

# Sri Indu College of Engineering & Technology

**UGC Autonomous Institution** 

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BATCH 2022-2026

#### DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

#### MINI PROJECT ON

STRENGTHENING CLOUD COMPUTING SECURITY MECHANISMS FOR SECURE KEYWORD SEARCH AND DATA SHARING

#### **GUIDED BY:**

Mrs B.HIMABINDU

Asst.prof.

#### **TEAM MEMBERS:**

B.DAYAKAR (22D41A0511)

D.MITHIN (22D41A0552)

CH.AKSHITHA (22D41A0548)

B.KAVYA SREE (22D41A0539)

## <sup>2</sup> AGENDA

- Abstract
- Introduction
- **■** Existing system
- Proposed system
- **■** System requirements
- System Architecture
- **■** Modules
- **■** UML Diagrams
- Screenshots of execution
- Conclusion

### **ABSTRACT**

- Cloud computing enables low-cost, scalable data storage but raises security concerns.
- To address this, we propose CPAB-KSDS (Ciphertext-Policy Attribute-Based Keyword Search and Data Sharing).
- Supports both attribute-based keyword search and data sharing.

## INTRODUCTION

- Secure keyword search and controlled sharing of encrypted files are essential for confidentiality in critical sectors like healthcare and finance.
- Focuses on data confidentiality, fine-grained access control, and resilience to key exposure.
- Enhances trust and compliance in cloud environments.

## **EXISTING SYSTEM**

- Uses attribute-based encryption (ABE), which is inflexible for dynamic search and sharing.
- Often stores data in plain text or with weak encryption methods.

## Disadvantages

- Poor data privacy during access/sharing.
- Performance Bottlenecks.

### PROPOSED SYSTEM

- Introduces CPAB-KSDS: Ciphertext-Policy Attribute-Based Encryption with Keyword Search and Data Sharing.
- Supports keyword updates during sharing.
- CCA-secure, resists collusion attacks.

## Advantages

- Strong security: CCA & CKA secure.
- Secures data at rest and in transit.
- Multiple keys enhance decryption protection.

## 7 SYSTEM REQUIRMENTS

## **HARDWARE SYSTEM CONFIGURATION:**

Processor : Intel core i3

Hard Disk : 5 GB

RAM : 4 GB

## **SOFTWARE SYSTEM REQUIRMENTS:**

Technology : Java SE 8

■ Web Server :Tomcat 7.0

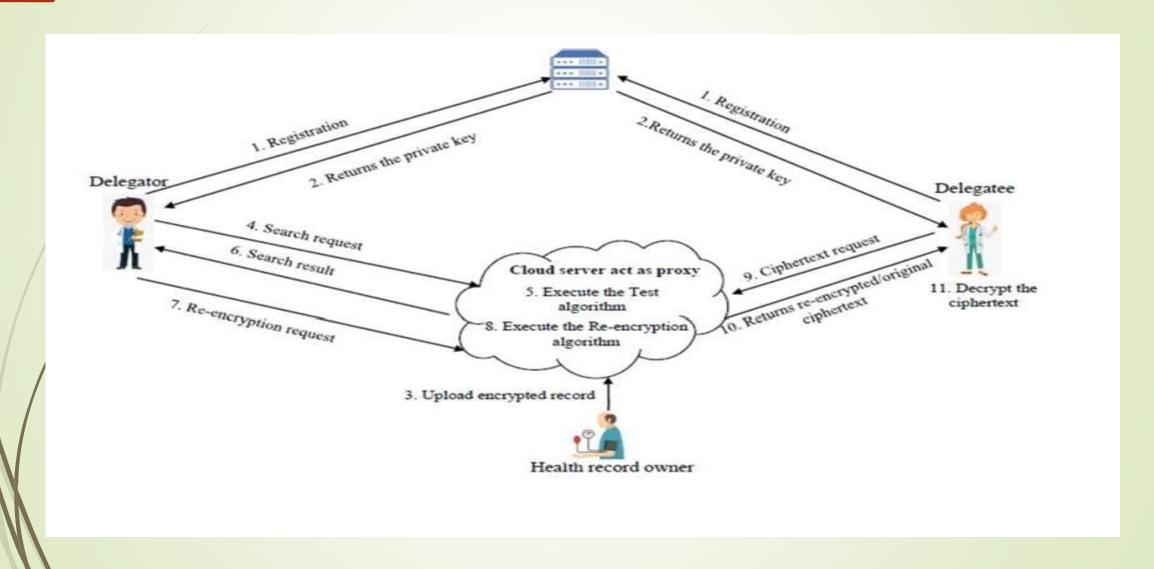
:HTML, CSS, JavaScript Client web Technologies

