

# **Blockchain-Based Criminal Information Management System in Sri Lanka**

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**GROUP ID: 23-270**

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**IT 20150952**

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**IT 20171438**

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**IT 20157814**

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**IT 19983370**

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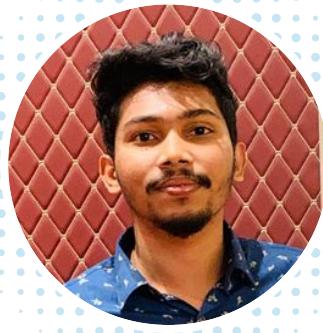
# Group Members



IT 20150952  
Brahanawardhan B.



IT 20171438  
Wijayarathne S.N.



IT 20157814  
Ahamed M.N.H.



IT 19983370  
Thushitharan M.

## Project Details

- Project ID: 23-270
- Supervisor: Mr. Kanishka Yapa
- Co-Supervisor: Ms. Dinithi Pandithage

01

# Project Overview

# Introduction

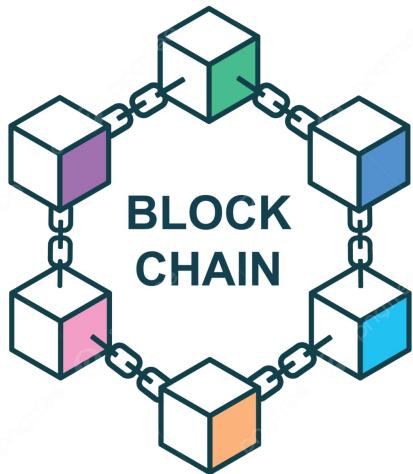
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- This project aims to develop a blockchain-based criminal information management system as an improvement of the existing criminal information management method in Sri Lankan.
- Why we need blockchain technology ?
  - It helps improve data security, transparency and efficiency in managing criminal records.



# Introduction

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- Who will get benefits from Blockchain based Criminal Information management system ?
  - Law Enforcement Authorities
    - Police Officers
    - Lawyers
    - Police Departments
    - Law Enforcement Agencies

# Research Problem

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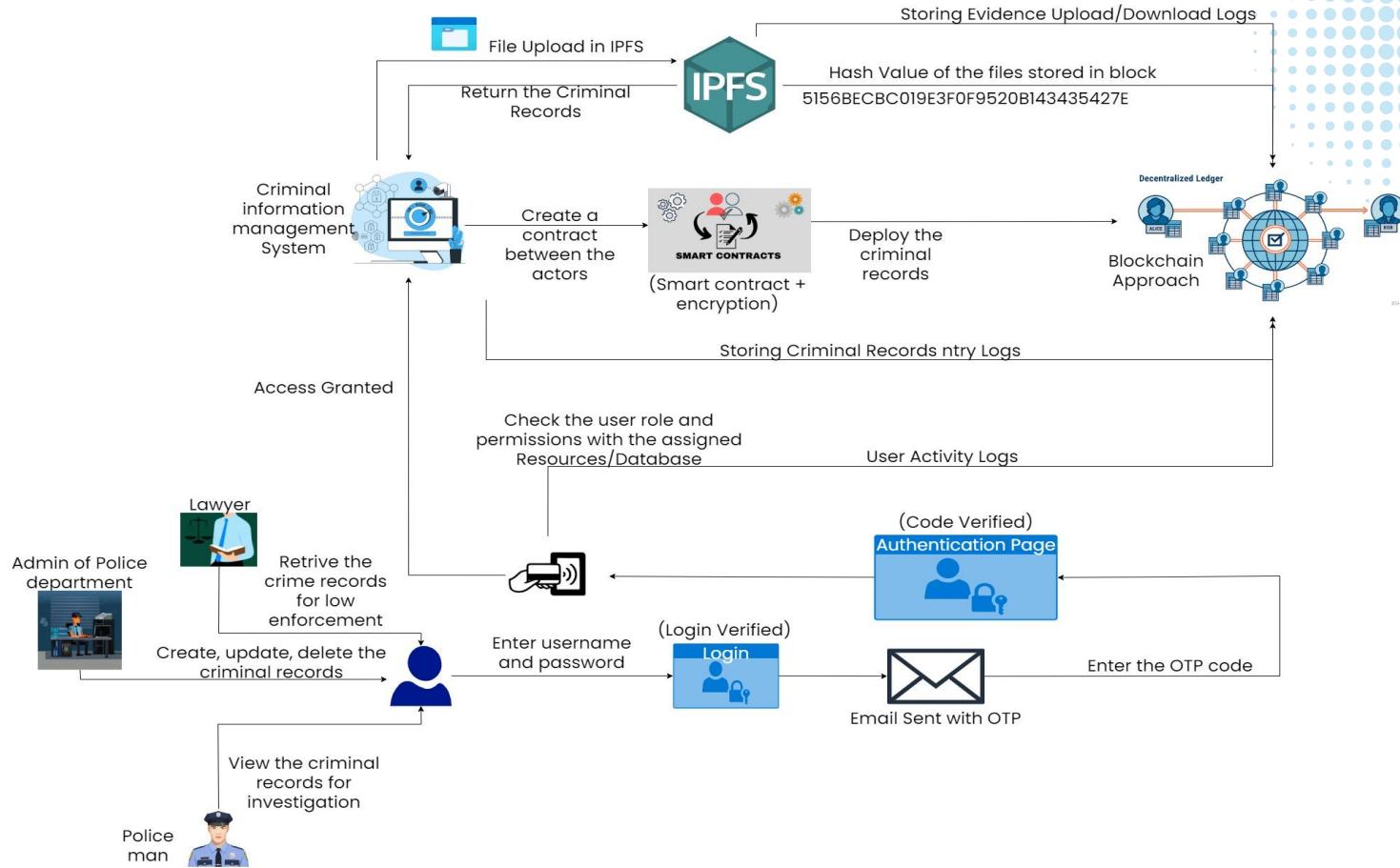
- Lack of integration
- Inconsistent data quality
- Privacy and security concern
- Insufficient process

## Objective

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- **SMART CONTRACT** | Deployment of Criminal Records with Decentralized blockchain.
- **AUTHENTICATION SYSTEM** | Prevent from the unauthorized access.
- **INTERPLANETARY FILE SYSTEM** | To Securely store criminal Evidence Document.
- **CHAIN OF CUSTODY** | High level of security for records verification

# Overall System Diagram



# Research Gap

CONSIDERATION ON	EXISTING LOCAL DATABASE BASED CRIMINAL INFORMATION MANAGEMENT SYSTEM IN SRI LANKA	BLOCKCHAIN TECHNOLOGY FOR CRIMINAL INFORMATION MANAGEMENT SYSTEM
<b>Security of Sensitive Criminal Records</b>	MEDIUM	HIGH
<b>Decentralization Of System</b>	LOW	HIGH
<b>Ensure data Integrity</b>	LOW	HIGH
<b>Prevent loss of data</b>	LOW	HIGH
<b>Availability</b>	MEDIUM	HIGH
<b>Confidentiality</b>	LOW	HIGH

01

# Smart Contract for Blockchain



**IT20150952 | BRAHANAWARDHAN B.**  
**BSc (Hons) in Information Technology**  
**Specializing in Cyber Security**

# **Research Question**

---

How can a blockchain-based criminal information management system be implemented effectively in Sri Lanka to enhance data security, transparency, and efficiency in the criminal system ?

- Understand the Current policy and procedure of Criminal System in Sri Lanka.
- Identify the Stakeholders
- Define the System Requirements
- Develop a Blockchain platform



# Research Problem

---

- How to ensure the Confidentiality, Integrity, Availability of Criminal records ?
  - Challenges currently encountered by the Criminal information management System ?
    - Interoperability
    - Scattered Criminal Records
    - Handfill Documents
    - Integrity problem
    - Local databases



