# Draft for the structure of the MyThaiStar specification

## Basic ideas

The goal of the specification guide and the restaurant specification is to create a document that is:

* Aligned to the implementation: Structure, concepts and nomenclature should be the same in the code. Since this is an angular client, the whole process flow is part of the client: The server will present REST interfaces for necessary server interaction. These small operations will be documented as use cases and use case functions. The client modules and routes will be documented as part of the dialogue.
* Allow for compact design documentation: Much of the structuring of components and data should be presented here and not need to be formally repeated in another documentation. The split of the application into components presented here should be present in the code.
* Slim: It should contain only the strictly needed information and should be very pragmatic.
* Easy to maintain: It should be versioned together with the code. A developer should be able to change it using only a text editor.

Because of these goals, it is very important for me to have a hard discussion about the structure of the components, the data, the use cases and the dialogue features. I am no angular expert and would welcome this.

## Structure of the document

Roughly, the document shall contain the following chapters:

* Introduction and fundamental ideas
* Application components, use cases and use case functions
* Data model
* Dialogue, Dialogue modules and screens
* System interfaces
* Appendix

I do not think we need to specify printouts or non-functional requirements. Otherwise, they would be handled in additional chapters.

The following list of contents is a current very first draft and will probably change in the future.

## Structure for the application components and use cases

### ACO\_Booking\_Ordering

This application component handles the management of bookings (whole reservations) and orderings (food and drink for one person).

**UC\_Book\_Table**: This use case will get the relevant data for the booking of a table (date, time, email, numbers, friends, invitation text) and create a booking (if possible) for it. If no tables at all are available, it will create an appropriate message. It will send a confirmation email to the host. The invitation of friends could be delegated to UF\_Invite\_friends.

**UC\_Order\_Meal**: This use case will get the relevant data for a meal (dishes, drinks, additions, comments), will validate the data and will store it for one guest of a booking. It will compute the price of the meal including VAT. The system will send an email containing details about the order to the guest.

**UF\_Invite\_friends**: This use case function will create unique references (text and QR-Code) for each invited friend and send emails containing an invitation text, a link to directly place the order for the meal, a link to accept the invitation without ordering and a link to refuse. The handling of the link to directly order the meal will be part of a dialogue route, the others will be handled by the following UC. Additionally, a mail containing all relevant information will be sent to the host.

**UC\_Handle\_invitation\_feedback**: This use case will handle refusals and acceptances for invitation. The UC will validate the data and update the booking. In case of invalid data, it will present an appropriate response. If a guest has cancelled an invite, all other guests are sent an information, and all previously ordered meals for the guest are deleted.

**UC\_Select\_Table**: This use case will be automatically executed by the system after all invitees of a booking have responded or a configured interval before the meal is reached: The system will optimize the table allocation in the restaurant.

**UC\_Check-In\_Guest**: This use case will be used when the host or one of the invitees arrive at the restaurant. It will provide information about the reserved table, and it will update the booking status.

**UC\_Administrate\_Booking**: This use case allows the creation, update and deletion of bookings and orderings. It will probably be generated via Cobigen.

### ACO\_Menu\_Management

This application component is responsible for managing the data about dishes and drinks the restaurant can offer. The presentation of the menu and the selection of the dishes is done in the dialogue.

**UF\_Search\_Menu-Items**: This use case allows to search or filter menu items based on different search parameters, e.g. names, categories, likes or hashtags. A hit list will be returned, the entries of which can then (including images) be read in full.

**UF\_Administrate\_Menu-Items**: This use case allows the creation, update and deletion of dishes, drinks, additions, Categories of dishes and drinks, and twitter data (hashtags). It will probably be generated via Cobigen.

### ACO\_Twitter\_Integration

This application component will typically contain little data. It is responsible to encapsulate the handling of the twitter API.

**UF\_Get\_Twitter\_Feedback**: This use case function uses the configured hashtag of a dish or drink to get the twitter feedback information (number of likes, last comments).

**UC\_Rate\_Dish\_Drink**: This use case allows to either “like” a dish or drink, or to enter a comment for the dish or drink. Both actions will probably create a tweet for the corresponding hashtag.

