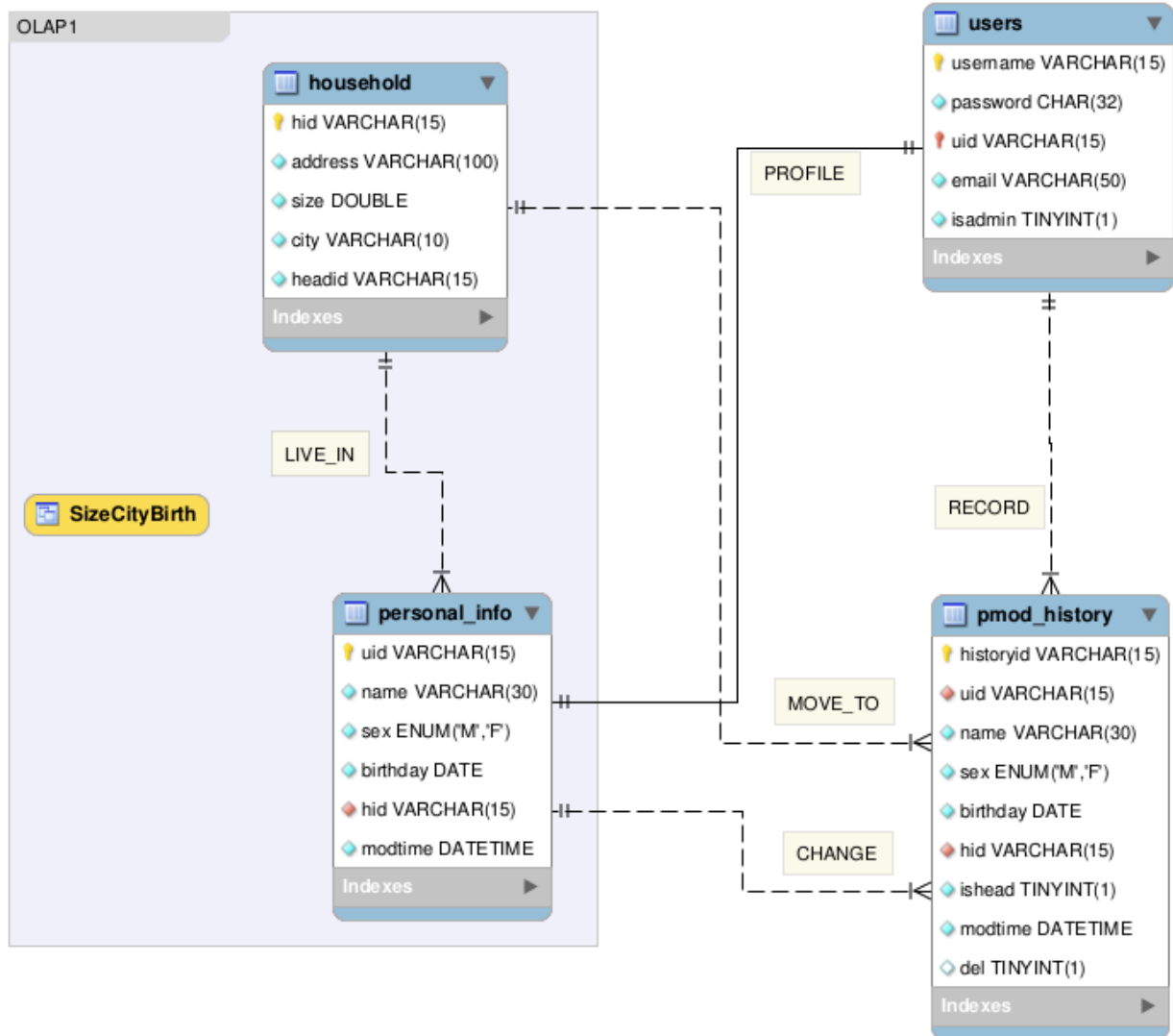# Database Final Report
Household Registration System

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Objective

Implement an household registration system based on previous project 1~3.

EER Model (Designed by mysql-workbench)

Relational Schema

- Users table

Field	Type	Explain
username	VARCHAR(15)	used to login
password	CHAR(32)	store md5 value
uid	VARCHAR(15)	identify users
email	VARCHAR(50)	user's email address
isadmin	TINYINT(1) (BOOLEAN)	if the user is an administrator

- Personal_info table

Field	Type	Explain
uid	VARCHAR(15)	identify users
name	VARCHAR(30)	real name for users
sex	ENUM('M', 'F')	Male or Female
birthday	DATE	the born date
hid	VARCHAR(15)	line in which household
modtime	DATETIME	when did this record store

- Household table

Field	Type	Explain
hid	VARCHAR(15)	line in which household
address	VARCHAR(100)	real address
size	DOUBLE	how big is the house
city	VARCHAR(10)	location for the house
headid	VARCHAR(15)	which person own the house

- Pmod_history table

Field	Type	Explain
historyid	VARCHAR(15)	primary key for this table

uid	VARCHAR(15)	identify users
name	VARCHAR(30)	real name for users
sex	ENUM('M', 'F')	Male or Female
birthday	DATE	the born date
hid	VARCHAR(15)	line in which household
ishead	TINYINT(1)	preserved (no use for now)
modtime	DATETIME	when did this record store
del	TINYINT(1) (BOOLEAN)	indicate if the user is deleted

- SizeCityBirth View

Field	Type	Explain
size	DOUBLE	how big is the house
city	VARCHAR(10)	location for the house
year(birthday)	BIGINT(20)	the born year
count	BIGINT(21)	how many people we have

Bug fixed for project 3
- A typo for variable name "check" has changed to "$check"
- WHERE clause in SQL command has fixed "uid='$uid'" by single-quote

New Functionality
- **Admin: Delete a person by uid** (Can't perform the routine when the user is a head of a household, we want to modify the headid to other person first)
  The deletion history will be written into pmod_hist table.
  The functionality, "**show household members in history by hid**", works fine.
- **Admin: Deletion for a household**
  The deletion history will be written into pmod_hist table.
- **User: Change password**
  Users can change their password easily. we will calculate md5 value again and store into users table.
- **User: Update his/her personal info**
  Users can modify their personal info individually.
- **Admin: Aggregation function (COUNT operation)**
  We can summarize the raw data to statistical data. For either household table or personal info table, we can quickly view a summary.
- **Admin: OLAP summarization (household size, city, and the birth year)**
  We can view size, city and birth year as three dimensional cube so that it's a simple OLAP and see what's the implicit information inside the data. Here we only provide roll-up one dimension for each.