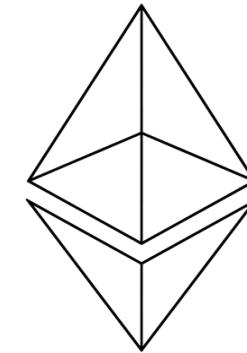
# Main Objectives



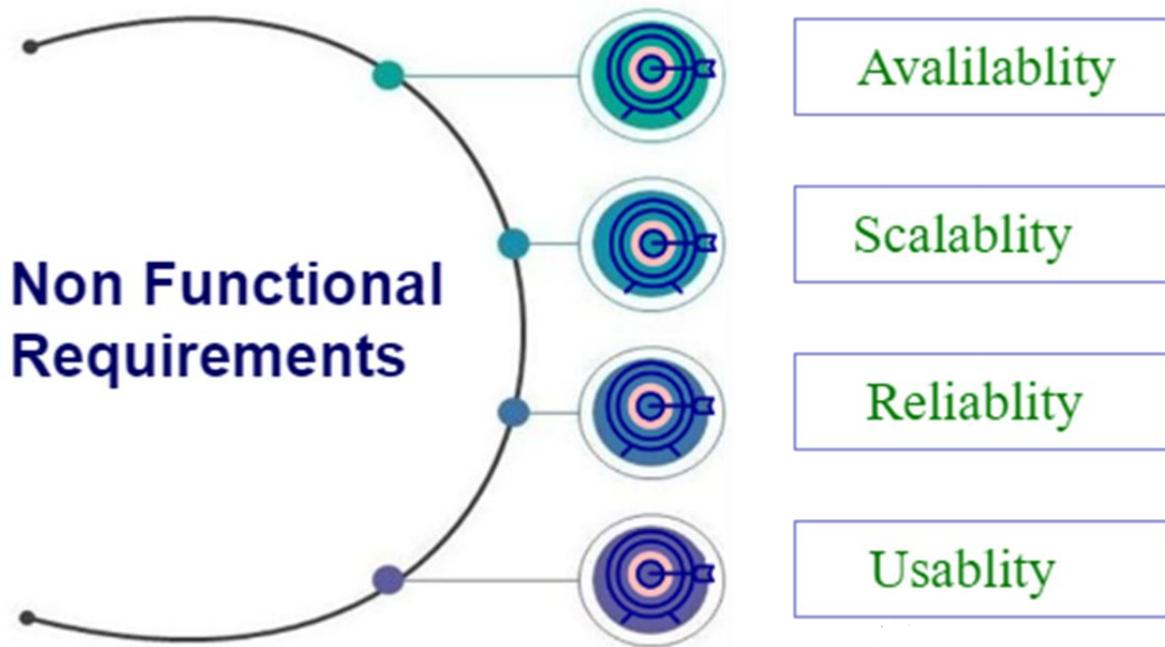
- Increased efficiency, transparency, and Security
- Ensured Confidentiality, Integrity, Availability
- Reduced the lack of Consistency
- Increased the performance and usability of Criminal Records.

## Specific Objectives

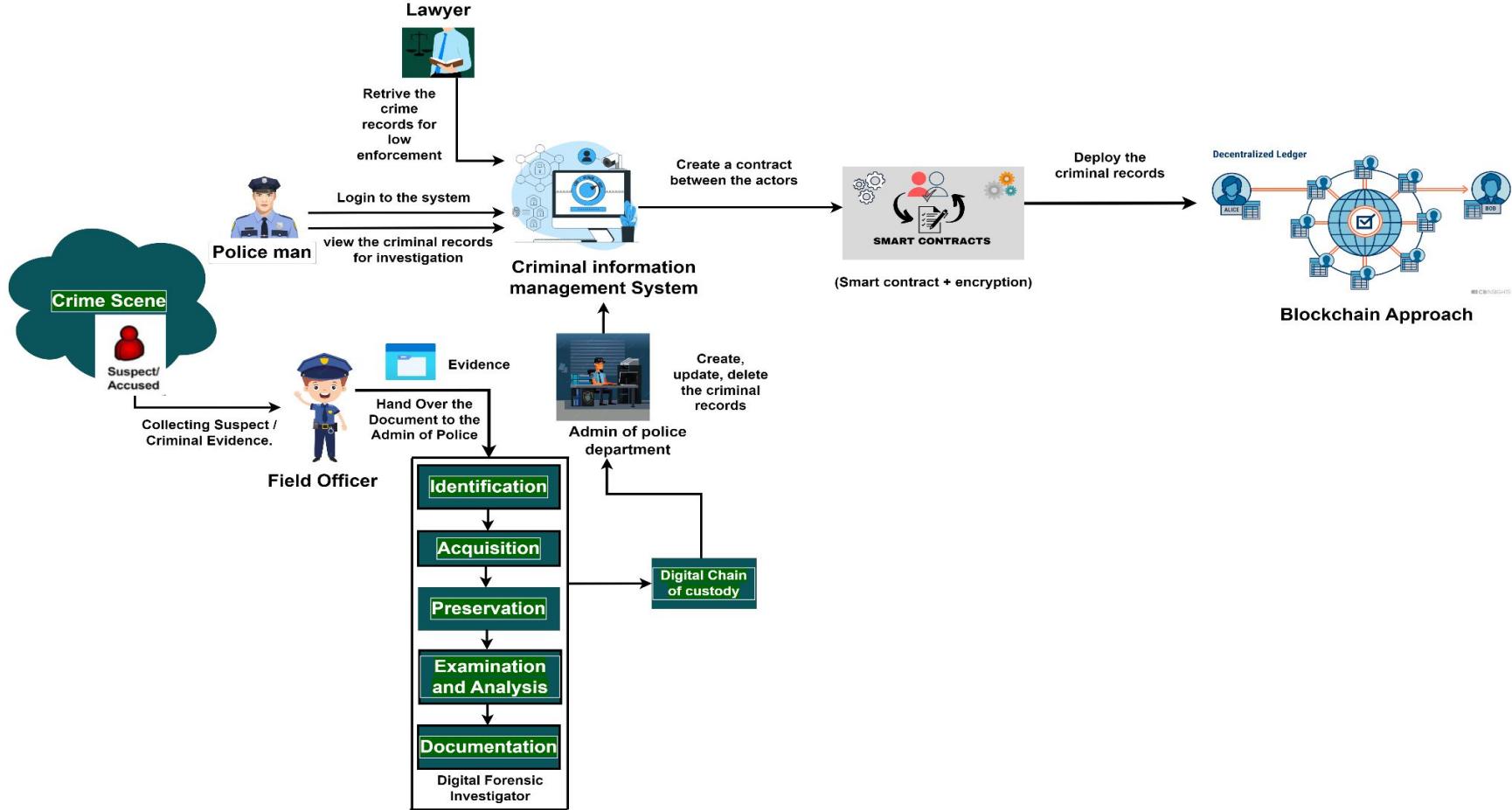
- Implementing Blockchain network for Criminal information Management System using Smart Contracts



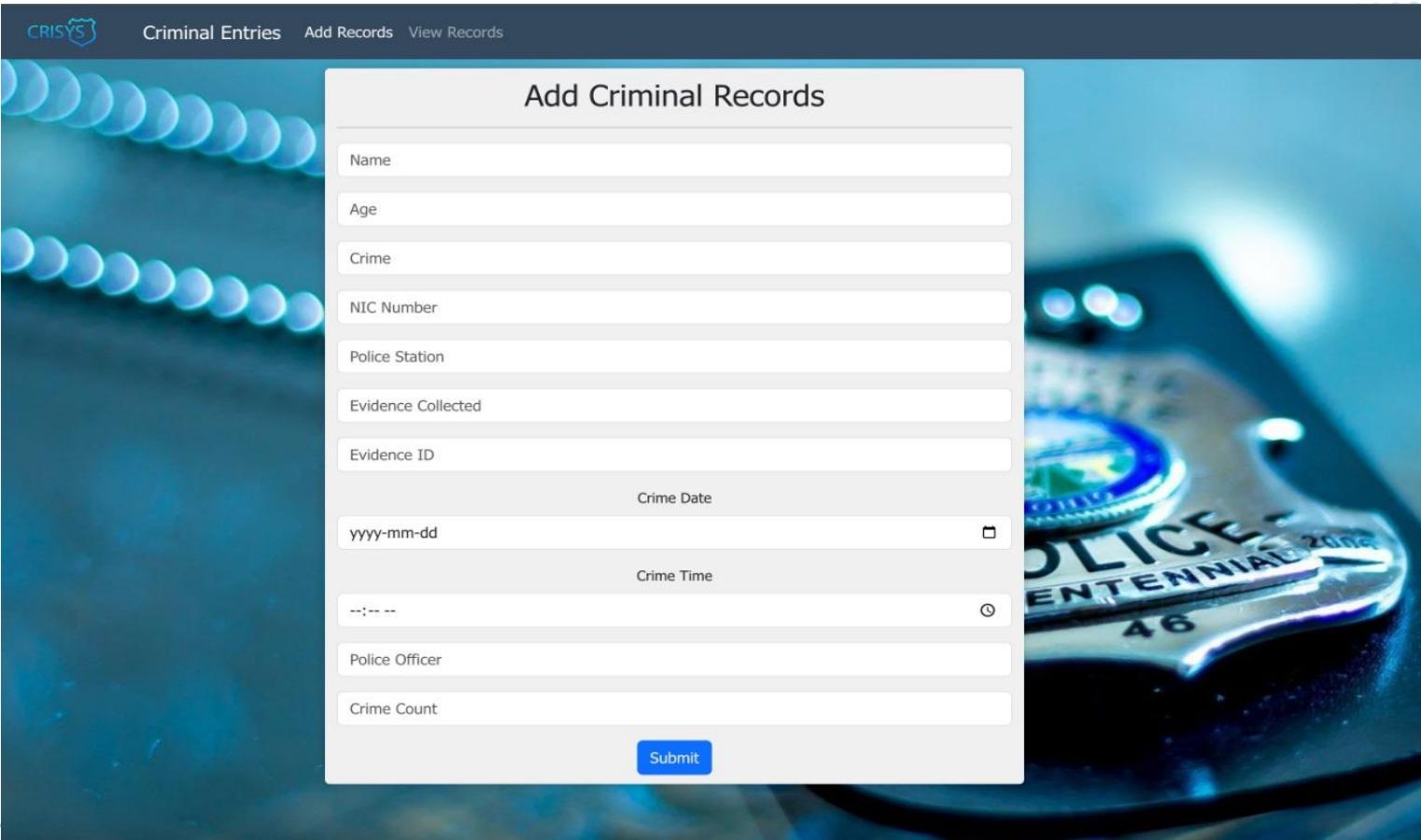
# Non-functional Requirements



# System Overview & possible solution



# PROGRESS DEMO (100%)



CRISYS

Criminal Entries Add Records View Records

## Add Criminal Records

Name

Age

Crime

NIC Number

Police Station

Evidence Collected

Evidence ID

Crime Date

yyyy-mm-dd

Crime Time

--:--

Police Officer

Crime Count

Submit

The form is a modal window titled "Add Criminal Records". It contains fields for Name, Age, Crime, NIC Number, Police Station, Evidence Collected, Evidence ID, Crime Date (with a date input field and a calendar icon), Crime Time (with a time input field and a clock icon), Police Officer, and Crime Count. A "Submit" button is at the bottom.

