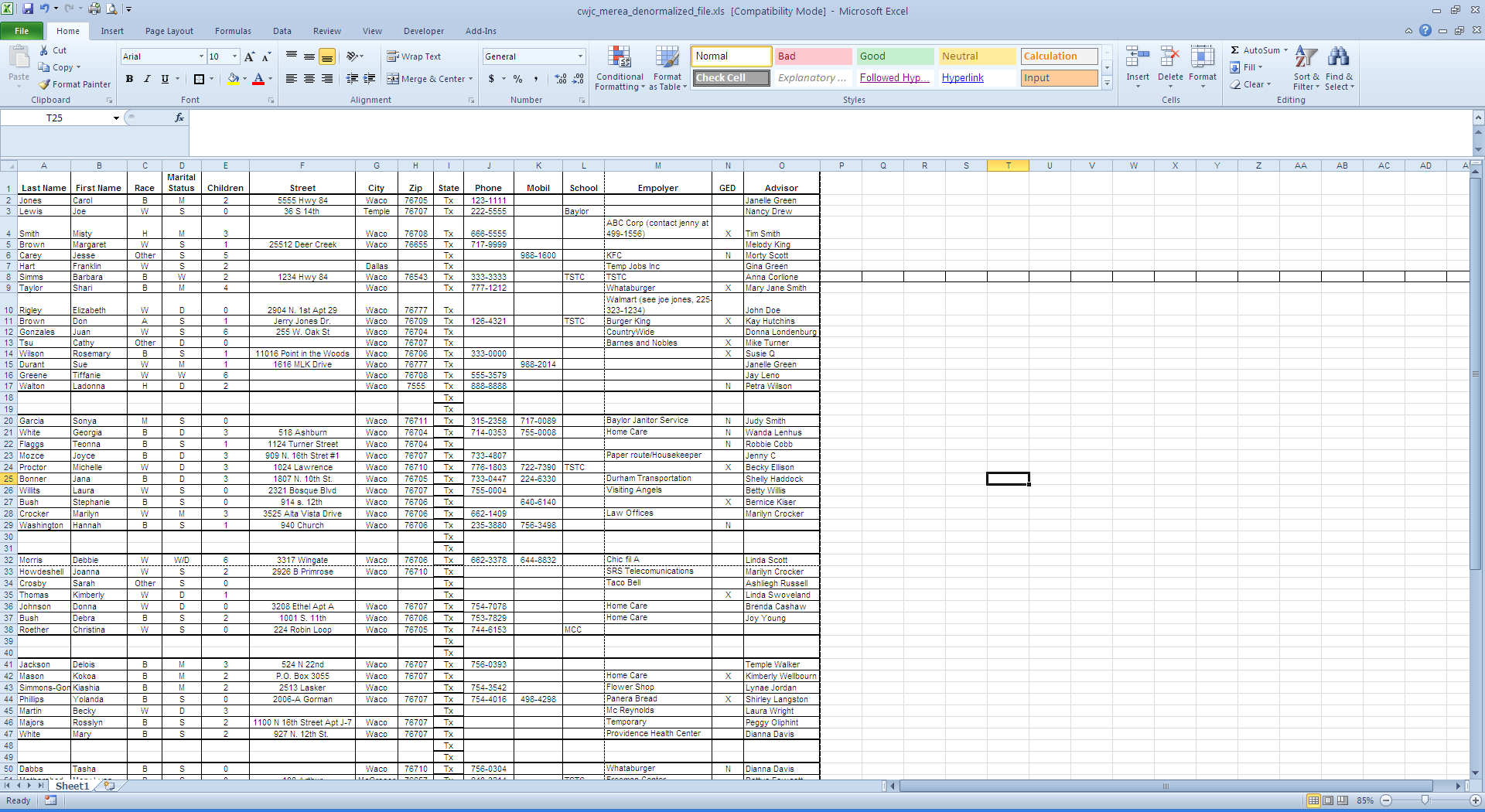
**In-Class Normalization Problems**

**Problem #1**

A nonprofit seeks to provide personal and career counseling to clients. They assign members of the nonprofit staff as advisors to the clients but don’t want to overwhelm their staff with too many clients—each staff advisor is able to handle a certain number of clients at once, and this number differs per staff person. The nonprofit has a problem with incomplete addresses—at a minimum, they would like to require zip codes so that they track the areas that they serve the most. Design normalized tables and suggest a few other fields they may want to store.