Server side Technologies :Servlets, JSP

Database server :MYSQL

Editor :Netbeans8.1

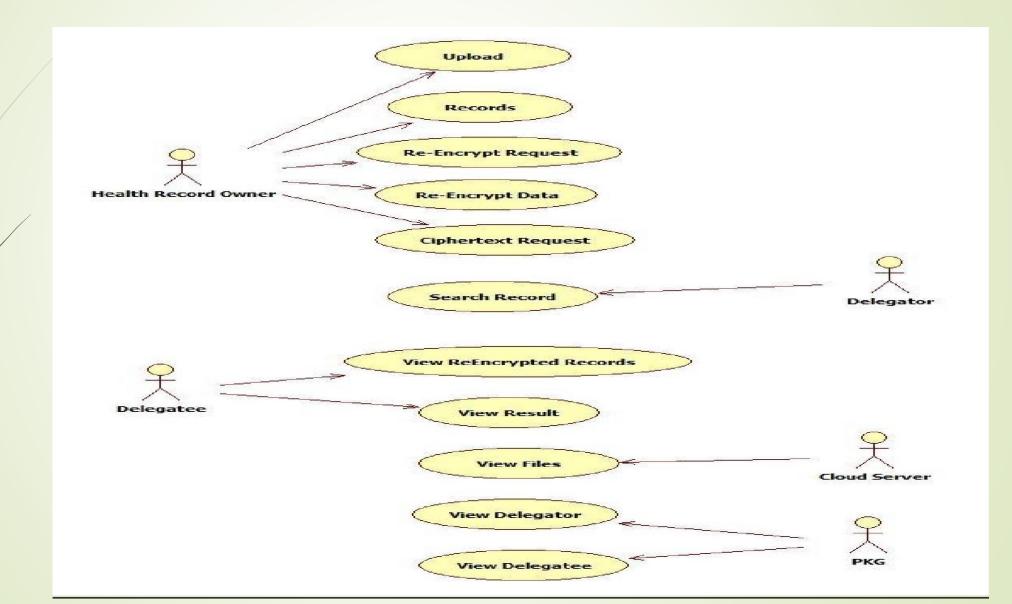
## SYSTEM ARCHITECTURE



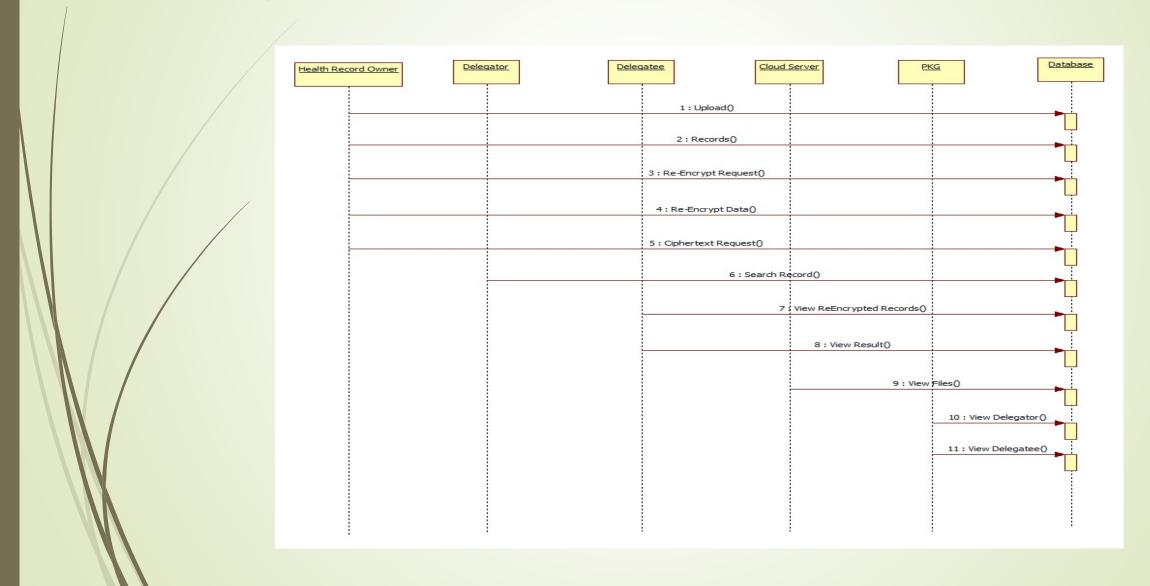
## **MODULES**

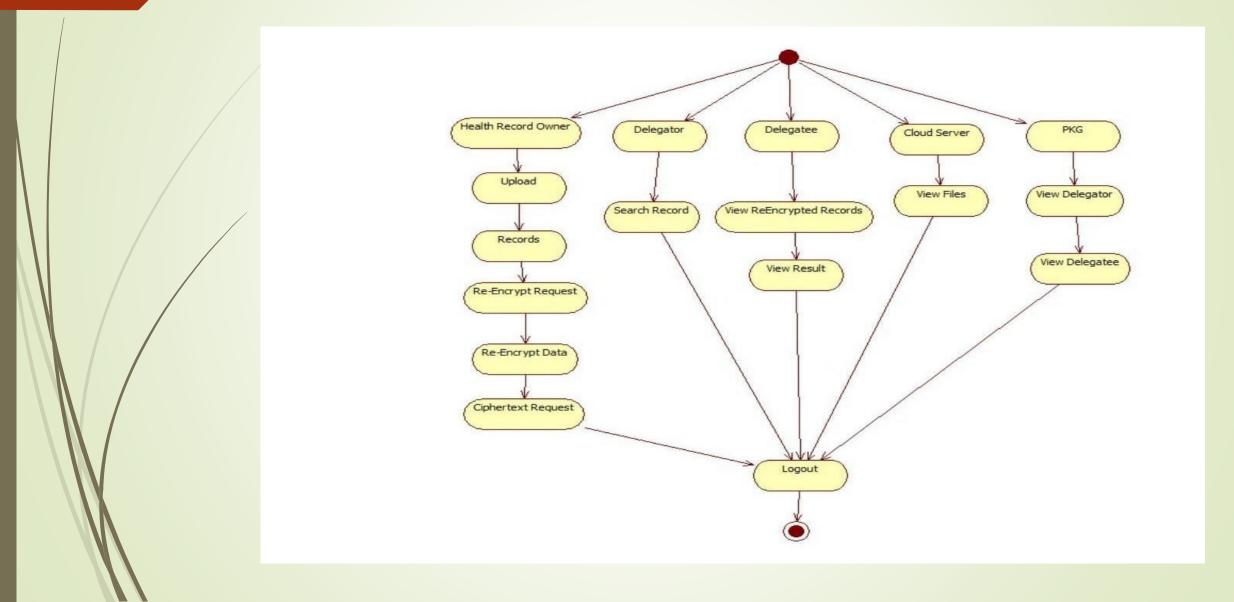
- Health Record Owner: Controls access to personal data.
- Delegator: Assigns access; retains responsibility.
- Delegatee: Accesses shared health records securely.
- PKG: Issues and manages cryptographic keys.
- Cloud Server: Stores encrypted data; supports secure search & sharing.

# UML DIAGRAMS USE CASE DIAGRAM



# 11 SEQUENCE DIAGRAM





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## SCREENSHOTS OF EXECUTION

STR	RENGTHENING CLOUD COMPUTING SECURITY: ME AND DATA SHA		E KEYWORD SEARCH								
Home Health Record Owner Delegator Delegatee PKG											
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	Home Health Record Owner	Delegator	Delegatee	Cloud Server	PKG						
Health Record Owner Login											
UserName	UserName										
UserName Password	UserName Password										

	STRENGTHENING CLOUD COMPUTING SECURITY: MECHANISMS FOR SECURE KEYWORD SEARCH AND DATA SHARING											
		Delegatee	Cloud Server	РКС								
	Health Record Owner Registration											
	Name	N	Vame									
	Email	E	Email									
	Mobile	N	Nobile									
	Address	A	Address									
	UserName	L	JserName									
	Password	F	Password									
	Register											
STRENGTHENING CLOUD COMPUTING SECURITY: MECHANISMS FOR SECURE KEYWORD SEARCH AND DATA SHARING												