# PROGRESS DEMO (100%)

CRISYS

Criminal Entries Add Records View Records

## View Records

Name	Age	Crime	NicNo	PoliceStation	Evidence Collected	Evidence ID	CrimeDate	CrimeTime	PoliceOfficer	CrimeCount
kamal	30	theft	200016902050	Colombo	Fingerprint and CCTV Footage	jnhikhbiuh786y896y876y887y87	2023-09-07	10:00	Officer Manoj	3
Ranidu	34	Kidnapping	200016902249	Galle	pen drive, CCTV Footage	jfdfduvuidfsjvui453jujuojuou8j8	2023-09-07	10:00	Officer Manoj	1
kanishaka	37	theft	200016902050	kandy	pen drive	jfdfduvuidfsjvui453jujuojuou8j8	2023-09-01	14:23	Officer Manoj	3
Pranavan	28	Murder	200016902249	Colombo	pen drive, CCTV Footage	jnhikhbiuh786y896y876y887y87	2023-10-09	08:59	Officer Nimal	3
Thor Murphy	Suscipit magni do as	Voluptatum hic paria	Quos voluptate omnis	Ipsam nisi qui conse	Dolor enim voluptate	Ea veritatis expedit	1976-06-14	18:39	Consequatur Odit hi	Exercitation tempor
Thor Murphy	Suscipit magni do as	Voluptatum hic paria	Quos voluptate omnis	Ipsam nisi qui conse	Dolor enim voluptate	Ea veritatis expedit	1976-06-14	18:39	Consequatur Odit hi	Exercitation tempor
Rajah Mann	Quasi qui voluptas e	Adipiscing similiqu	Eos inventore id r	Sed tempora omnis al	Ullamco qui modi nat	Sed similique alias	2008-07-05	11:59	Eiusmod excepturi in	In et ut ex aliquam

# PROGRESS DEMO (100%)

ACCOUNTS	BLOCKS	TRANSACTIONS	CONTRACTS	EVENTS	LOGS	SEARCH FOR BLOCK NUMBERS OR TX HASHES				
CURRENT BLOCK 251	GAS PRICE 2000000000	GAS LIMIT 6721975	HARDFORK MERGE	NETWORK ID 5777	RPC SERVER HTTP://127.0.0.1:7545	MINING STATUS AUTOMINING	WORKSPACE QUICKSTART	SAVE	SWITCH	⚙️
BLOCK 237	MINED ON 2023-10-29 19:13:37					GAS USED 300550			1 TRANSACTION	
BLOCK 236	MINED ON 2023-10-29 19:13:37					GAS USED 300550			1 TRANSACTION	
BLOCK 235	MINED ON 2023-10-29 19:13:37					GAS USED 300550			1 TRANSACTION	
BLOCK 234	MINED ON 2023-10-29 19:13:36					GAS USED 300550			1 TRANSACTION	
BLOCK 233	MINED ON 2023-10-29 19:13:36					GAS USED 300550			1 TRANSACTION	
BLOCK 232	MINED ON 2023-10-29 19:13:36					GAS USED 300550			1 TRANSACTION	
BLOCK 231	MINED ON 2023-10-29 19:13:35					GAS USED 300550			1 TRANSACTION	
BLOCK 230	MINED ON 2023-10-29 19:13:35					GAS USED 300550			1 TRANSACTION	
BLOCK 229	MINED ON 2023-10-29 19:13:35					GAS USED 300550	Activate Windows. Go to Settings to activate.		1 TRANSACTION	

# Methodology

- **IDE :** Remix (Ethereum) IDE, VS Code
- **Programming Language:** Solidity, JS
- **Front- end:** React JS
- **Blockchain Platform:** Ganache  
Personal Blockchain (Truffle Suite)
- **Project Management :** Trello, Ms Planner



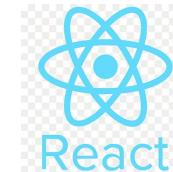
Remix IDE



VS Code



SOLIDITY



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- “Crab: Blockchain based Criminal Record Management System.” [Online]. Available: [https://www.researchgate.net/publication/329489346\\_CRAB\\_Blockchain\\_Based\\_Criminal\\_Record\\_Management\\_System](https://www.researchgate.net/publication/329489346_CRAB_Blockchain_Based_Criminal_Record_Management_System). [Accessed: 19-Mar-2023].
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03

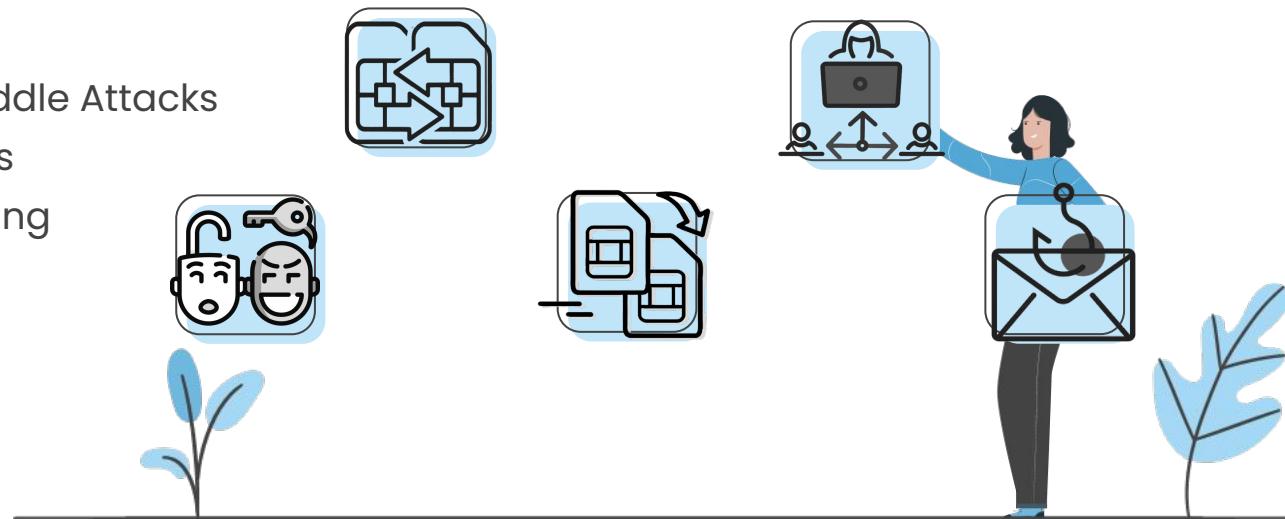
# Authentication System



**IT20171438 | WIJAYARATHNE S. N.**  
Specializing in Cyber Security

# Research Question

- How To Secure System Login By Implementing A Secure Authentication System To The Blockchain- Based Criminal Information Management System In Sri Lanka?
- Is 2-Factor Authentication SECURE? Can 2-Factor Authentication be HACKED?
  - SIM Swapping
  - SIM Cloning
  - Man-in-the-Middle Attacks
  - Phishing Attacks
  - Social Engineering



# Research Problem

Consideration On	Existing Systems	Proposed System
<b>1st Factor</b>	Security Level is <b>LOW</b>	Security Level is <b>HIGH</b>
<b>2nd Factor</b>	Security Level is <b>MODERATE</b>	Security Level is <b>HIGH</b>
<b>Confidentiality</b>	Security Level is <b>LOW</b>	Security Level is <b>HIGH</b>
<b>Integrity</b>	Security Level is <b>LOW</b>	Security Level is <b>HIGH</b>
<b>Possible Otp Combinations</b>	<b>LOW (59,049)</b>	<b>HIGH (60,466,176)</b>
<b>Overall System</b>	<b>Security Level is MODERATE</b>	<b>Security Level is HIGH</b>