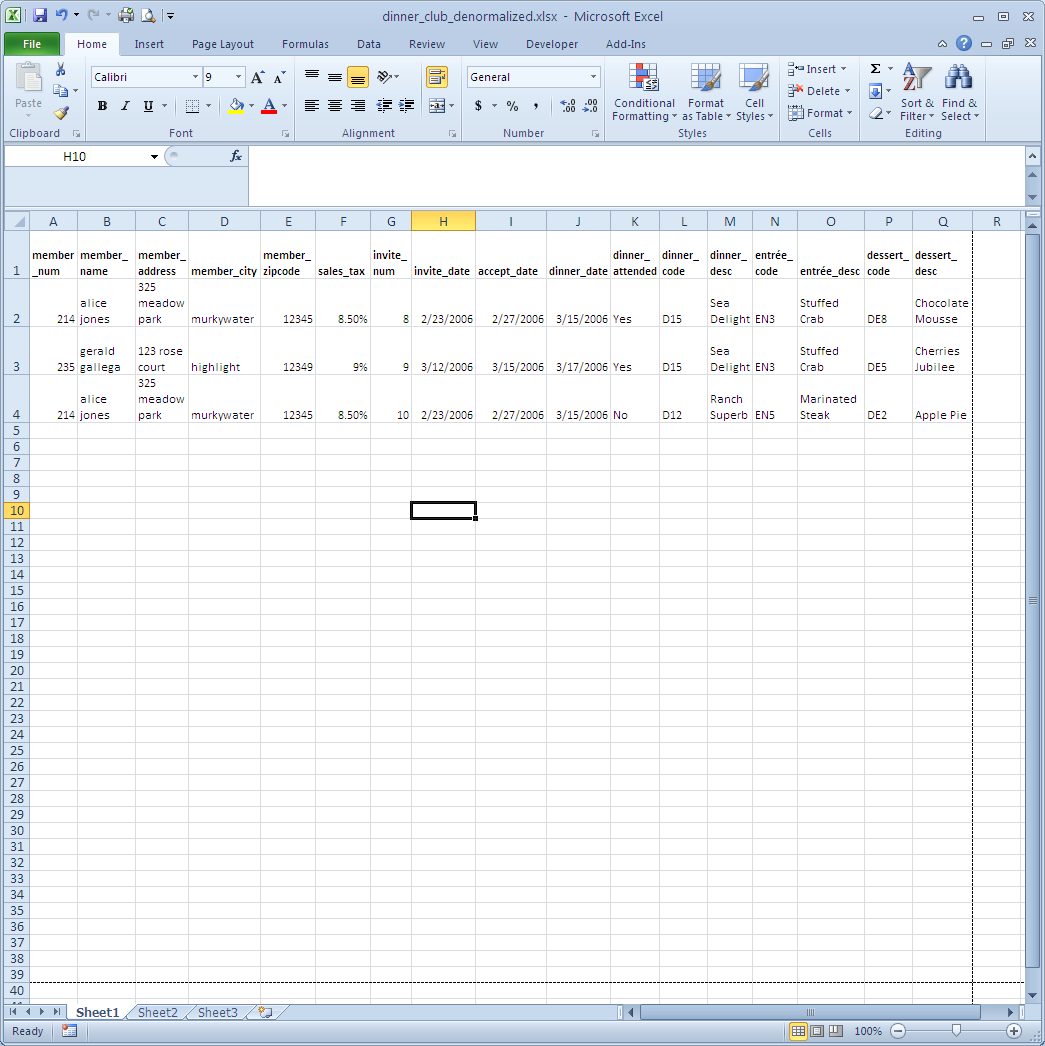


**In-Class Data Normalization Problems**

**Problem #2**

A dinner club business has the following file design below. Create normalized tables from this design using the following assumptions:

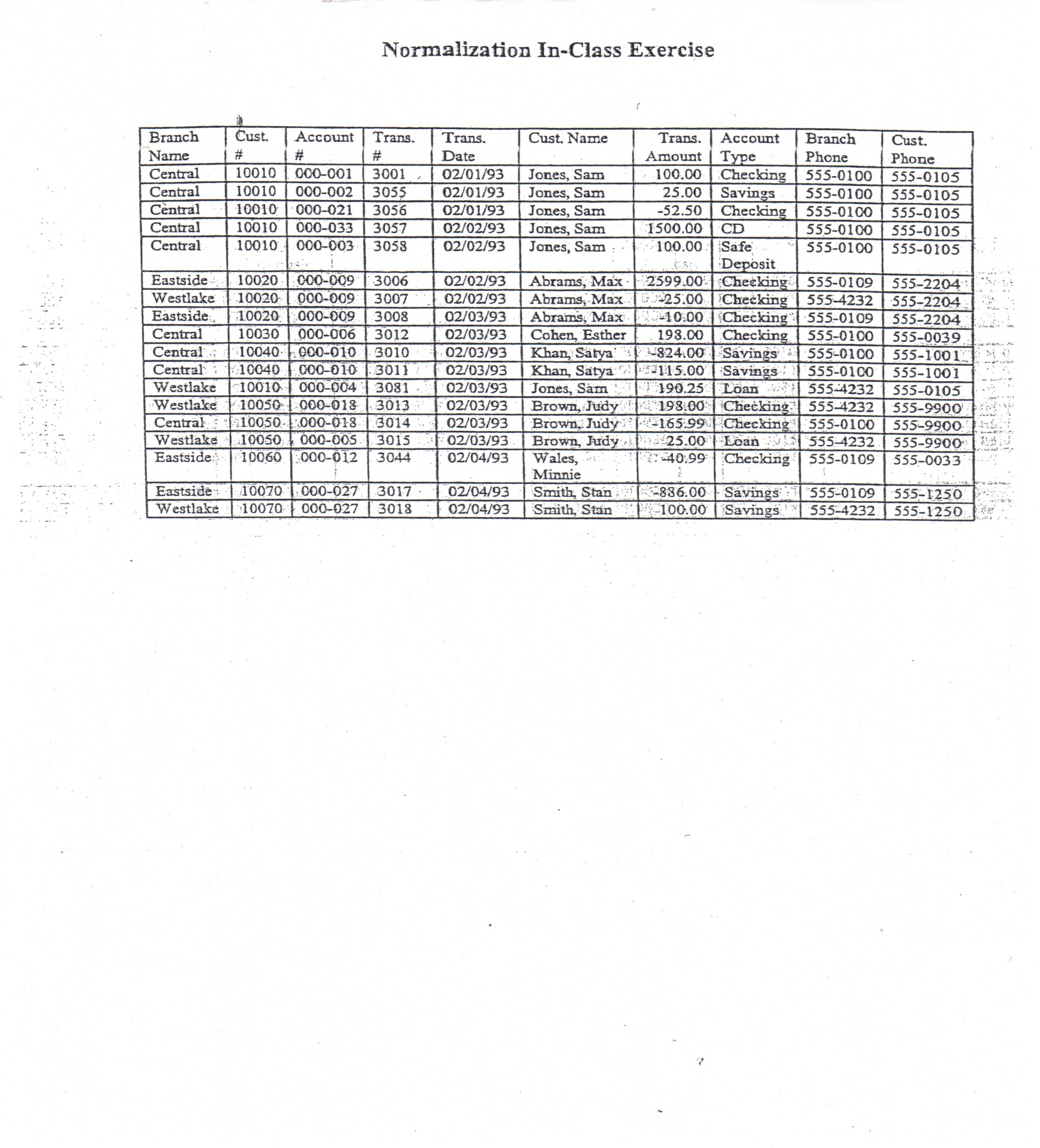
* Members join the dinner club. The dinner club offers periodic dinner events throughout the year. The same dinner event can be offered multiple times per year.
* Dinner events consist of entrée meals, and desserts
* A dinner event may be based on multiple food items (eg, one or more entrees, and one or more desserts)
* Invitations to specific dinner events are sent to club members throughout the year
* Dinner invitation numbers are unique
* When dinner invitations are accepted by members, the entrée item selected by the member AND the dessert item selected by the member are indicated on the member’s RSVP
* Sales tax varies by zip code



**In-Class Data Normalization Problems**

**Problem #3**

A bank is tracking customer transactions using the table design below. Normalize the table. Note that an account belongs to one customer, and a customer can have multiple accounts.



**In-Class Data Normalization Problems**

**Problem #4**

The Pressly Ad Agency uses a single table (shown below) to store its ad campaign data. An ad campaign can be delivered through several modes. A mode represents a unique combination of an advertising media and advertising range. Each record in the table describes one ad campaign mode. Create normalized tables for the Ad Agency to use.

