**Secure Data De-duplication in Cloud: Based on Blind Signature & Proof of Ownership**

Secure data-deduplication is an application that helps in effectively managing the cloud storage space and bandwidth. It refrains the client from uploading files that are already existing in the cloud so that space is not wasted. It also overcomes the security problems that are faced in convergence encryption system like dictionary attacks and ownership infringement with the help of Blind Signature and Proof of Ownership protocol.

**TECHNOLOGIES**

* Programming language : Java
* Front-End : HTML, JavaScript, JSP, CSS
* Database (Back-End) : MySQL5.5

**INSTALLATIONS**

* Apache Tomcat 8
* EditPlus IDE
* SqlYog

**WORKING – LOCALHOST**

Run Apache Tomcat installer. Go to the browser, type “localhost:8080” in address bar. After opening the URL in the browser, the home page of the project appears. In this home page, we can navigate to the registration or login pages of each module, i.e., Client, Key Server and Cloud Server. On successful login by the client, file uploading, hash code generation, convergent key request and file downloading functions can be performed. Duplication check is also performed. The Key Server can login and check the key requests, generate the convergent key using the hash code and send the generated key to the client. The Cloud Server can login and verify the proof of ownership claims of clients in case of duplication.

**WORKING – AWS**

To deploy the application, first create an Amazon AWS account. Navigate to RDS and create the database for the application. Then navigate to Elastic Beanstalk and upload the code. After successful upload, a URL is generated. Enter this URL in web browser to open the application. After this the user can navigate through the application.