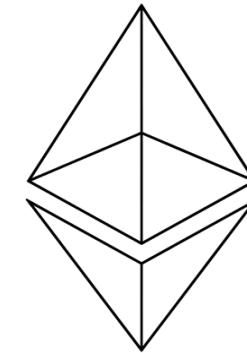
# Main Objectives



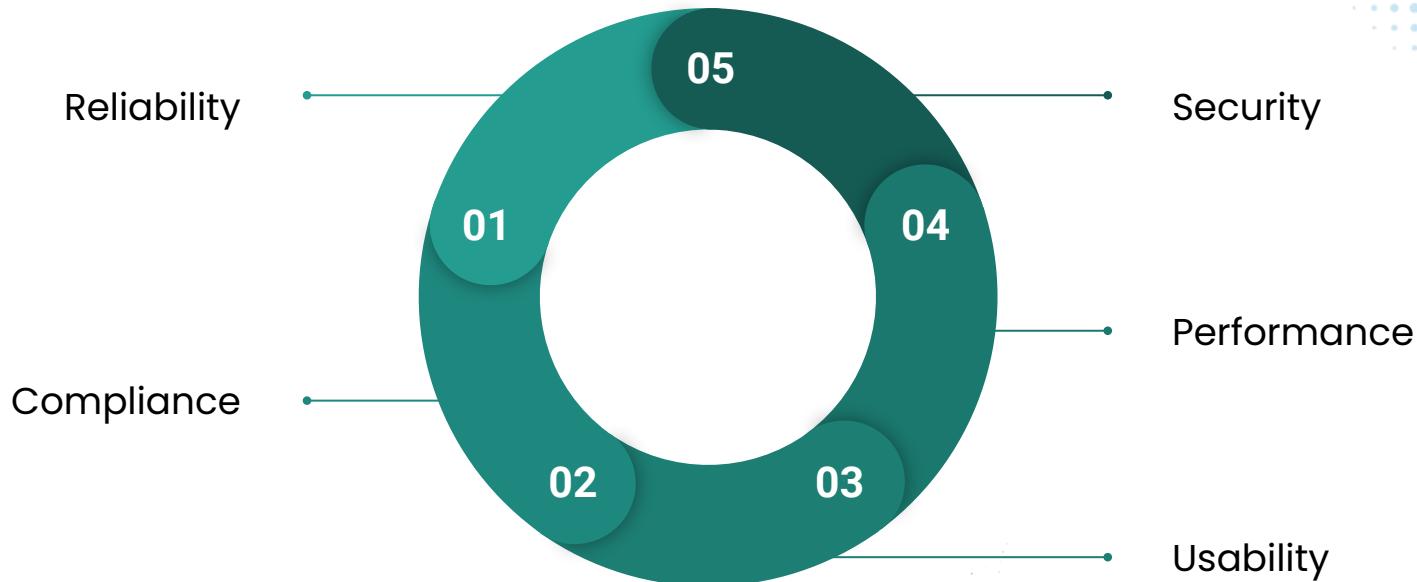
- Increased efficiency and Security
- Ensured Confidentiality, Integrity, Availability
- Increased performance

## Specific Objectives

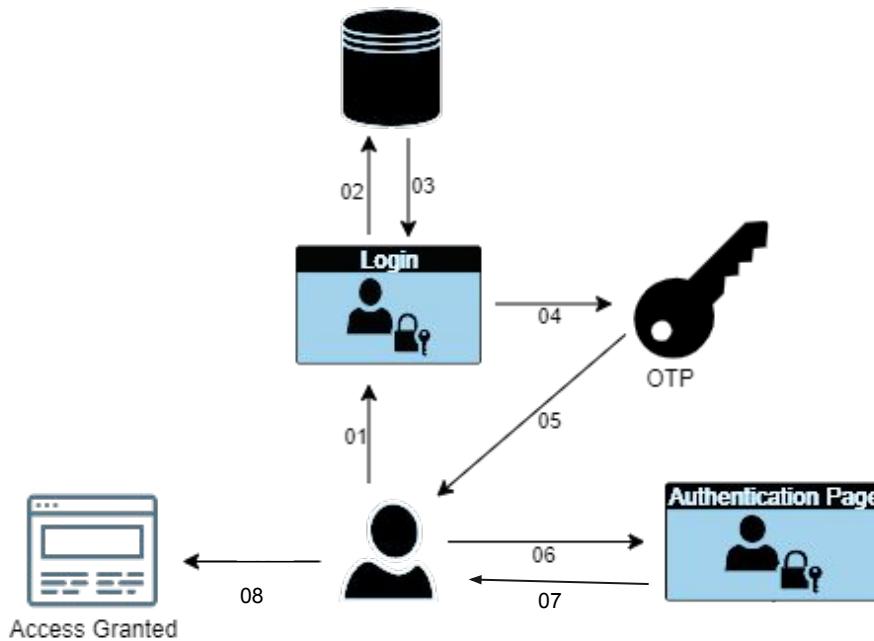
- Improving the existing 2FA system into a better and more secure system by 60,466,176 options.
- 1024 times more than the existing system



# Non-functional Requirements



# System Overview & possible solution



- 01 – User entering Username & Password
- 02 – Entered Username & Password being checked
- 03 – Username & Password being verified
- 04 – Moving to the OTP page
- 05 – OTP code will be send to the client
- 06 – Entering the OTP code to the Authentication Page
- 07 – Verification of the authentication
- 08 – Access Granted to the System

# Progress Demo (100%)

### Crime Information Management System

[SIGN UP](#)

Full Name

E-mail Address

Mobile Number

Password

Please make sure it meets the requirements

- X Password must be between 10 and 15 characters.
- X Password must contain at least one uppercase letter.
- X Password must contain at least one digit.
- X Password must contain at least one special character.

[Sign Up](#)

### Crime Information Management System

[SIGN IN](#)

Email

Password

[Lost Password?](#)

[Sign In](#)

### Crime Information Management System

[SIGN IN](#)

Police ID

Password

[Lost Password?](#)

[Sign In](#)

### Crime Record Management System

[SIGN IN](#)

Username

Password

[Lost Password?](#)

Remember Me

[Sign In](#)

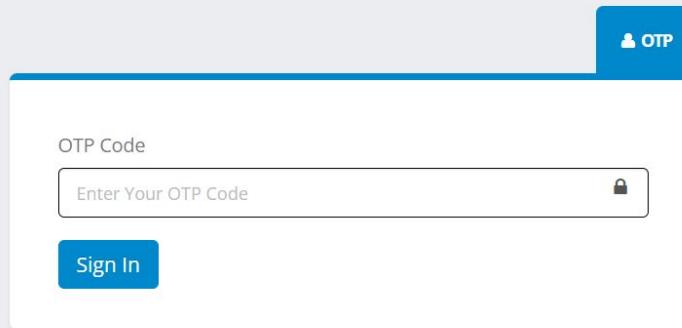
# Progress Demo (100%)

you have been sent an email with the OTP code. please check and give

The OTP code is

n9k0Mx

One-Time Password



A screenshot of a One-Time Password (OTP) login interface. At the top right, there is a blue button labeled 'OTP' with a user icon. Below it, the text 'OTP Code' is displayed above a large input field containing the placeholder 'Enter Your OTP Code'. To the right of the input field is a small lock icon. At the bottom left of the form is a blue 'Sign In' button.

# Progress Demo (100%)

Crime Record Management System | Admin Panel

Senesh Wijayarathne  
seneshw@gmail.com

Dashboard

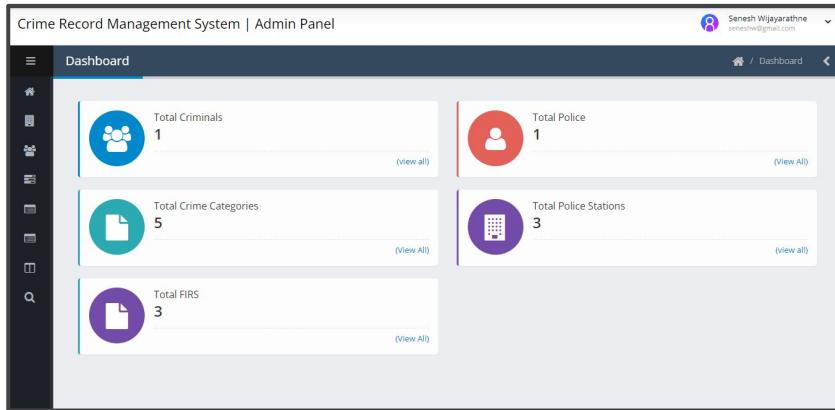
Total Criminals 1 (view all)

Total Police 1 (View All)

Total Crime Categories 5 (View All)

Total Police Stations 3 (view all)

Total FIRS 3 (View All)



Crime Record Management System | Police Panel

Senesh Wijayarathne  
0231234

Dashboard

Total New FIR 1 (view all)

