

**A mini-project report on**  
**IMPLEMENTATION OF TRIPLE DES USING OTP**

*submitted in partial fulfillment of the  
requirements for*

**TE (Information Technology)**

*by*

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*under the guidance of*  
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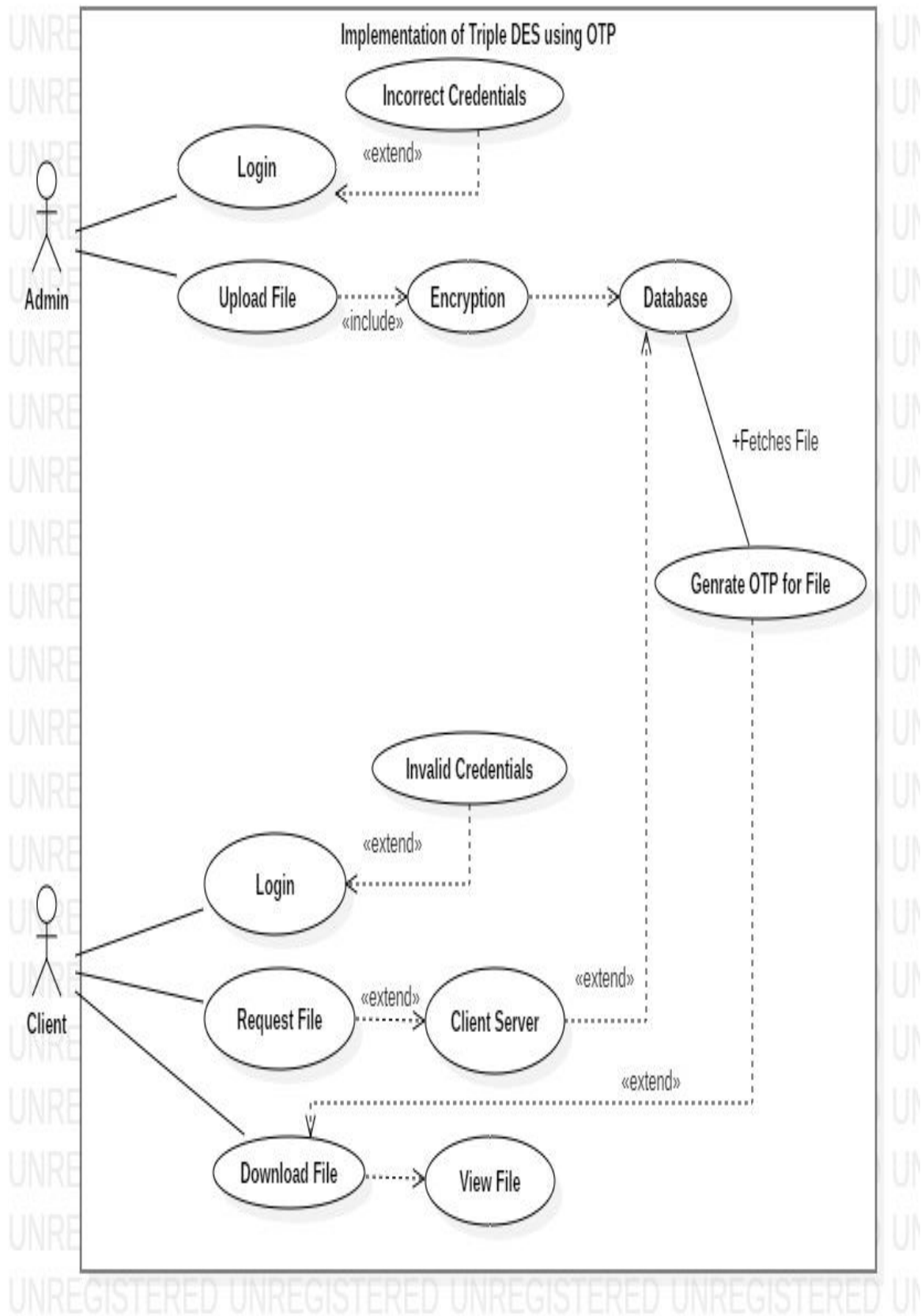
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Finolex Academy of Management and Technology, Ratnagiri  
April 2019