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Owner Home Page::'dayakar@gmail.com'.												
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STRENGTHENING CLOUD COMPUTING SECURITY: MECHANISMS FOR SECURE KEYWORD SEARCH AND DATA SHARING							STRENGTHENING CLOUD COMPUTING SECURITY: MECHANISMS FOR SECURE KEYWORD SEARCH AND DATA SHARING						
Home	Health Record Owner	Delegator	Delegatee	Cloud Server	PKG				Health Record Owner	Delegator	Delegatee	Cloud Server	PKG
Delegator Registration						Delegatee Registration							
Name Email Mobile Address UserName Password Register  STRENGTHENING CLOUD C	Name  Email  Mobile  Address  UserName  Password  Login  OMPUTING SECURITY:  AND DATA S		S FOR SECUE	RE KEYWORD S	SEARCH	ST	Name Email Mobile Address UserName Password Register		Name  Email  Mobile  Address  UserName  Password  Login  MPUTING SECURITY  AND DATA		MS FOR SECU	JRE KEYWORI	) SEARCH
Home	Health Record Owner	Delegator	Delegatee	Cloud Server	PKG			Home	Health Record Owner	Delegator	Delegatee	Cloud Server	PKG
Cloud Server Login						PKG Login							
UserName Password Login	UserName Password						UserName Password Login	٦	JserName Password				

## CONCLUSION

- Proposed CPAB-KSDS for secure keyword search and data sharing in the cloud.
- Ensures CCA-security
- Demonstrates strong efficiency, practicality, and scalability.
- Addresses prior limitations and opens scope for advanced secure search schemes.

# THANK YOU...!!