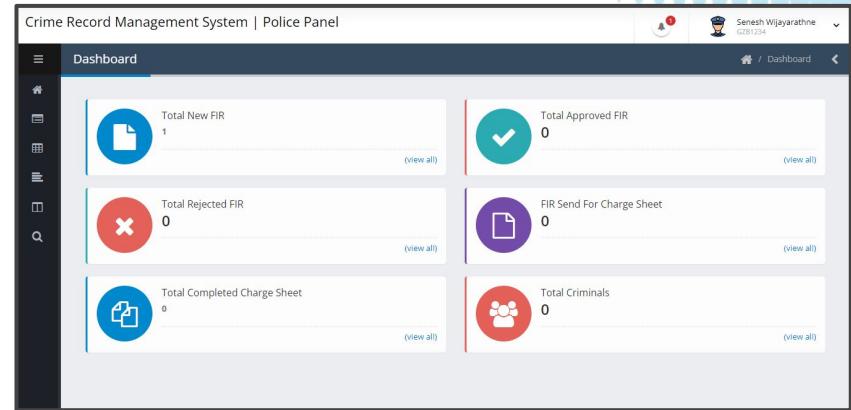
Total Approved FIR 0 (view all)

Total Rejected FIR 0 (view all)

FIR Send For Charge Sheet 0 (view all)

Total Completed Charge Sheet 0 (view all)

Total Criminals 0 (view all)

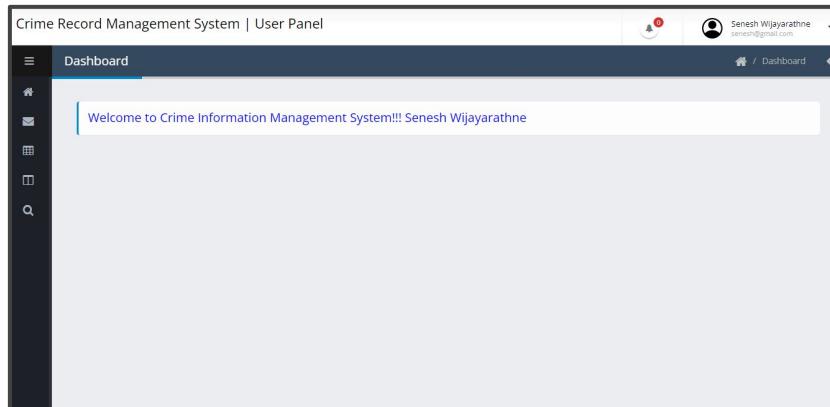


Crime Record Management System | User Panel

Senesh Wijayarathne  
seneshw@gmail.com

Dashboard

Welcome to Crime Information Management System!!! Senesh Wijayarathne



# Testing and Results

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- **JMeter & Locust - Load Testing**
  - Concurrent users: 80 – 98
  - Error rate: 0% – 2%
- **Hydra & Hashcat - Password Strength Testing**
  - Time: Hours (Stopped after 15 hours)
  - Password crack: **Unsuccessful**



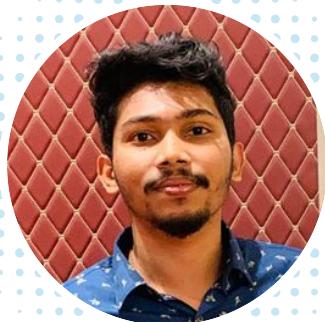
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- Adham, M., Azodi, A., Desmedt, Y., Karaolis, I. (2013). How to Attack Two-Factor Authentication Internet Banking. In: Sadeghi, AR. (eds) Financial Cryptography and Data Security. FC 2013. Lecture Notes in Computer Science, vol 7859. Springer, Berlin, Heidelberg. [https://doi.org/10.1007/978-3-642-39884-1\\_27](https://doi.org/10.1007/978-3-642-39884-1_27)

04

# Secure File Management System



IT20157814 | M.N H AHMED  
Specializing in Cyber Security

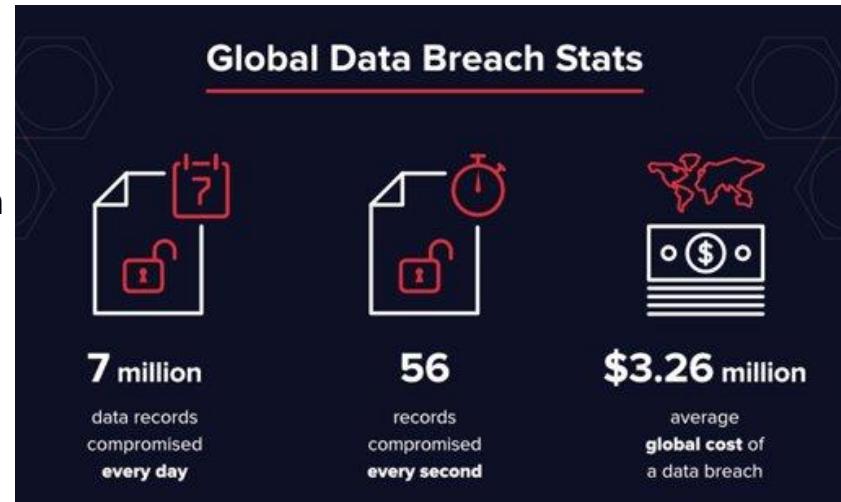
# Research Question

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How secure file management system can be implement effectively in decentralized network to enhance confidentiality, integrity, and availability in the criminal system ?

# Research Problem

- Manual file sharing system
  - Paper based
  - Store files in cupboard and etc
- Centralize System
  - Sorting files in a single database without proper encryption
- Vulnerabilities in Current file management system
  - SQL Injection Attack
  - DDoS Attack
  - Theft / Stolen of the Files
- Data Breach





# Main Objectives

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- Secure File Management System in Decentralized Network
- Ensured Confidentiality, Integrity, Availability

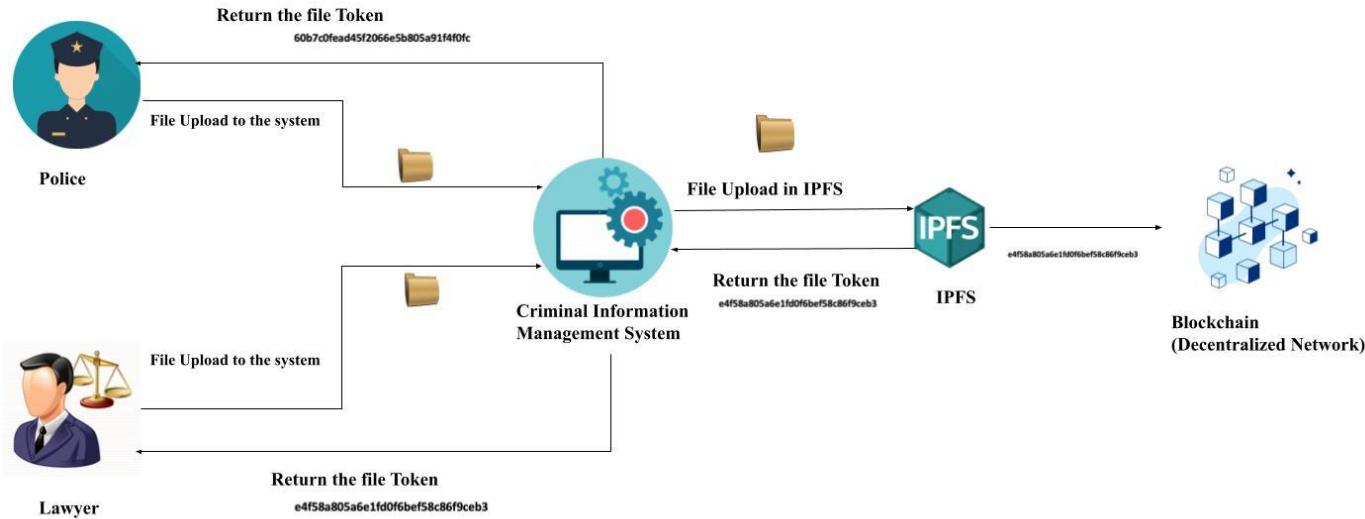
## Specific Objectives

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- Implementing cryptography secure file management system to share file.
- Implementing cryptography secure file management system to store file.

