Answers: New Use Case

Questions proposed by:

Hadar, I., Reinhartz-Berger, I., Kuflik, T., Perini, A., Ricca, F., Susi, A.: **Comparing the comprehensibility of requirements models expressed in Use Case and Tropos: Results from a family of experiments**. Information and Software Technology. 55, 1823–1843 (2013).

1. How many actors, mentioned in the case study's story, have been modeled? What are their names? What are their names?

Waiter, Chef, Customer, Ingredients DB, and Retailer.

2. Are there actors in the model who are not mentioned in the case study's story? If so, name them.

e-Ordering Service.

3. Are there any actors, mentioned in the case study's story, who have NOT been modeled? If so, name them.

Owner and Restaurant DB (optional, to be consistent with the Ingredients DB).

4. Is there any functionality in the case study's story, which is NOT mentioned in the model? If so, describe it (them) in a few words

   - Check if all the customers the waiter served paid the bill.
   - Waiter / chef manage information related to the orders.
   - Call a waiter to prepare the bill.
   - Customer ask waiter to help them in using the system.

5. How many relationships involving actors and relationships between use cases, have been modeled? Specify the number of relationships per type.

   - Association: 10
   - Includes: 1

6. Which info can the e-Restaurant system get from Ingredients DB, according to the model only? Please provide a short description.

Information about the available ingredients.

7. How many relationships between the Waiter and the e-Restaurant system appear in the model? Specify the number of relationships per type.

   - Association: 2
   - Includes: 0

8. According to the model, describe the ways the Customer can place an order through the e-Restaurant system? What are they? Please provide a short description.

Place order directly to the system or ask for the intervention of the waiter to place order.

9. According to the model, who are the actors that provide the e-Restaurant system with the data about the available ingredients? Actor(s) name(s).

Ingredients DB.

10. According to the model, which type of information about dishes can the Customer get from the e-Restaurant system? Please provide a short description.

Price, ingredients, nutritional information, and availability (optional).

11. How do you modify the model to include the fact that the e-Restaurant system can give information about the history of the dishes? Make the modification directly on the model and describe here by words which modification you made.

Solution 1
- UC diagram: new use case "Get history of the dishes.
- UC textual description: new use case.

Solution 2
- UC diagram: -.
- UC textual description: add an alternative flow in the "Browse menu" use case.

12. How do you modify the model if the Customer has to complete the activity of placing an order using the e-Restaurant system, without calling the Waiter? Make the modification directly on the model and describe here by words which modification you made.

- UC diagram: remove association between "Place order" and Waiter
- UC textual description: in the "Place Order" use case remove Waiter from the list of actors, and remove alternative flow.

13. How do you modify the model if the e-Restaurant system will get information about the status of the pending orders from the Ingredients DB instead of from the Retailer? Make the modification directly on the model and describe here by words which modification you made.

Solution 1
- UC diagram: remove the Retailer actor and its association to the "Manage Ingredients Order" use case.
- UC textual description: in the "Manage Ingredients Order" use case, change Retailer to Ingredients DB in the steps 4 and 5, and remove Retailer from the list of actors.

Solution 2
- UC diagram: remove the Retailer actor and its association to the "Manage Ingredients Order" use case.
- UC textual description: in the "Manage Ingredients Order" use case, change steps 1 and 2 to ask and obtain the pending orders, and remove steps 4 and 5.

14. How do you modify the model to represent the fact that the bill preparation will be performed by the e-Restaurant system, without the intervention of the Waiter? Make the modification directly on the model and describe here by words which modification you made.

- UC diagram: remove association between "Ask for the Bill" and Waiter.
- UC textual description: in the "Ask for the Bill" use case, remove Waiter from the list of actors, and remove steps 2 and 3.