Implementation

* **Data Owner**

In this module, the data provider uploads their encrypted data in the Cloud server. For the security purpose the data owner encrypts the data file and then store in the server. The Data owner can have capable of manipulating the encrypted data file and performs the following operations Register and Login, Attackers, Upload File, View Files, Verify data(Verifiability), View and Delete Files, View All Transactions.

**Cloud Service Provider**

The **Cloud** server manages which is to provide data storage service for the Data Owners. Data owners encrypt their data files and store them in the Server for sharing with data consumers. To access the shared data files, data consumers download encrypted data files of their interest from the Server and then Server will decrypt them. The server will generate the aggregate key if the end user requests for file authorization to access and performs the following operations such as Login, View and Authorize Users, View and Authorize Owners, View Files, View All Search Transactions, View All File Transactions, View All Top Searched, View Attackers, Search Requests, View Time Delay, View Throughput.

* **User**

In this module, the user can only access the data file with the secret key. The user can search the file for a specified keyword. The data which matches for a particular keyword will be indexed in the cloud server and then response to the end user and performing the following operations Register and Login, My Profile, View Files, Search Files, Search Ratio, Top K Search, Req Search Control.

* **PKG– responsible for viewing Files and Generate Key.**