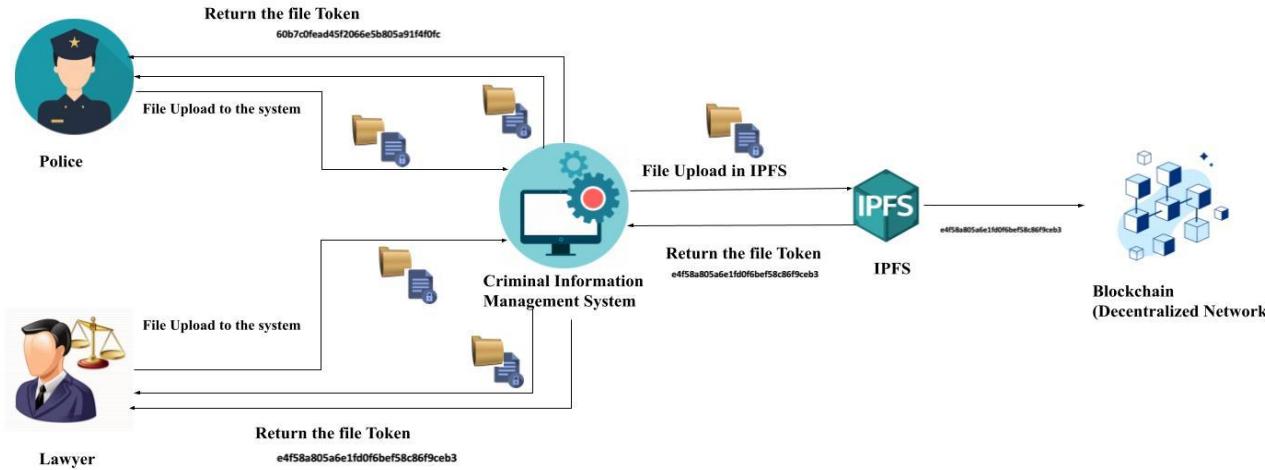
# System Overview & possible solution

- Secure File Management System in Decentralized Network



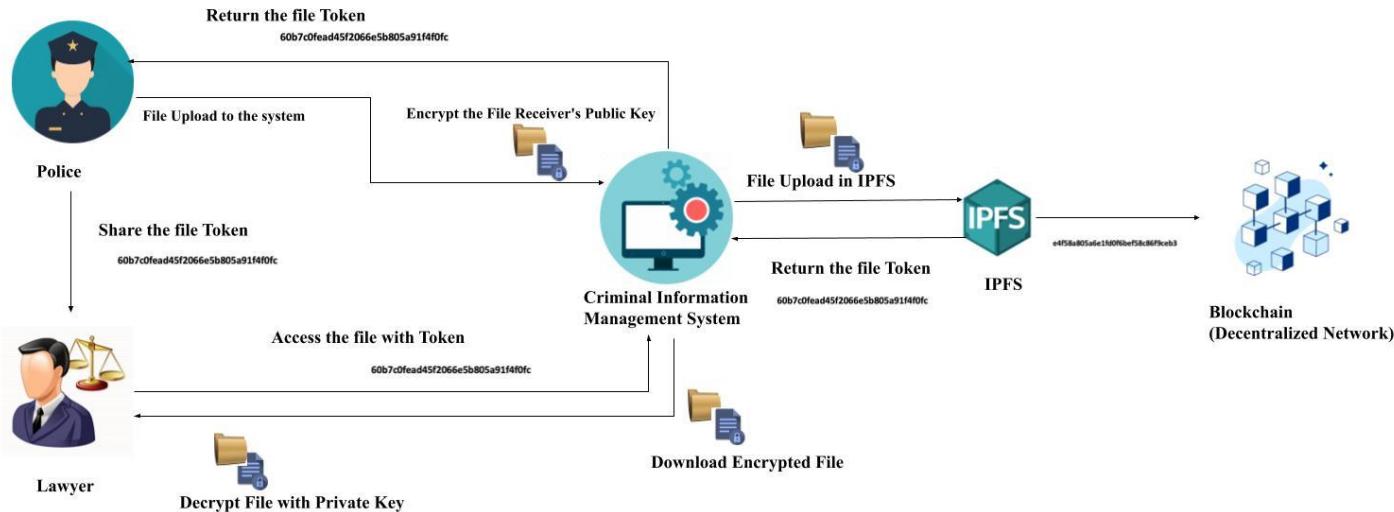
# System Overview & possible solution

- Implementing Cryptography Secure File Management System to Store File



# System Overview & possible solution

- Implementing Cryptography Secure File Management System to Share File



# PROGRESS DEMO (100%)

The screenshot shows a web browser window with a Node.js terminal window open below it.

**Web Browser:**

- Address bar: http://localhost:3001
- Header: Secure File Storage, Crisys
- Content:
  - Upload Files** section:
    - Choose File button: user.zip
    - Text area: Encrypt the file before upload to the system.  
Note: Upload file extention need to be ".zip"
    - Upload File button
  - Download** section:
    - Text: Use CID value to download file
    - CID value: QmSi6WpU5tfaFeNnJW3PMzFnKDNmV7WpCavn1i7VGBxFPW
    - Download button

**Terminal:**

```
PROBLEMS OUTPUT TERMINAL ...
PS C:\xampp\htdocs\tmp-23-270\securefilestorage> node app.js
Server is running on port 3001
{
 fieldname: 'avatar',
  originalname: 'user.zip',
  encoding: '7bit',
  mimetype: 'application/x-zip-compressed',
  destination: 'uploads/',
  filename: '58dbae8cac69679cebf10aac2b883469',
  path: 'uploads\\58dbae8cac69679cebf10aac2b883469',
  size: 5056
}
(node:5960) [DEP0005] DeprecationWarning: Buffer() is deprecated due to security and usability issues. Please use the Buffer.alloc(), Buffer.a
llocUnsafe(), or Buffer.from() methods instead.
(Use `node --trace-deprecation ...` to show where the warning was creat
ed)
[
  {
    path: 'QmSi6WpU5tfaFeNnJW3PMzFnKDNmV7WpCavn1i7VGBxFPW',
    hash: 'QmSi6WpU5tfaFeNnJW3PMzFnKDNmV7WpCavn1i7VGBxFPW',
    size: 5067
  }
]
QmSi6WpU5tfaFeNnJW3PMzFnKDNmV7WpCavn1i7VGBxFPW
QmSi6WpU5tfaFeNnJW3PMzFnKDNmV7WpCavn1i7VGBxFPW
[]
```

# PROGRESS DEMO (100%)

---

## File Integrity Check

- Uploaded File Hash

```
PS E:\Evidence> Get-FileHash ".\user.zip"
```

Algorithm	Hash	Path
-----	-----	-----
SHA256	DDD70226D0471FA358C7813667CA869484DEA21D8E60976BCE2530E444EFE9C3	E:\Evidence\user.zip

- Download File Hash

```
PS C:\Users\spt\Downloads> Get-FileHash ".\download.zip"
```

Algorithm	Hash	Path
-----	-----	-----
SHA256	DDD70226D0471FA358C7813667CA869484DEA21D8E60976BCE2530E444EFE9C3	C:\Users\spt\Downloads\downlo...

# Methodology

- **IDE :** VS Code
- **Programming Language:** Java Script
- **Front- end:** HTML, CSS
- **Back-end:** node.js
- **Secure File Management System:**  
InterPlanetary File System (IPFS)
- **Encryption & Decryption:** Kleopatra , FPS II fe
- **Project Management :** Trello, Ms Planner



# References

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- D. Praveen, S. G. Totad, M. Rashinkar, R. Ostwal, S. Patil and P. M. Hadapad, "Scalable Blockchain Architecture using off-chain IPFS for Marks Card Validation," in 4th International Conference on Innovative Data Communication Technology and Application, 2022.

05

# Chain of Custody

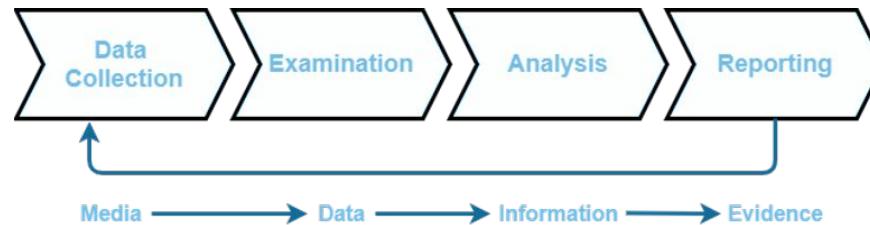


IT19983370 | THUSHITHARAN .M  
Specializing in Cyber Security

# Chain of Custody

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- ❖ Chain of Custody of more than a system, This is a **Process** of handling the movement of evidences by the Department of Police Sri Lanka
- ❖ How can the implementation of chain of custody in of the criminal records management improve the current Process of handling the evidence?
  - Chain of custody is a logical sequence of keep the records of digital evidence process.
  - Once peer uploads the file, the file is stored in a ipfs.
  - These block gets appended to the current blockchain, which makes it impossible to edit or delete the file/block.



# **Current System Followed by Sri Lankan Police Department – The Research Problem**

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- Evidence are not stored in a proper manner.
- Digital evidences are stored locally in the police station computer's hard drive which is completely insecure.
- Any authorized officials can access the digital evidence by just signing in the log ledger. This may let them delete other's evidence without their concern and there will be no records of who deleted the evidence file.
- Not aware of the Chain of Custody process.
- Lack of knowledge in digitalize the physical evidence.