## Abstract:

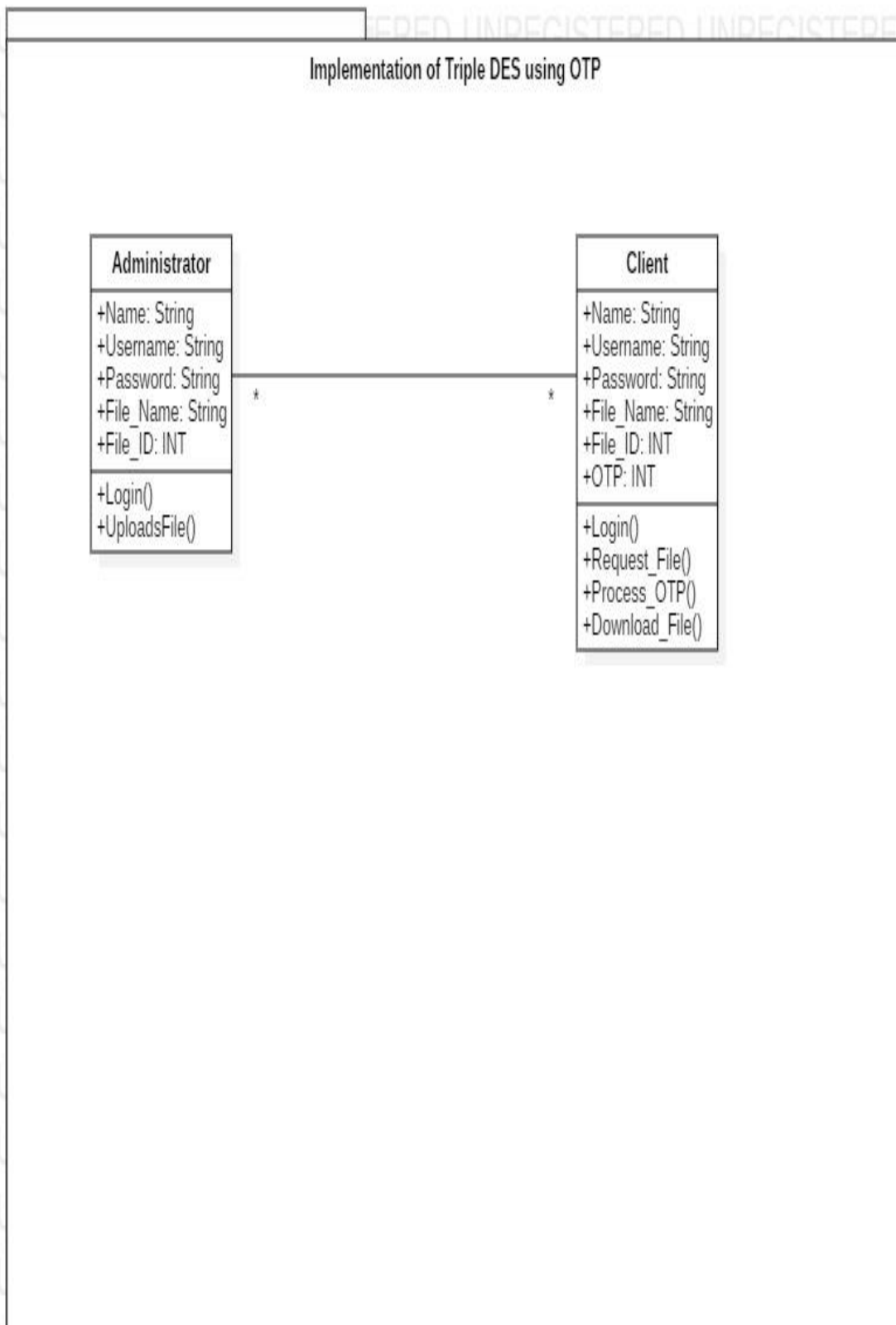
Our aim is to develop a system where we can share files easily and securely in cloud environment. In our system there will be mainly two parts, one is Admin part. In Admin part, he will be allowed to login using credentials where he will upload files. These will be indexed and stored in the cloud database. Client will login to the system using his credentials. Client will search for the file which he wants to download. Client will send request of downloading file to Admin. Admin will also have a section where it will process to client request. Admin will generate an OTP for the file which is requested by the client. Admin will send OTP to the client. After receiving OTP client will enter that OTP. Entered OTP will be verified by Admin. Admin will then allow client to download the file. The file will be then downloaded to client end. If the OTP is expired, then client have to request again. OTP (One Time Password) is used to maintain integrity and provide security to the system. OTP is generated using Triple DES. Triple DES is a process where three keys are required for encryption. It provides most security to the system.

