- The following packet contains multiple subject areas.
- Please read one subject area at a time and model it until it is complete before moving onto the next subject area.
- The model should be completed in third normal form relational model for an OLTP system.
- If you do not complete all of the sections, that is OK.
- We will come in shortly to ask you to walk us through each subject area one at a time to explain how your model meets the business requirements.

- **Create a Subject Area for "Reservations"**
- **Read the following paragraph and model this Subject Area in a Logical Model.**

Romano's is the finest Italian Restaurant in the city. Unless you're a good friend of Romano you will need a reservation. A reservation is made for a specific time, date and number of people. The reservation also captures the name and phone number of the person making the reservation. Each reservation is assigned a unique reservation number.

There are two categories of reservations at Romano's: Individual reservations and banquet reservations. Additional reservation information captured when an individual makes a reservation includes seating preference (i.e. – Inside or Outside) and Smoking Preference (i.e. – smoking or non-smoking). Additional information for banquet reservations includes the group name and the payment method.

- Create a Subject Area for "Table"
- Read the following paragraph and model this Subject Area in a Logical Model.

Seating at Romano's is limited. Romano's has a fixed number of tables. Each table is identified by a unique table number. Each of the tables is further described by a unique free form description such as "Round Oak table by the bay window", "Oval granite table in front of the fountain", or "Square card table by the kitchen door". Each table is classified as one of three table capacities: 2, 4 or 6 person capacity.

When a reservation is made, Romano associates a specific table number(s) to the reservation. A table can be utilized many times over the evening by many reservations. Romano tends to overbook tables. Therefore, there can be overlapping table reservations.

- Create a Subject Area for "Personnel"
- Read the following paragraph and model this Subject Area in a Logical Model.

The management structure at Romano's is hierarchical. There are several restaurant managers who report to Romano. The managers are responsible for the Maitre'd and the Chefs as well as ensuring that the guests have a pleasant dining experience. The Maitre'd is responsible for managing the waiters, bartenders and bus personnel. The Chefs are responsible for the cooks and the dishwashers.

Each person working at Romano's must be classified as either manager, Maitre'd, waiter, bartender, bus personnel, Chef, cook, or dishwasher. Additional information maintained for each person is Name, Date of Birth, Driver's license number.

When the reservation party arrives at Romano's the reservation is assigned to one waiter. A waiter can be assigned to many reservations during the course of an evening.

- Create a Subject Area for "Menu Item"
- Read the following paragraph and model this Subject Area in a Logical Model.

The menu at Romano's is exquisite. There are many exciting and exotic items. Each menu item is identified by a unique menu item number. Information maintained by Romano's for each menu item includes an item description (e.g. "Chicken Marsala", "endive salad", "House Merlot Wine", etc.) and prep time.

Each menu item is classified by Romano's as "Appetizer", "entrée", "Desert" or "Beverage".

The price of each menu item can vary based upon the time of day. For example, some of the menu items have different prices for lunch and dinner prices. Some of the items change price during happy hour.

In order to calculate the check, the waiter maintains a list, by reservation number, of the menu items ordered and the time that the menu item was ordered. In other words, each reservation can be associated with many menu items and menu items can be associated with many reservations.

- **Create a Subject Area for "Food Item"**
- **Read the following paragraph and model this Subject Area in a Logical Model.**

In addition to menu items, Romano's maintains a list of food items that are utilized by the restaurant such as chicken, mushrooms, bread sticks, red sauce, cream sauce, etc. Food items are utilized in the preparation of menu items. Each food item is identified by a unique food item number.

Additional information maintained by Romano's about food items includes a description of the food item and purchase flag. A purchase flag indicates that the food item is purchased from a vendor rather than prepared in-house.

A food item can be utilized by many menu items. A menu item can utilize many food items. For example, the menu item "Lasagna Dinner" is comprised of the food items "lasagna", "Bread" and "Salad". The menu item "Chicken Marsala" is comprised of the food items "Chicken Marsala", "pasta", "bread" and "salad". Beverages are menu items which do not come form the kitchen (ie: no food item)

- Create a Subject Area for "Food Item Structure"
- Read the following paragraph and model this Subject Area in a Logical Model.

Each food item is classified by one unit of measure. For example, Olive oil is measured in tablespoons (tbsp), mozzarella cheese is measured in ounces (oz.) and bread sticks are measured in "each". Other unit of measure values include sheet, pound, gram and dozen.

The relationship between food items is identified by a combination of a parent food item number and the food item number that is used as a food item ingredient (i.e. child) of the parent food item. Additional information captured about the relationships between food items is the quantity of the child food item used in the relationship. For example, the food item "lasagna" and the food item "pizza" both use the food item "Mozzarella Cheese" as an ingredient (ie: child). Lasagna uses 3 oz. of mozzarella cheese and Pizza uses 9 oz of mozzarella cheese.