# Methodology

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- **IDE :** Visual Studio Code
- **Front End:** HTML, CSS, Javascript
- **Back End:** Php, Mysql
- **Database:** Sql
- **Server:** Apache web Server
- **Version Control:** Gitlab



GitLab



CSS



MySQL™



# Main Objectives

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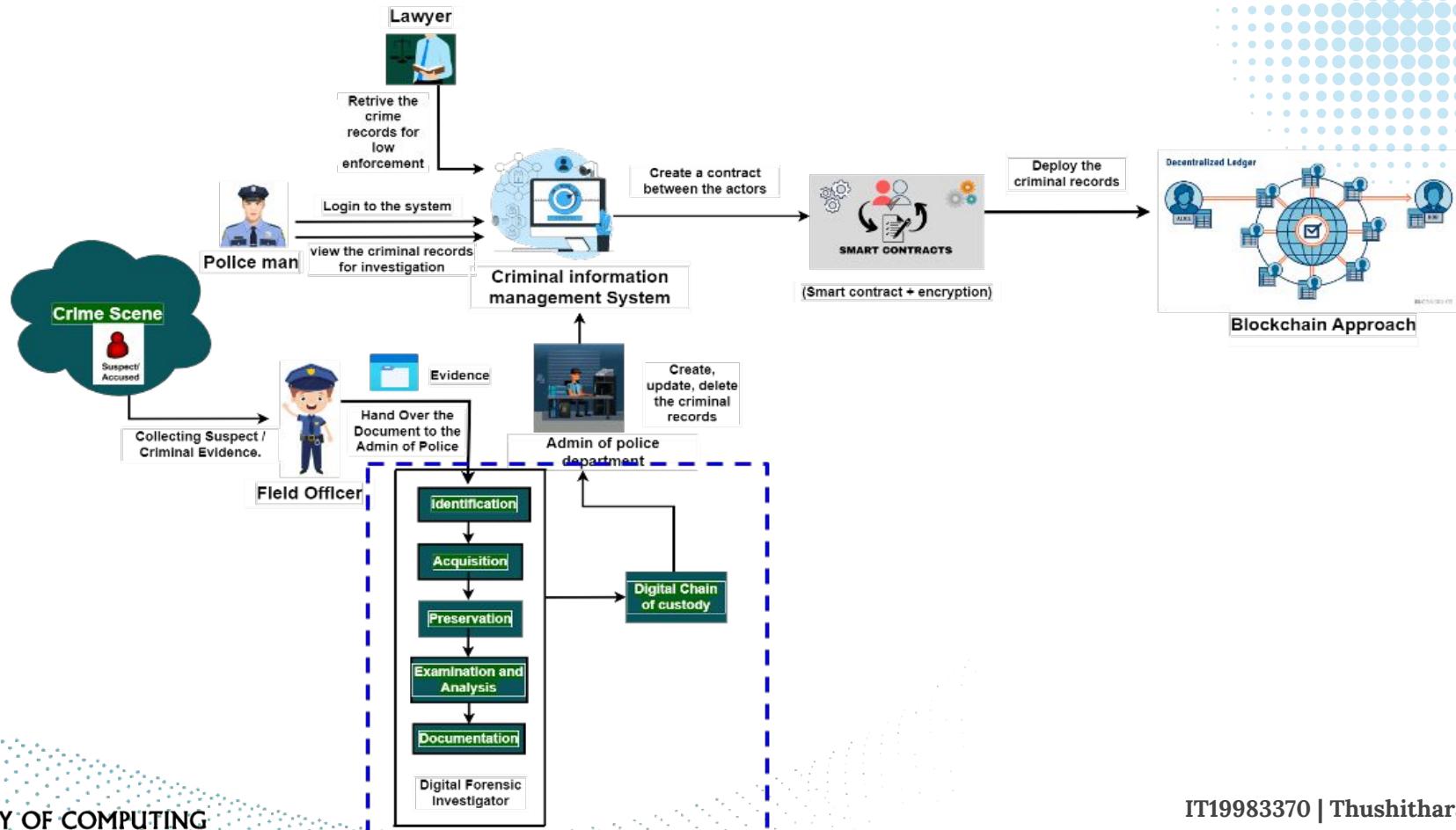
- Record Evidence Upload Logs
- Record Evidence Download Logs
- Store Evidence Verification Status

## Sub-Objectives

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- Increased Efficiency
- Ensure Integrity

# System Overview



# Objective Achieved

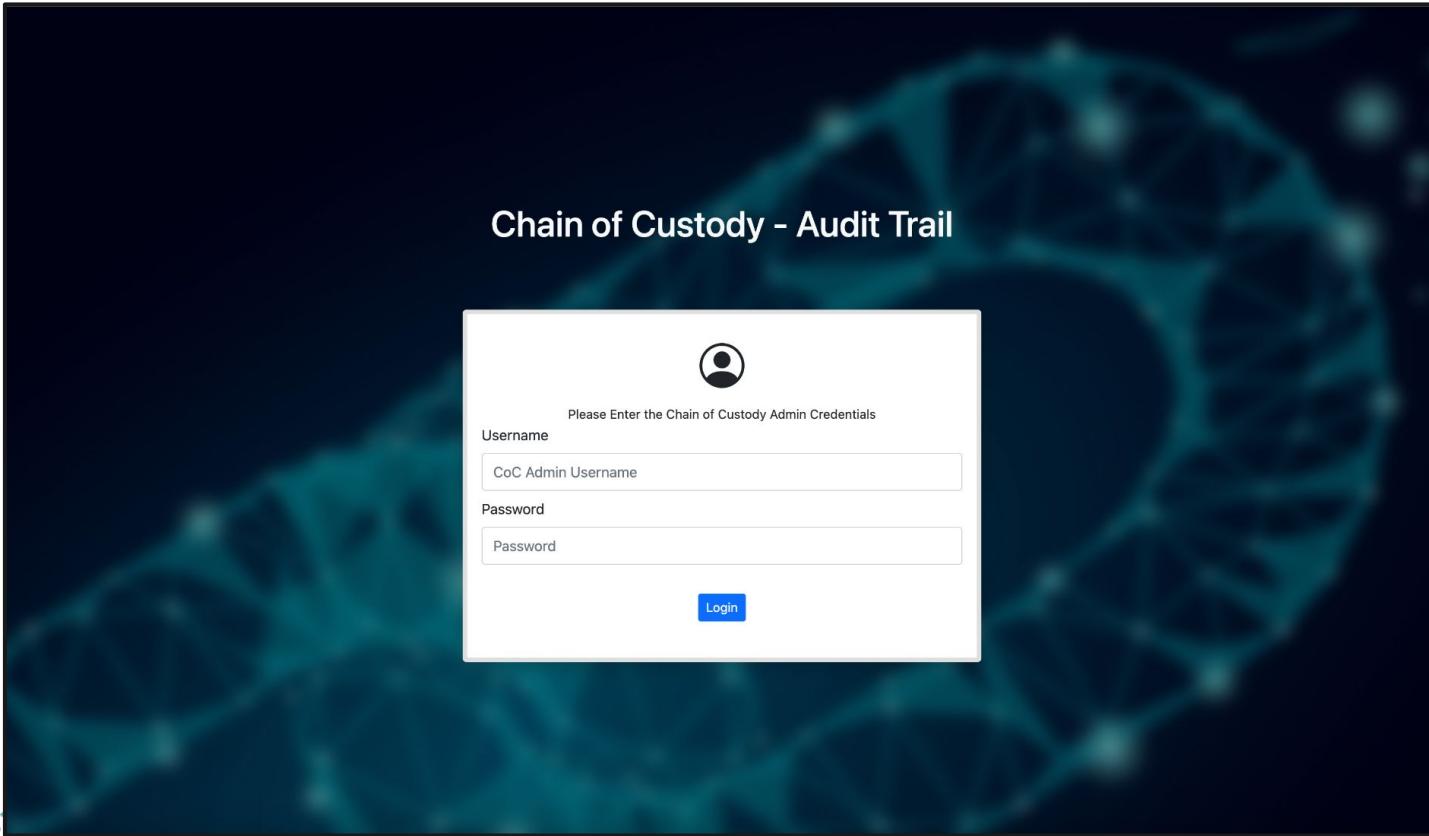
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- Storing the Evidences details in the database.
- Store Criminal Database add, view, update, delete logs
- Store Evidence Upload, download logs



