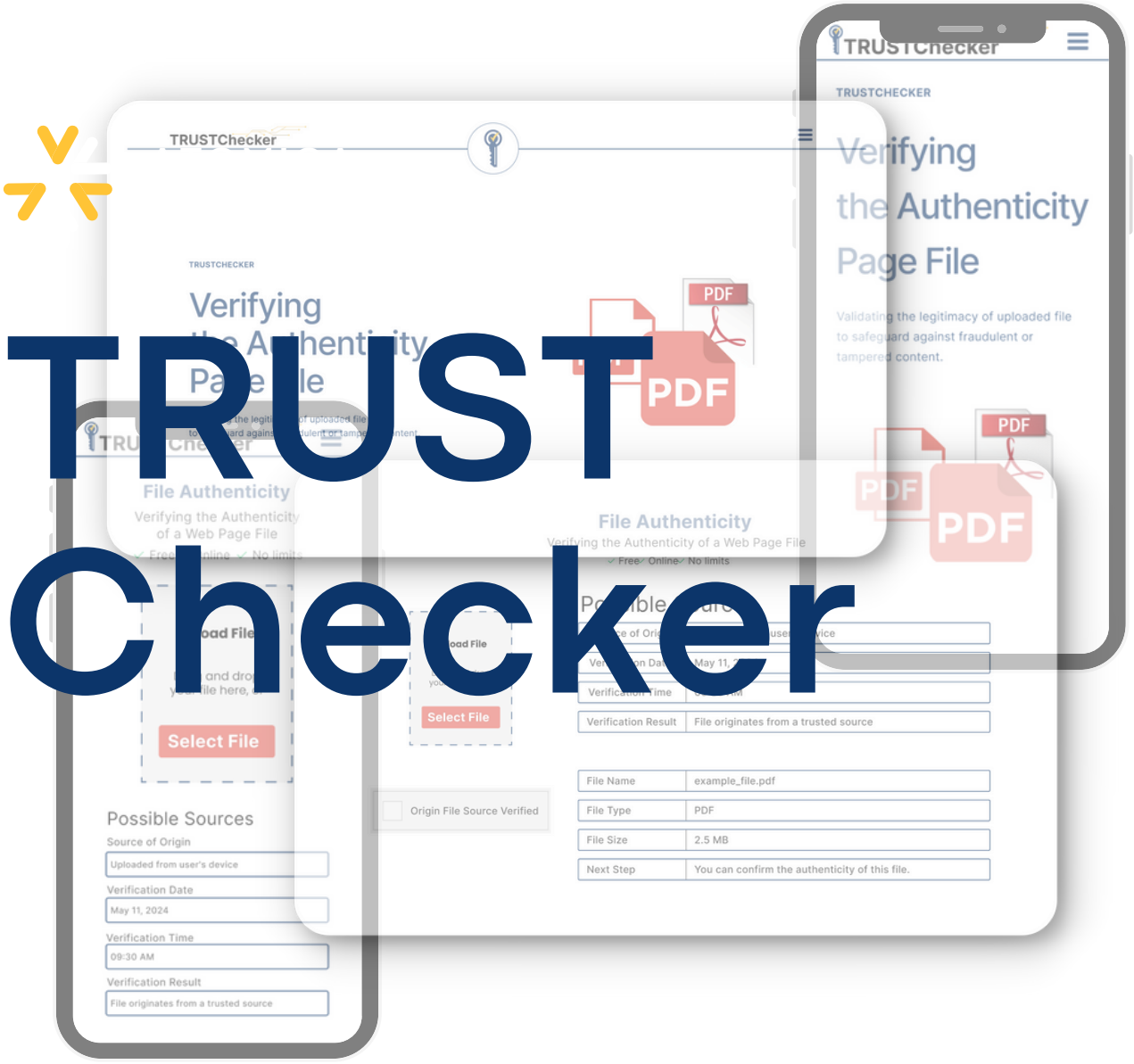
TRUST Checker



PROPOSAL BY:

Nada Fadhiilah Balqis
Nanda Tiara Sabina Hidayatulloh
Nasywah Darraini
Nur Halizah

Our Team

Nanda Tiara Sabina Hidayatulloh
Researcher

I am interested becoming a UI/UX designer.
“Be like a flower, survive the rain but use it to grow.”

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Nasywah Darraini
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I am interested becoming a Data Analyst.
“Don’t give up when faced with obstacles, because they are opportunities to grow.”

