

Iron Chef

This TV show features a set of four “Iron Chefs,” each one an expert in precisely one of the following cuisines: Chinese, French, Italian, and Japanese. Iron Chefs are famous; their name serves to identify them uniquely.

Each episode, identified by an episode number, features a competition between a challenger and one of the Iron Chefs. Each challenger is also quite famous; his/her name and restaurant are enough to identify the challenger.

The challenger selects the Iron Chef he/she wants to compete with. Each competition features a secret ingredient unveiled at the beginning of the episode. The secret ingredient never repeats, i.e., two different competitions do not have the same secret ingredient.

The challenger and the selected Iron Chef each have one hour to prepare a set of dishes where each dish uses the theme ingredient. At the end of the hour, a panel of four judges tastes these dishes. Each judge awards each competitor a score. The competitor with the maximum number of points wins. There are no ties!

A person can be a judge in multiple competitions. If you cannot model any aspect of this scenario, then mention them as notes. You may use notes to explain any other aspect of your design, for example, the type of an attribute.