CS3095D DBMS Lab

Exercise No. 02

Due Date:23.08.2021

Marks: 5 marks

Problem Defnition

Assume that we have to design an online *cloud storage management system*. This online system has five key roles ***user, user login, file, manger*** and ***server***.

Creating an account:

To access the ***file*** (storing/retrieving) in a cloud storage system, a ***user*** should signup on the server login page with the basic credentials like Username, Email id, Address, Mobile number, Company name, user/employee id, Manager name. The hash value of each file must be stored on the cloud server. The server must not allow duplicate entries of the same hash on the server database. After registering in the ***server***, the server gives the user login credentials to the user. The server also shares the details, excluding the password, as a message in manager login with the corresponding manager. ***User login*** must have user id, user name, initiation date, expiry date (automatically set as 35 days from the initiation date). After 35 days, every user (except managers) should request to renew their login credentials to their managers.

Information shared from the server to the ***manager*** is for authentication purposes. When the user requests to retrieve the details of a file, the system should take the user to another page where the file details are displayed. Last file access details should be available to the user.

Accessing File:

If a user wants to access (store/retrieve) a file from the server, the user should get permission from the manager to access the data. A manager login should have the privilege to check the pending approval requests and approve/reject the same. A manager is authorized to see all the recorded transactions under his observation.

Deleting File:

Deletion of a file happens only after getting permission from the corresponding manager. The deletion of a file should reflect for both manager and user.

Note:

* All the permission granted by a manager will exists only for 48hours. After that, the user needs to raise a new request for getting permissions.

Design an ER Model for the details mentioned above. Describe each Entity, Relationship, cardinalities of relations, and all the other features of the designed ER model, including attribute types such as Composite, Multivalued, Single, Stored, and complex attributes. Use any of the open-source tools for drawing the ERD and saving it as a file.

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