## UML Diagrams:

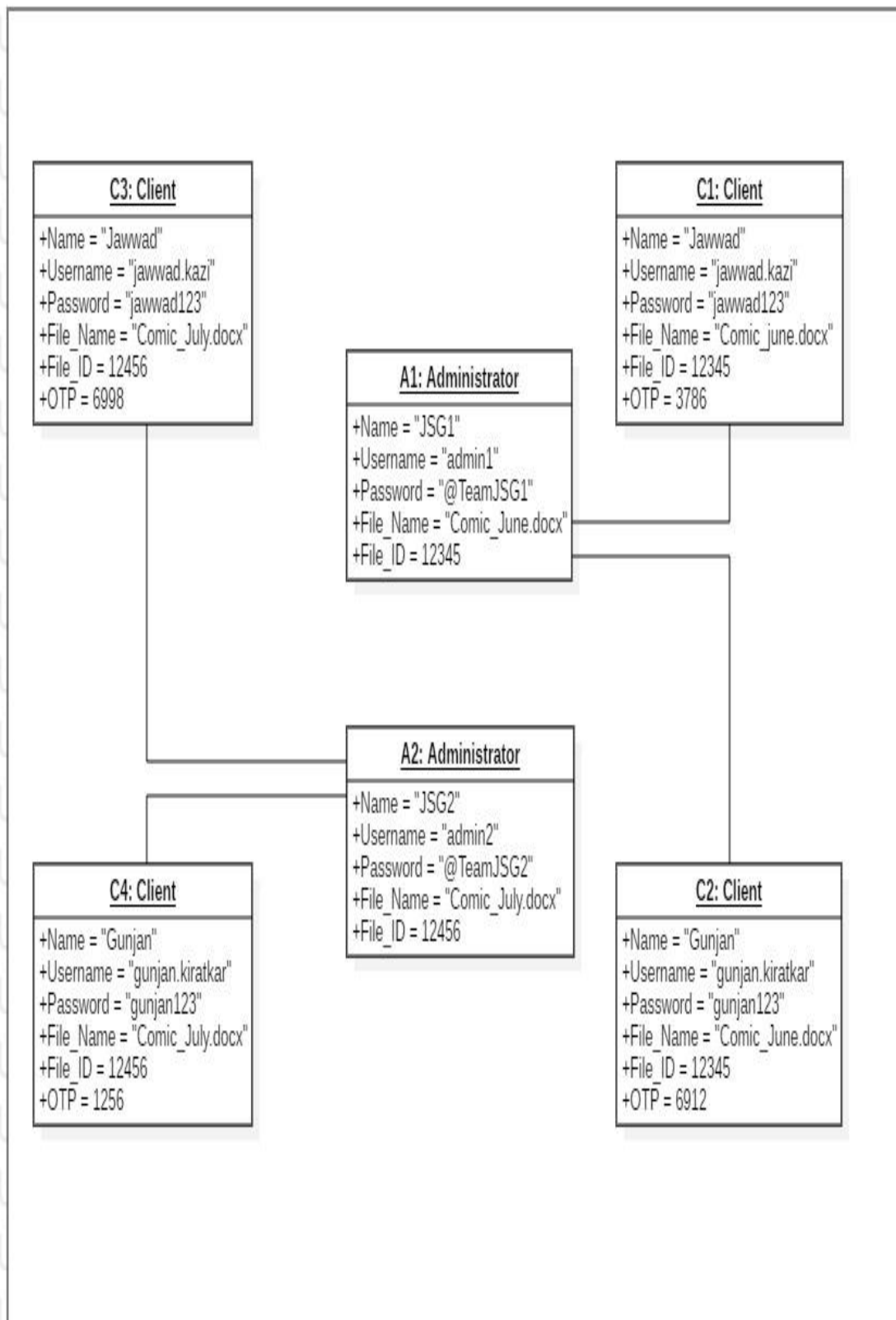
### 1. UseCase Diagram



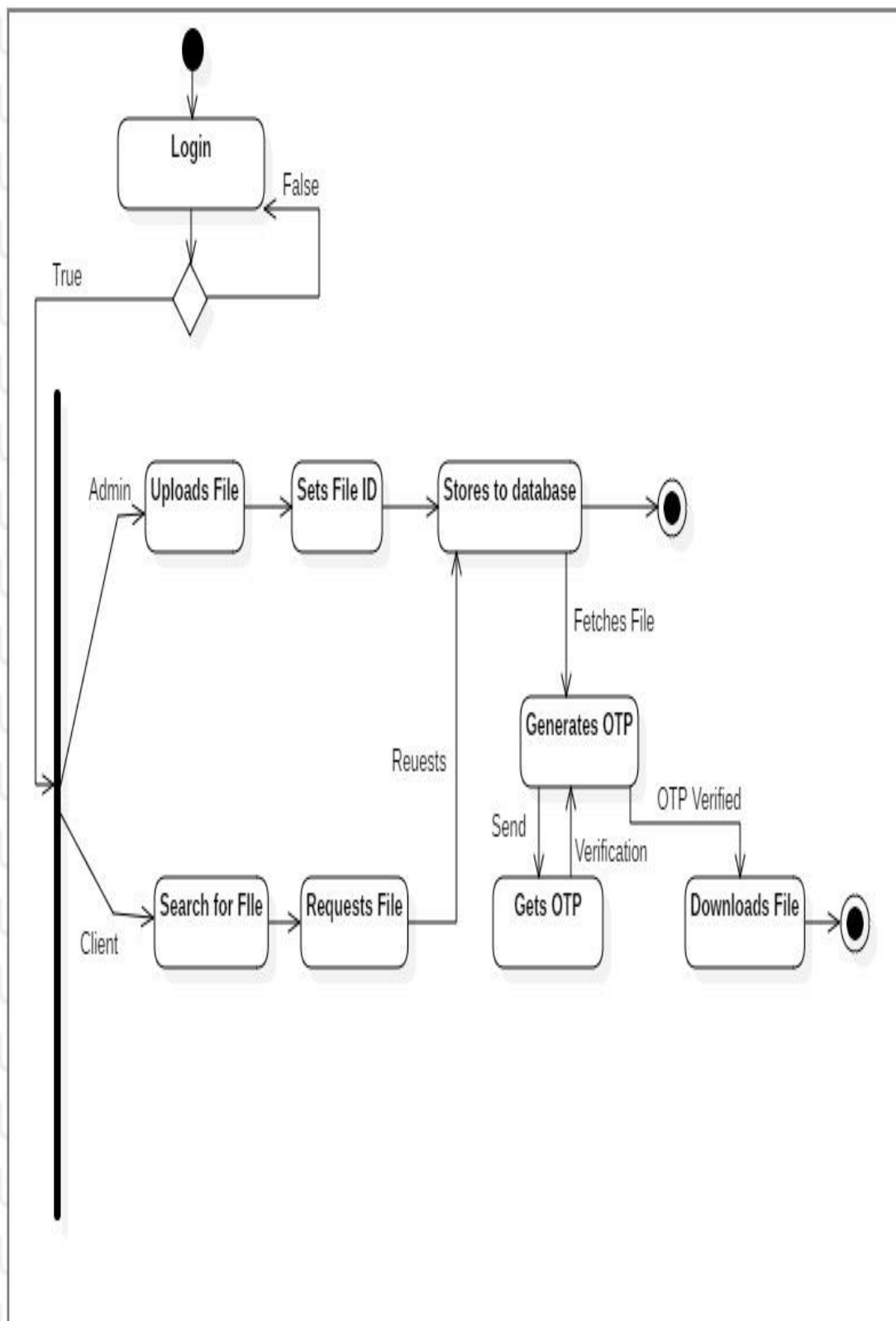
## 2. Class Diagram



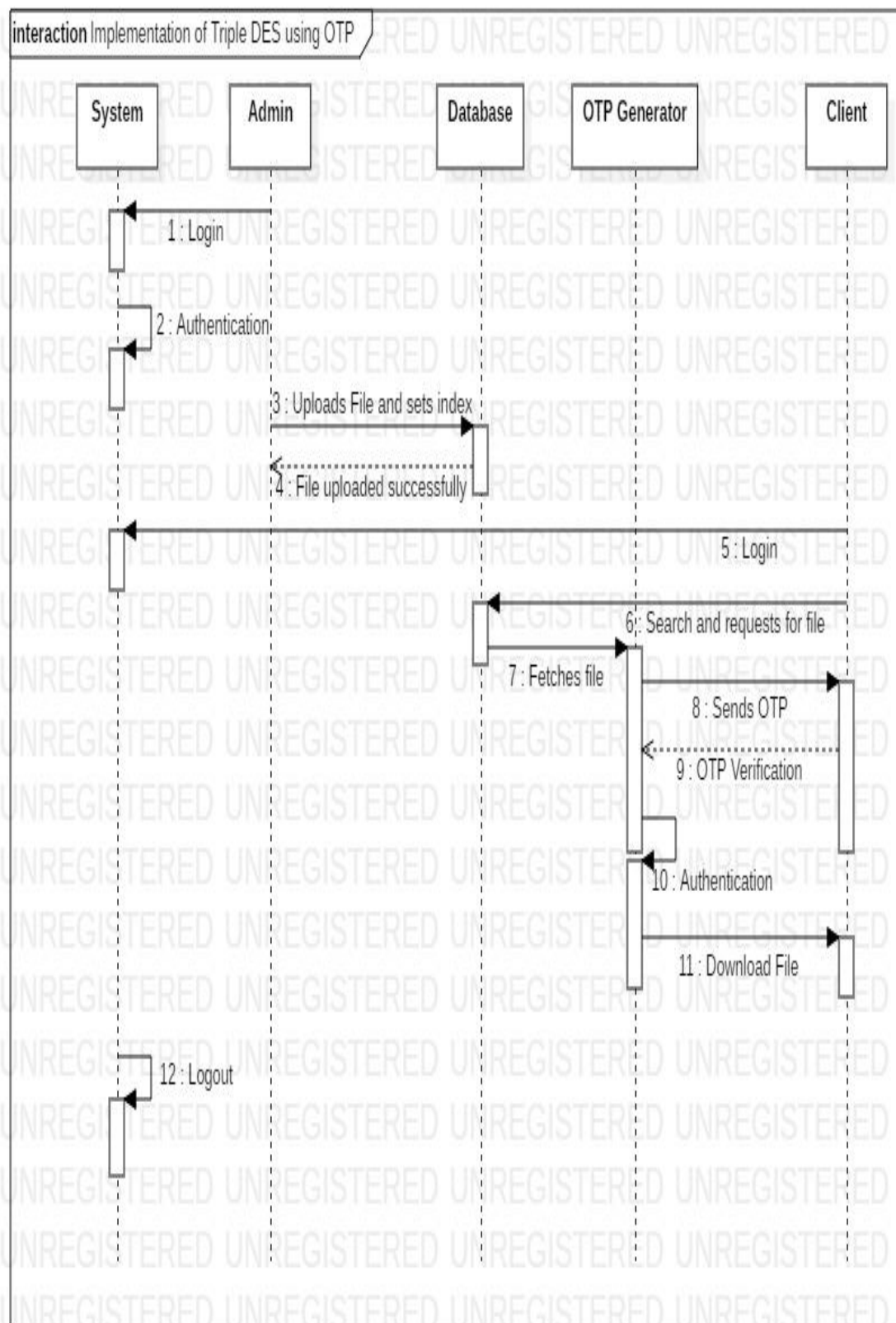
### 3. Object Diagram



#### 4. Activity Diagram



## 5. Sequence Diagram



### interaction Implementation of Triple DES using OTP

```
graph TD
    Admin[Lifeline1: Admin] -- "1: Start" --> UploadsFile[Uploads File]
    UploadsFile -- "2: Set Index" --> StoreToDatabase[Store to database]
    Client[Lifeline2: Client] -- "3: Start" --> SearchFile[Search File]
    SearchFile -- "4: Requests for file" --> StoreToDatabase
    StoreToDatabase -- "5: Fetches File" --> GeneratesOTP[Generates OTP]
    GeneratesOTP -- "6: Send OTP" --> GetsOTP[Gets OTP]
    GetsOTP -- "7: Verification" --> GeneratesOTP
    GeneratesOTP -- "+Authentication" --> GeneratesOTP
    GeneratesOTP -- "8: Verified" --> FileDownload[File Download]
```

