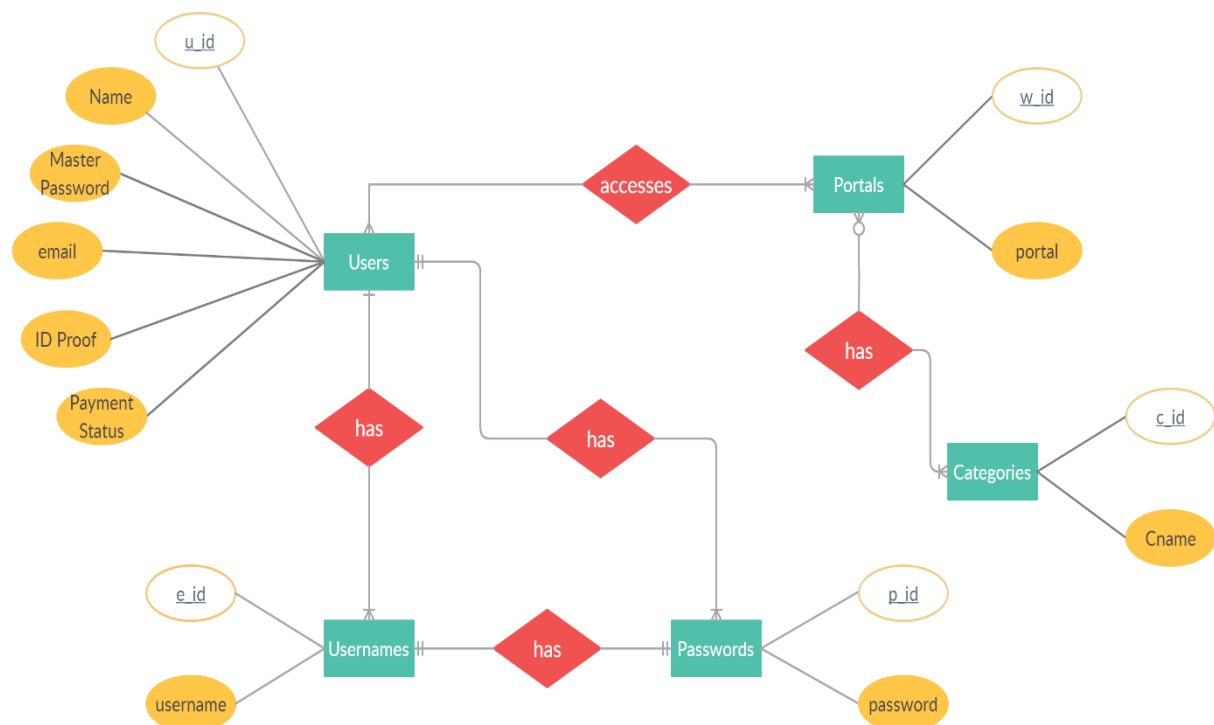## Practical – 3.2

Aim : To perform function oriented diagram for the system: Prepare ER Diagram

ER Diagram of Password Manager

The above shown figure depicts the Entity-Relationship diagram pertaining to a password manager. It comprises 5 relations among 5 entities namely Users, Portals, Categories, Usernames and Passwords.

The Users entity mainly stores the data recorded during the registration of various individuals that use the software. It consists of attributes such as u_id (the primary key) representing the unique no. associated with each user to distinguish one from the others. The Name, email and ID Proof attributes store the user's name, email ID and identity proof respectively. The Payment Status is a Boolean attribute that shows whether the user has paid the user fee in full or not. Finally, the Master Password attribute stores the master code that the user is required to generate at the time of registration which is essential in accessing their other passwords and sensitive information. The Users entity possesses couple of 'has' relationships with the Usernames and Passwords entities and 'accesses' relationship with the

Portals entity since users have access to portals and their categories, their usernames and naturally the associated passwords.

The Portals entity stores all of the user's added portals for which he has saved usernames and strong passwords in the password manager. It has the w_id (the primary key) and portal attributes to store and identify the user's portals. Another entity which is closely associated with Portals is the Categories entity having c_id (the primary key) and Cname attributes which consists of several categories such as personal, professional or any custom-created category. They both possess a 'has' relationship since each Portal can be classified into some or the other category.

The Usernames (primary key - e_id) and Passwords (primary key - p_id) entities contain the most important data in their corresponding attributes, username and password. They share a 'has' relationship among them since each username for a portal has one and only one password linked to it.