Data Mining - Assignment 1

A restaurant owner has a core menu that has remained constant throughout the past two years, while many other dishes have rotated on and off the menu. The owner has prepared a dataset of all orders containing elements of that core menu in which the customer also ordered wine. The dataset has 3 columns:

- **orderNo** which identifies each table/party that sat at the restaurant,

- **seatNo** which indicates which seat at the table ordered each meal,

- and **item** which provides the item in the order.

Each seat in the dataset should have an order that contains 3 items: a meat, a side, and a wine.

The restaurant owner would like to add wine suggestions to the menu next to each meat and analyze her customer ordering habits in general. She is open to listing more than one wine suggestion for each main course, but only if the data supports it. She doesn't want to have a *fixed* number of wines (say, 3) suggested for each main if the data doesn't support 3 wine suggestions for each meat. She would rather have the number of wines suggested vary based upon relationships that the data clearly supports.

She is also interested in showing a picture of the most popular meal of hers in an ad in Gourmet Diner magazine. Your job is to address her goals and also to report anything else of interest in terms of customer ordering habits, all in a nice report that is complete but **to the point**.