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Nada Fadhiilah Balqis
Engineer

I am interested becoming a software engineer
”Software engineering inspirated me for building technology”
posal on a memorable, but professional note.

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Nur Halizah
Engineer

I am Interested becoming a Data Science.
"If you can't find a good person, then be one."

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Topic and Motivation

This proposal aims to develop a document security and authentication system that utilizes the Secure Hash Algorithm-1 (SHA-1) within the context of distributed computing. With the increasing need for security in digital documents, this system will provide a reliable solution for verifying the authenticity and integrity of documents efficiently. By leveraging the power of SHA-1 and distributed computing concepts, this project aims to provide a system that can address the challenges in document authentication quickly and effectively in distributed environments. The motivation behind this project lies in the importance of document security in today's digital age, the challenges in traditional document authentication processes, the reliability of the Secure Hash Algorithm-1, and the benefits of distributed computing in improving efficiency and scalability.

QURAN

يَـٰٓأَيُّهَا ٱلَّذِينَ ءَامَنُوٓاْ إِن جَآءَكُمْ فَاسِقُۢ بِنَبَإٖ فَتَبَيَّنُوٓاْ أَن تُصِيبُواْ قَوْمَۢا
بِجَهَـٰلَةٖ فَتُصْبِحُواْ عَلَىٰ مَا فَعَلْتُمْ نَـٰدِمِينَ

O believers, if an evildoer brings you any news, verify ˹it˺ so you do not harm people unknowingly, becoming regretful for what you have done.

HADITH

حَدَّثَنَا يَعْقُوبُ بْنُ إِبْرَاهِيمَ، حَدَّثَنَا إِسْمَاعِيلُ ابْنُ عُلَيَّةَ، حَدَّثَنَا خَالِدٌ الْحَذَّاءُ، عَنِ ابْنِ أَشْوَعَ، عَنِ الشَّعْبِيِّ، حَدَّثَنِي كَاتِبُ الْمُغِيرَةِ بْنِ شُعْبَةَ، قَالَ كَتَبَ مُعَاوِيَةُ إِلَى الْمُغِيرَةِ بْنِ شُعْبَةَ أَنِ اكْتُبْ، إِلَىَّ بِشَىْءٍ سَمِعْتَهُ مِنَ النَّبِيِّ، صلى الله عليه وسلم. فَكَتَبَ إِلَيْهِ سَمِعْتُ النَّبِيَّ صلى الله عليه وسلم يَقُولُ " إِنَّ اللَّهَ كَرِهَ لَكُمْ ثَلاَثًا قِيلَ وَقَالَ، وَإِضَاعَةَ الْمَالِ، وَكَثْرَةَ السُّؤَالِ ".

The clerk of Al-Mughira bin Shu`ba narrated, "Muawiya wrote to Al-Mughira bin Shu`ba: Write to me something which you have heard from the Prophet (p.b.u.h) ." So Al-Mughira wrote: I heard the Prophet saying, "Allah has hated for you three things: -1. Vain talks, (useless talk) that you talk too much or about others. -2. Wasting of wealth (by extravagance) -3. And asking too many questions (in disputed religious matters) or asking others for something (except in great need). (See Hadith No. 591, Vol. III)

Target User Group

Those who have an interest in ensuring the authenticity and integrity of their digital documents. This includes various professions, ranging from business and finance to education and law, as well as individuals who require validation of their personal documents.

Target User Group	Value Proposition	Needs and Challanges
Enterprise Users	• High document security • Verification of contract and financial document authenticity	Advanced security features, system integration
Government Agencies	• Protection of administrative data Security of official documents	Regulatory compliance, IT resource availability
Educational Institutions	• Security of academic data • Authentication of research reports	Resource availability, user accessibility
Legal and Financial Services Providers	• Protection of legal and client financial documents • Authentication of contracts and critical documents	High-level security, system auditability
Individual Professionals	• Security of publications and personal documents • Verification of document integrity	User-friendliness, customization features
General Users	• Protection of personal documents • Authentication of everyday documents	Simple security features, customer support

Proposed Solution

A Product Branding

Logo

Filosofi

Key elements: Symbolize security, encryption, or access control to data.

Checkmark symbol: Represents the process of validation, verification, and authentication.

Network element: Refers to the connection between two or more devices that enables the exchange of data or resources between them.

Proposed Solution

TRUST
CHECKER

The name "Trust Checker" embodies the meaning of verifying truthfulness, aiming to become a system capable of authenticating a file to prevent hoaxes.