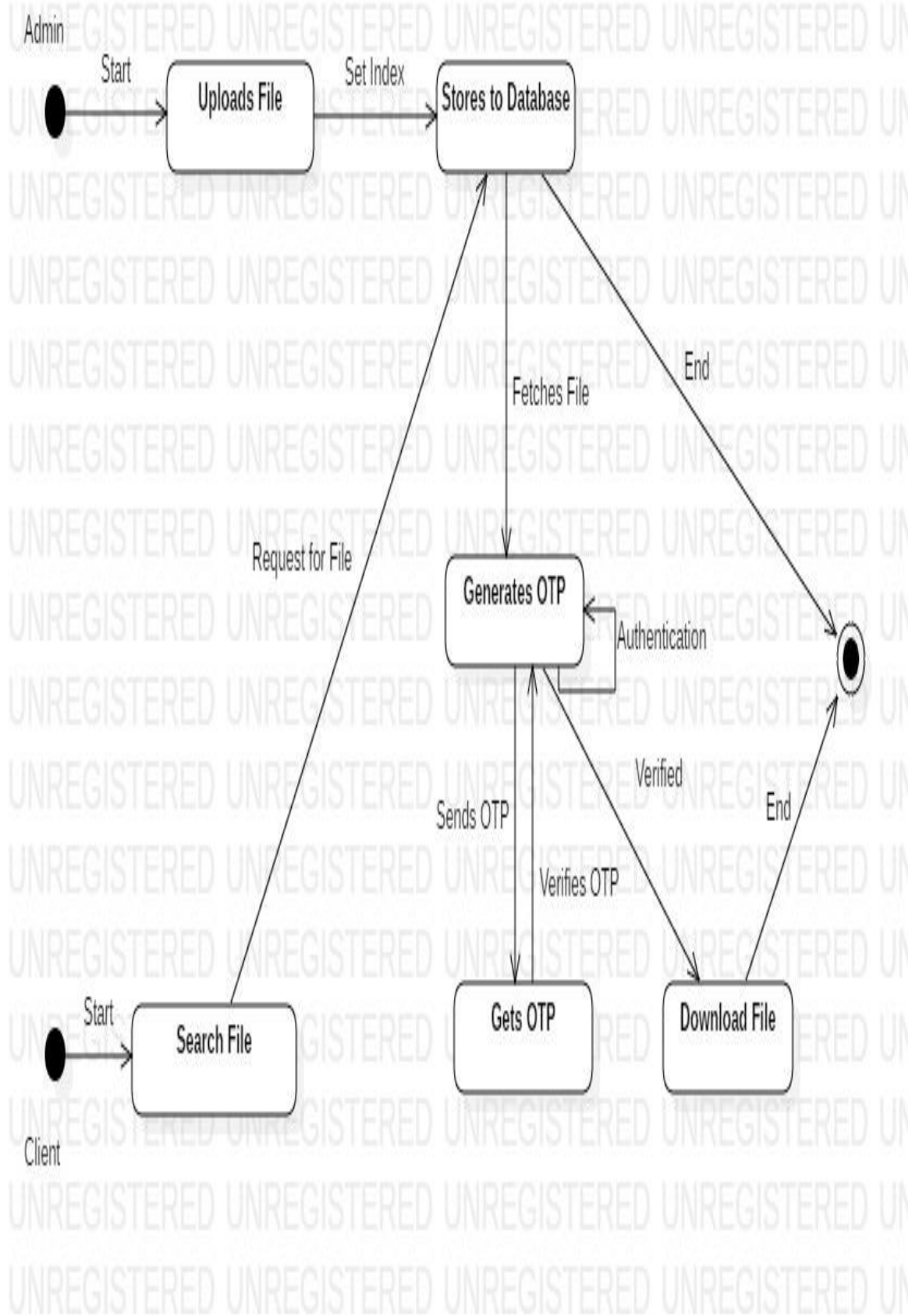
The diagram illustrates the interaction for implementing Triple DES using OTP. It involves two lifelines: Lifeline1: Admin and Lifeline2: Client, and several use cases: Uploads File, Store to database, Search File, Generates OTP, Gets OTP, and File Download.