# PROGRESS DEMO (100%)

## Chain of Custody Admin Login Page



# PROGRESS DEMO (100%)

## Event logs Page

Chain of Custody				CRISYS	Crisys	Criminal List	Event Logs	View Evidences	+ Add Evidences	Users	Hello Thushitharan
130	Oct 29, 2023 15:35	thushi	Logged out.								
131	Oct 29, 2023 15:35	perera	Logged in the system.								
132	Oct 29, 2023 15:35	perera	Downloaded 'Blaine Estes'								
133	Oct 29, 2023 15:53	perera	Uploaded 'uploads/sample (3).jpg' for case 'Est provident volup'								
134	Oct 29, 2023 15:53	perera	Downloaded 'Benjamin Hicks'								
135	Oct 29, 2023 15:58	perera	Downloaded 'John Wick'								
136	Oct 29, 2023 15:58	perera	Downloaded 'Abdul Moreno'								
137	Oct 29, 2023 15:58	perera	Downloaded 'Benjamin Hicks'								
138	Oct 29, 2023 16:01	perera	Downloaded 'Carl Cunningham'								
139	Oct 29, 2023 16:03	perera	Downloaded 'Sean Burks'								
140	Oct 29, 2023 16:03	perera	Downloaded 'Sean Burks'								
141	Oct 29, 2023 16:05	perera	Downloaded 'Sean Burks' from location "								
142	Oct 29, 2023 16:07	perera	Downloaded 'Brett Lawrence' from location 'uploads/logo (3).png'								
143	Oct 29, 2023 22:58	perera	Downloaded 'Kalia Harper' from location 'uploads/scared.mp3'								
144	Oct 30, 2023 08:36	thushi	Logged in the system.								
145	Oct 30, 2023 08:36	thushi	Logged out.								
146	Oct 30, 2023 08:36	thushi	Logged in the system.								
147	Oct 30, 2023 08:38	thushi	updated the details of [id=9] member.								
148	Oct 30, 2023 08:39	thushi	Downloaded 'Benjamin Hicks' from location 'uploads/sample (3).jpg'								
149	Oct 30, 2023 08:41	thushi	Uploaded 'uploads/gun-dematagoda.jpg' for case '20012'								
150	Oct 30, 2023 08:42	thushi	deleted [id=5] Mikee Williams from member list.								
151	Oct 30, 2023 08:43	thushi	added [id=12] Hans Zimmer into the member list.								
152	Oct 30, 2023 08:44	thushi	viewed the data of [id=6]Thushi Sutha								

# PROGRESS DEMO (100%)

## Evidence List

CRISYS Chain of Custody Home Criminal List Event Logs View Evidences + Add Evidences Users Hello Thushitharan

### Evidence List

Total Entries: 37

#	Case ID	Evidence Name	Fingerprint	Assigned Officer	Evidence Location	File Hash	Uploaded by	Action	Verification
48	Architecto	Ann	Dolore	Explicabo	uploads/sample.jpg			<a href="#">Download</a>	<span>VERIFIED</span>
49	Quis tenetur eiusmod	Blaine Estes	Asperiores magnam co	Deserunt in enim rem	uploads/sample.jpg			<a href="#">Download</a>	<span>VERIFIED</span>
50	Quis tenetur eiusmod	Blaine Estes	Asperiores magnam co	Deserunt in enim rem	uploads/sample.jpg			<a href="#">Download</a>	<span>UNVERIFIED</span>
51	Quis tenetur eiusmod	Blaine Estes	Asperiores magnam co	Deserunt in enim rem	uploads/sample.jpg			<a href="#">Download</a>	<span>UNVERIFIED</span>
52	Voluptates beatae mi	Skyler Solomon	Eum autem velit et	In dolor et tempora	uploads/sample.jpg	305769af1257ffa3a41521f4de743c66		<a href="#">Download</a>	<span>VERIFIED</span>
53	Sunt sint deserunt	Libby Battle	Assumenda duis dolor	Dolorum necessitatibus	uploads/sample.jpg	305769af1257ffa3a41521f4de743c66	1	<a href="#">Download</a>	<span>VERIFIED</span>
54	Est minima incident	Guinevere Guy	Qui error qui aut ma	Aliquid in deserunt	uploads/sample.jpg	305769af1257ffa3a41521f4de743c66	3	<a href="#">Download</a>	<span>UNVERIFIED</span>
55	Deleniti mollitia ve	Keefe Stark	Aut elit in quia su	Excepturi vel nemo c	uploads/sample.jpg	305769af1257ffa3a41521f4de743c66	thushi	<a href="#">Download</a>	<span>VERIFIED</span>
56	Deleniti mollitia ve	Keefe Stark	Aut elit in quia su	Excepturi vel nemo c	uploads/sample.jpg	305769af1257ffa3a41521f4de743c66	thushi	<a href="#">Download</a>	<span>VERIFIED</span>
57	In rerum quia repreh	Idona Stevens	Ilo rem voluptatum	Minima fugiat dolor	uploads/sample.jpg	305769af1257ffa3a41521f4de743c66	perera	<a href="#">Download</a>	<span>UNVERIFIED</span>
58	Inventore ut ut magn	Wynter Kaufman	Aspernatur eum commo	Ut obcaecati sunt fa	uploads/sample.jpg	305769af1257ffa3a41521f4de743c66	perera	<a href="#">Download</a>	<span>UNVERIFIED</span>
59	Quo sunt vel consegu	Melissa Beach	Eaque eu nulla magna	Omnis necessitatibus	uploads/sample.jpg	305769af1257ffa3a41521f4de743c66	perera	<a href="#">Download</a>	<span>UNVERIFIED</span>

Search

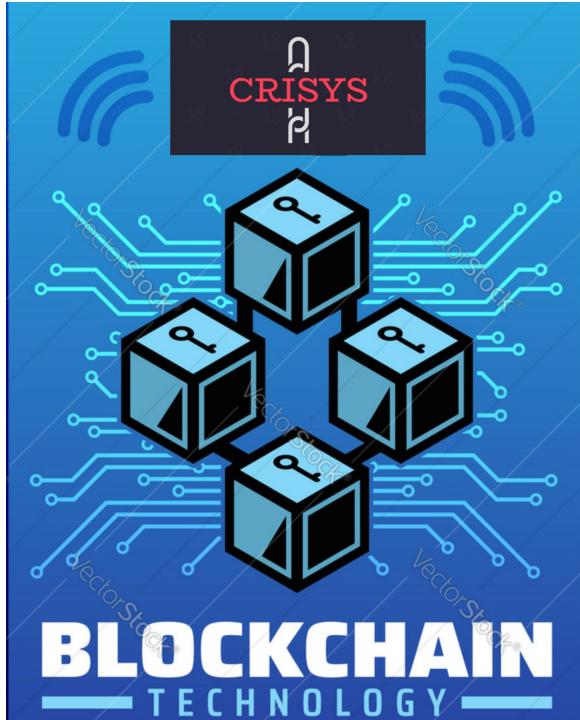
# References

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1. Prayudi, Yudi & Sn, Azhari. (2015). Digital Chain of Custody: State of The Art. International Journal of Computer Applications. 114. 975-8887. 10.5120/19971-1856.
2. Anderson, G.S., Litzenberger, R. and Plecas, D. (2002), "Physical evidence of police officer stress", Policing: An International Journal, Vol. 25 No. 2, pp. 399-420.
3. Tasnim, Maisha & Omar, Abdullah & Rahman, Shahriar & Bhuiyan, Md. (2018). CRAB: Blockchain Based Criminal Record Management System. 294-303. 10.1007/978-3-030-05345-1\_25.

# Gantt Chart

# Commercialization



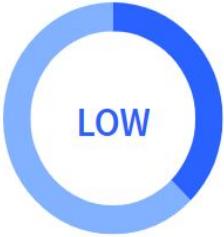
## **Primary Target Audience**

- Plan to market this product for Law
  - Enforcement Agencies.
  - Special Private investigation.
- The pricing model is based on subscription tiers.
  - Offer a free trial or demo. This will allow law enforcement agencies to try your system before they buy it.

# System Scan Report



## Comprehensive Report



### Acunetix Threat Level 1

One or more low-severity type vulnerabilities have been discovered by the scanner.



High



Medium



Low



Informational

#### Scan Detail

Target	https://localhost/crisys/
Scan Type	Full Scan
Start Time	Sep 20, 2023, 4:57:03 AM GMT+1
Scan Duration	3 hours, 13 minutes
Requests	27863
Average Response Time	11ms
Maximum Response Time	29986ms

Severity	Vulnerabilities	Instances
❗ High	0	0
⚠ Medium	0	0
ⓘ Low	8	11
ⓘ Informational	7	13
Total	15	24

# **Supervisor & Co-Supervisor**

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**Mr. Kanishka Yapa**  
Supervisor



**Ms. Diniti Pandithage**  
Co-Supervisor

# Group Members

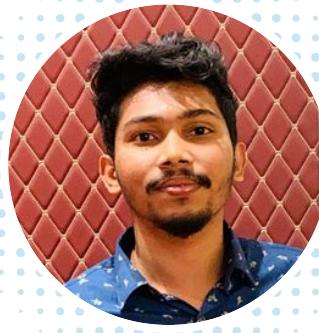
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**IT 20150952**  
Brahanawadhan B.



**IT 20171438**  
Wijayarathne S.N.



**IT 20157814**  
Ahmed M.N.H.



**IT 19983370**  
Thushitharan M.

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**GROUP ID: 23-270**

# THANK YOU!



**IT 20150952@my.sliit.lk - Brahanawardhan B**

**IT 20171438@my.sliit.lk - Wijayarathne S. N**

**IT 20157814@my.sliit.lk - Ahmed M. N. H**

**IT 19983370@my.sliit.lk - Thushitharan M.**

**Project Website: <https://crisys.vercel.app/>**

**-- GROUP ID: 23-270 --**