Deep blue symbolizes professionalism.

Yellow represents optimism, creativity, and vigilance.

Black symbolizes courage.

Proposed Solution

B Description

The proliferation of hoax news necessitates a technology capable of addressing it. This is because hoax news can have detrimental effects such as causing confusion, inciting conflict, and distorting an individual's perception of a subject. Hoax news comes in various forms, both written and oral, and across various media formats.

Trust Checker is a system developed and designed to verify the authenticity of a file. Beyond tackling and preventing hoax news, Trust Checker aims to assist in resolving cases to strengthen evidence.

Trust Checker can be used to verify the source of information, analyze whether the news contained within a file is produced by a reliable source, and verify the authenticity of the presented information. Additionally, Trust Checker helps ensure that the file has not been altered or manipulated by unauthorized parties before use.

Proposed Solution

C How This Project Relates to SDGs

QUALITY EDUCATION

This system can help ensure the authenticity and integrity of student assignments, research reports, and other academic documents, which are crucial for maintaining standards of honesty and educational quality.

DECENT WORK AND ECONOMIC GROWTH

This system can help build trust in the business environment and reduce the risk of fraud, which in turn can support the creation of decent jobs and sustainable economic growth.

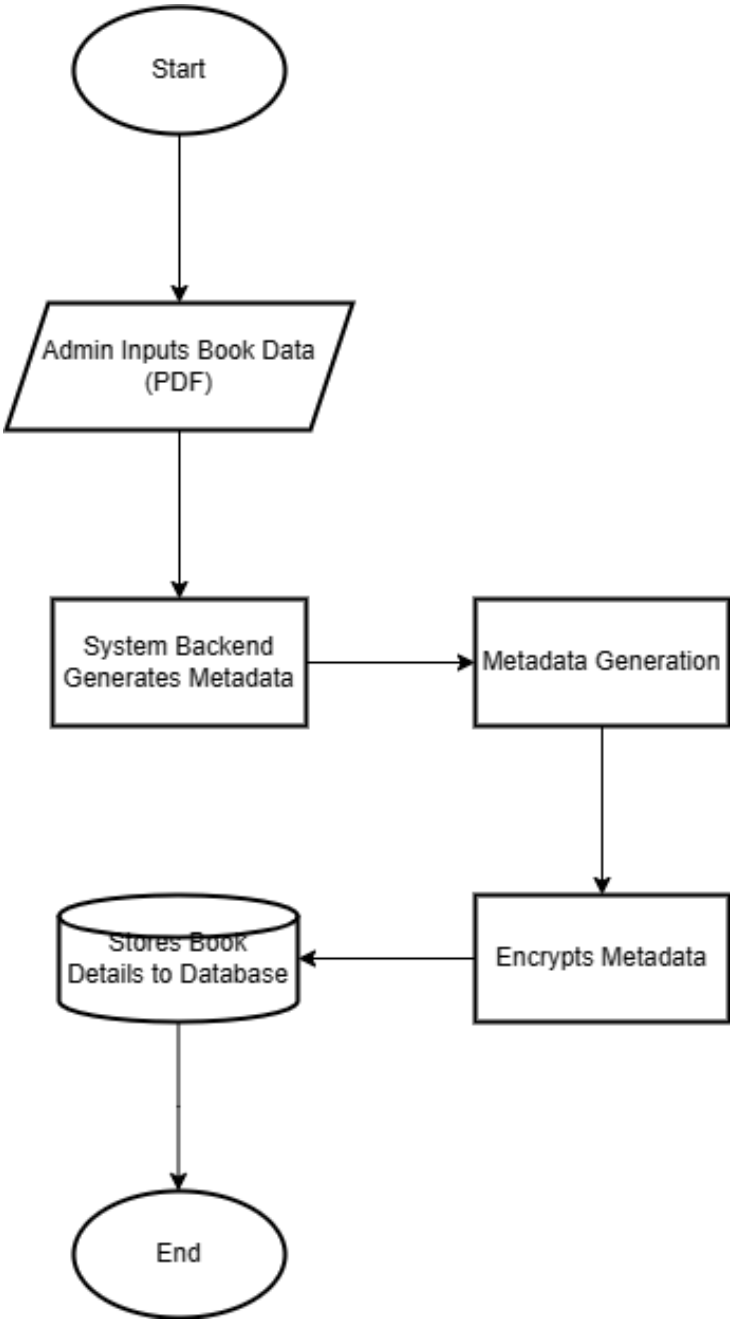
PEACE, JUSTICE, AND STRING INSTITUTION

Validation of document authenticity can help strengthen the justice system and institutions by ensuring data integrity, reducing the risk of document manipulation or forgery, and supporting transparency in legal and administrative processes.