The sequence of interactions is as follows:

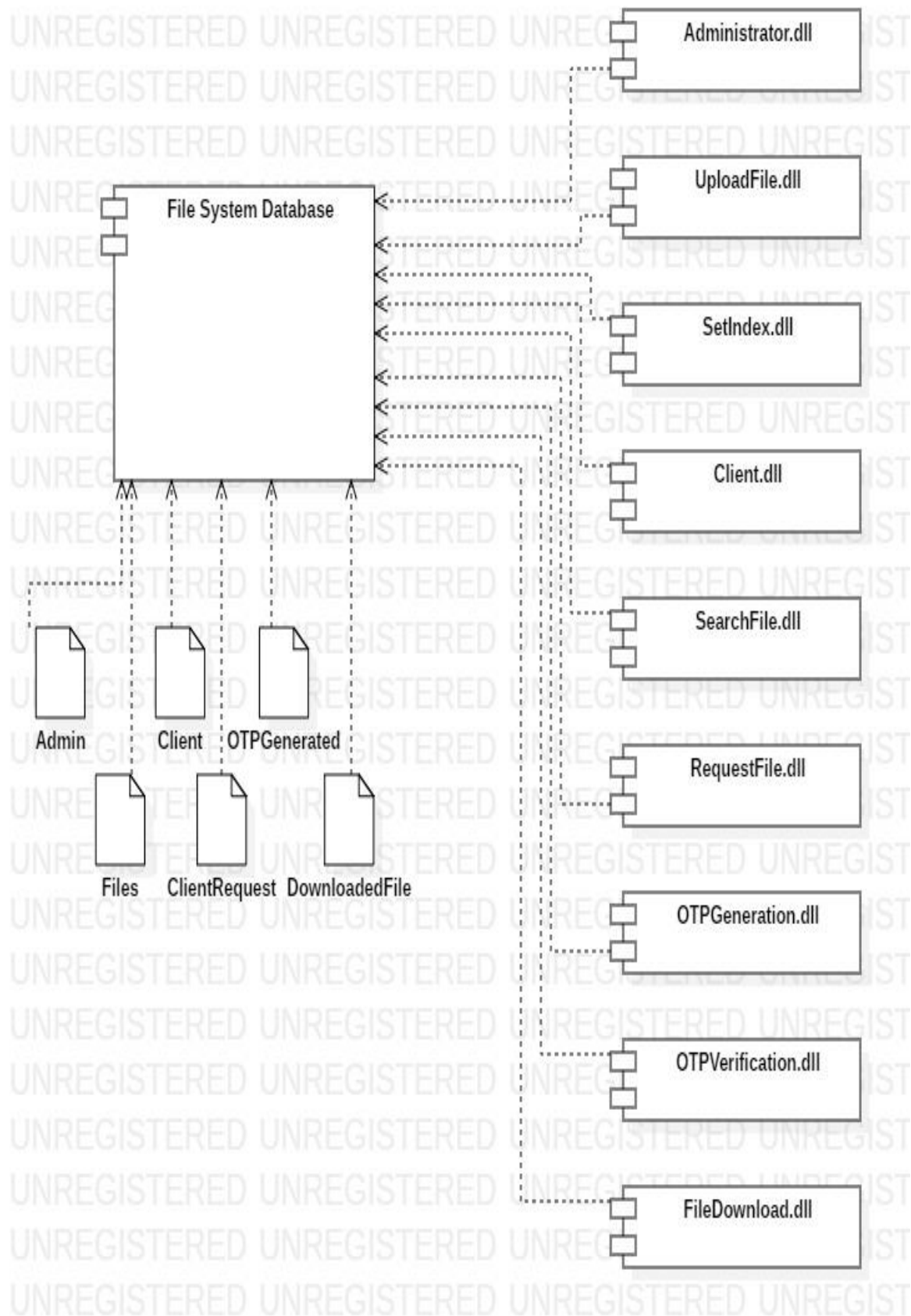
- Lifeline1: Admin starts the process (1: Start) by initiating the Uploads File use case.
- The Uploads File use case leads to the Store to database use case (2: Set Index).
- Lifeline2: Client starts the process (3: Start) by initiating the Search File use case.
- The Search File use case leads to the Store to database use case (4: Requests for file).
- The Store to database use case leads to the Generates OTP use case (5: Fetches File).
- The Generates OTP use case leads to the Gets OTP use case (6: Send OTP).
- The Gets OTP use case leads back to the Generates OTP use case (7: Verification).
- The Generates OTP use case has a self-loop labeled +Authentication.
- The Generates OTP use case leads to the File Download use case (8: Verified).



## 7. Statechart Diagram



## 8. Component Diagram



## 9. Deployment Diagram

