

Bookmark not defined.

Gambar 5.17 Report Controller - Function Laporan Format PDF **Error!**

Bookmark not defined.

Gambar 5.18 Fungsi Menampilkan Tampilan Utama E-Permit & Form Pengajuan Cuti **Error! Bookmark not defined.**

Gambar 5.19 Fungsi Merubah RFID menjadi NIK **Error! Bookmark not defined.**

Gambar 5.20 JavaScript generate NIK saat tap kartu RFID **Error! Bookmark not defined.**

Gambar 5.21 Function StoreCuti & Push Notifikasi Telegram .. **Error! Bookmark not defined.**

Gambar 5.22 Function Autogenerate No Transaksi Cuti **Error! Bookmark not defined.**

Gambar 5.23 Function Menyimpan Data Izin Sakit **Error! Bookmark not defined.**

Gambar 5.24 Function Check Izin Cuti **Error! Bookmark not defined.**

Gambar 5.25 Function Check Izin Sakit **Error! Bookmark not defined.**

Gambar 5.26 Function Hapus Izin Cuti **Error! Bookmark not defined.**

Gambar 5.27 Function Hapus Izin Sakit **Error! Bookmark not defined.**