Proposed Solution

D Application Flow Chart

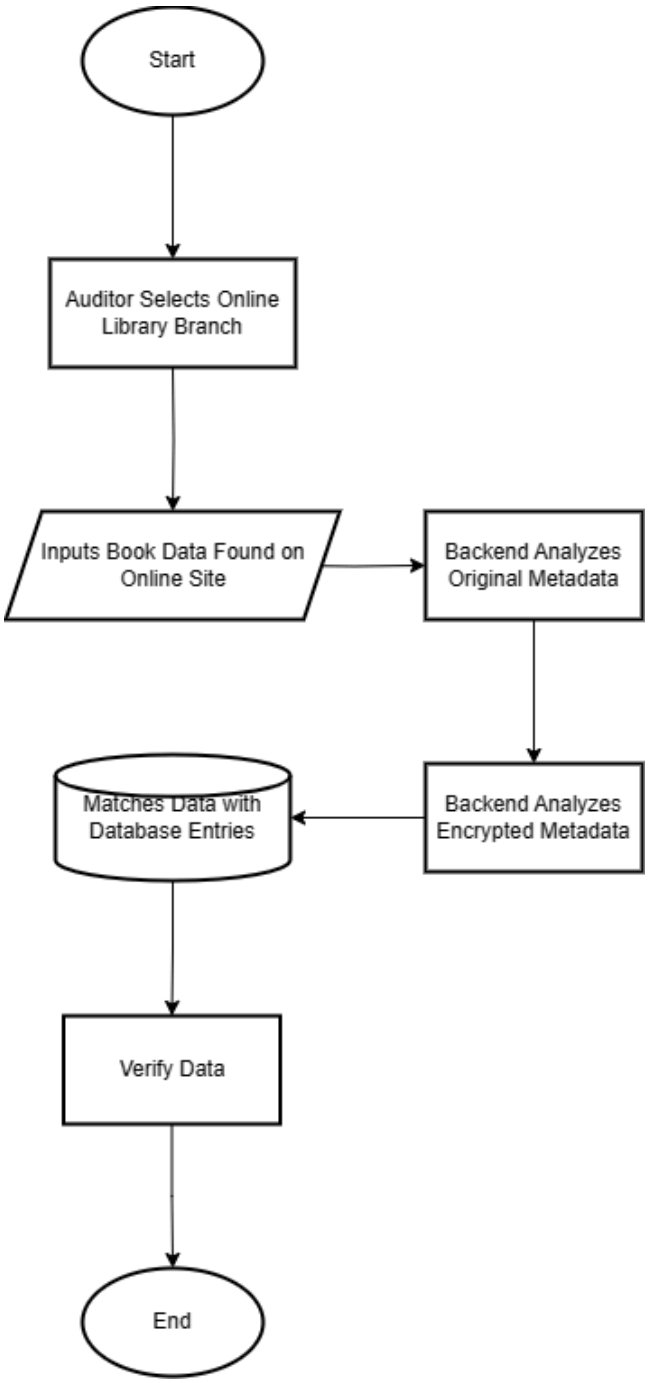
Initial scenario



Proposed Solution

D Application Flow Chart

Final scenario



Proposed Solution

E Application Design and Illustration

Desktop

Proposed Solution

E Application Design and Illustration

Mobile

Methods and Technologies

Methods

The methods utilized involve the implementation of the Secure Hash Algorithm-1 (SHA-1) to generate hashes of each document to be authenticated, employing cryptography to secure this process. This process leverages cryptographic hash functions to transform document data into unique hash values, which are then used for document authenticity verification. Additionally, a distributed data storage and management system is implemented, utilizing technologies such as Distributed Hash Table (DHT) or other distributed storage systems. This allows document hashes to be stored in a distributed manner, ensuring data redundancy and hash availability even in the event of failures in some nodes. Secure communication protocols are also employed for data exchange among nodes in the distributed computing environment, utilizing cryptographic technologies to ensure data confidentiality and integrity during the communication process.

Technologies

Time Tables

Start from April 27, 2024

Task	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8
Defining Project Goals								
Technical Requirements and System design								
Create Proposal								
Website Front End Development								
Website Back end & Database Development								
Testing and Evaluation								
Project Documentation								

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