Hell's Kitchen

In Gordon Ramsay's latest show, amateur chefs compete against each other to enchant their food and gain recognition from the star chef. In the competition, two teams are facing each other, the Red and Blue teams, both with 10-10 chefs. The goal during the competition is to bring out the finest food from the ingredients provided and then present it to Gordon and the rest of the jury.

- Create a class hierarchy for the raw materials. Example:
  Vegetable ⇨ *Parsley*, *Beets*, *Zucchini*, etc.
  Spice ⇨ *Oregano*, *Pepper*, *Coriander*, etc.
- Create recipes for some dish to be prepared. The recipes include the name of the dish, the ingredients and the quantities needed.
- Recipes are stored in a binary search tree, where the key is the number of unique ingredients needed for the recipe.
- At the start of the competition, each chef is randomly given some ingredients. Assign a unit of measure to a raw material, and make sure everyone gets the same amount, so if player A gets 3 kg of chicken breast, 4 eggs, 2 kg of ham, 10 dkg of pepper, then player B should also get 3+4+2+10 = 19 units of ingredients in total.
- Write an algorithm that allows each player to create as many dishes as possible from the available ingredients so that each player knows only certain recipes (this is decided randomly by the program). The created dishes are stored in a self-made linked list.
- If a player is unable to make any food from the ingredients available for them, Gordon gets a tantrum and begins to shout and the player is eliminated from the tournament. Use and event to accomplish this.

The team whose members were able to prepare more food in total win the competition. Print out the name of the winner team and the number of dishes prepared.

Everything that is not specified here can be implemented using any approach respecting common logic and the object-oriented principles. Loosly couple your classes using interfaces, events and exceptions.