**UC\_Update\_Rating\_Dish\_Drink**: Since the number of likes is a filter criterion for a dish or drink, the number needs to be updated regularly. This can either be done during UC\_Rate\_Dish\_Drink, or in regular intervals using the twitter API (which would be more stable). In this case, the current use case would check the likes of each dish and drink and update the menu data accordingly.

### ACO\_User-Data\_Management

This application component will manage information about the people using the MyThaiStar application. Currently, this is limited to the twitter data. It could however easily be extended.

**UC\_Authenticate\_User:** This use case will authenticate a user based on a user-name and a password. After this, the user will be associated with the current session, and the twitter data will be used for twitter integration.

**UF\_Get\_User-Data**: This use case function gets the user data of an already authenticatd user. Currently, it will return the twitter data of the user (see MCO\_User-Data).

**UC\_Manage\_User**: This use case will handle the update of passwords, of other user data like first and last names, of the twitter data, and the deletion of a user account.

## Structure of the data model

Components encapsulate the data they are responsible for. Therefore, the cutting of components depends upon the data that needs to be managed, and the cutting of data models depends on the components.

The data model is therefore cut into two model components: MCO\_Bookings\_Orders and MCO\_Menu.

### MCO\_Bookings\_Orders



Figure 1: Data model structure for booking (not final)

It is important to recognize that every person (friends and host) is a booked person. Even if no email addresses (and only numbers of guests) were given, references for each person will be generated, and “order-links” for all participants could be sent to the host.

The order encapsulates the dishes and drinks one participant has ordered:



Figure 2: Data model structure of an order (not final)

The main distinction here is that an ordered dish may contain a comment and a number of additions, while a drink is simply ordered without any supplementary information.

### MCO\_Menu

The structure of the menu data could be as follows:



Figure 3: The structure of the menu data (not final)

Main decisions here were e.g. that a drink is not specific for a course, and that the categories for drinks and dishes are separated.

### MCO\_User-Data

This model component encapsulates the user data stored in the MyThaiStar application. Currently, it is limited to the twitter data of the user. It could however also contain favorite dishes or e-mail addresses of persons often invited.



Figure 4: The structure of the user data (not final)

## Structure of the dialogue

I am no expert on angular. I know the dialogue is split into modules, and the dialogue flow is managed as routes. I am not sure on the best way to structure the dialogue specification to allow for a good alignment to the implementation. One way could be a split into the following “modules” (instead of screens):

**DIM\_MyThaiStar\_Main**: This module includes the welcome page and any additional page (imprint etc.) needed.

**DIM\_Table\_Booking**: This module includes the Booking of a table and the entering of e-mail addresses for friends, but not yet the ordering of dishes and drinks.

**DIM\_Dishes\_Drinks\_Ordering**: This module is perhaps the biggest and contains the presentation of the menu, the search and filter functionality, the twitter integration, the selection and commenting of dishes and drinks, the selection of additions, and the completion of the order.

**DIM\_Twitter\_Rating**: This small modules encapsulates the leaving of twitter comments for dishes and drinks. It is perhaps too small and too closely related to the Dishes/Drinks-Ordering Module, and should be integrated into this one.

**DIM\_Account\_Management**: This module contains the authentication of a user, and the management of a user account: The user can both change the account data and delete the account.

**DIM\_Menu\_Administration**: This module should be used for the administration of dishes, drinks, additions, categories, keywords, courses and twitter data. As far as I know, this should be done in a generative approach using Cobigen.

**DIM\_Booking\_Administration**: This module should be used for the administration of bookings and orders. As far as I know, this should be done in a generative approach using Cobigen.

DIM\_Waiter\_Cockpit: This Module contains screens only a waiter can use: It shows him a list of the current reservations. For each reservation, all bookings are shown. Optionally, a list of all future bookings could be presented. All data of the reservations and bookings should be seen in this module. The data should not be changeable.

## Structure of the system interfaces

Since the only really external interface is the twitter API and the mail API, no specification seems to be needed here.

We could present a vision of the internal REST APIs, but this is best left to the developer, and it is not needed for the client split in one application of the current size: I would omit it here.