Programming 2: Studio Project's General Plan

1. Personal Information

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- Data Science, 2nd Year
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- Project: Lunch list Application
- Title: Lunch list Application with JSON

2. General Description

- The program is Scala based application that collect weekly menus from student restaurants in Otaniemi campus and present them in a centralized manner The final version will be similar to the kanttiinit / ruokaliastat.net
- The project will initially be developed as a text-based but, if time allows, Graphical User Interface will be implemented to gain the intermediate level.
- Features aimed to be implemented:

  1. Filter menu items based on allergens

  2. Support for choice of favorite restaurants

  3. Inform user about menu items that contain a dish or a component (like fish)

     that the user has reported to like (show this in GUI in some reasonable way)

- The project will include two restaurants: Fazer and Sodexo
- If time allows, all three features listed above and all restaurants in Otaniemi will be covered

3. Draft User Interface

Users will be able to communicate with the program by following ways:

- When users choose the restaurant of interest, the program outputs the list of the lunch menus that are scheduled for the current date. List of menus are available for an entire week from both Fazer Oy and Sodexo Oy. (Unfortunately, past and future week's list of menus are not available)
- Users can choose specific restaurants as their favorite. The choice will be saved in the database and the list of menus from their favorite restaurant will show up first whenever the user runs the program. In case of more than one favorite restaurant, the priority option will be provided to the favorite restaurant list (Currently, the project aims to cover only two restaurants)
- Users can add specific ingredients as their favorite to their profile. (In case of GUI implemented) Each ingredient included in the specific menu will be presented as following:

  Fish pieces with lemon

  breaded fish pieces (contains COD [Baltic sea, wild], WHEAT FLOUR, water, potato starch, salt, rape oil, potato fibre, yeast, flavourings [e.g. pepper], antioxidant E330, WHEAT PROTEIN, lemon flavour)

  per 100g: 213 kcal, 890 kJ, 10,0 g Fat incl, 0,8 g saturates, 15,6 g CHO incl, 0,2 g sugars, 15,6 g Protein, 0,9 g Salt

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  and users are allowed to add any ingredient into their favorite by clicking them.

- The selected ingredients will be saved in the database and will notify the user, when the meal with selected ingredients is available on the current day.
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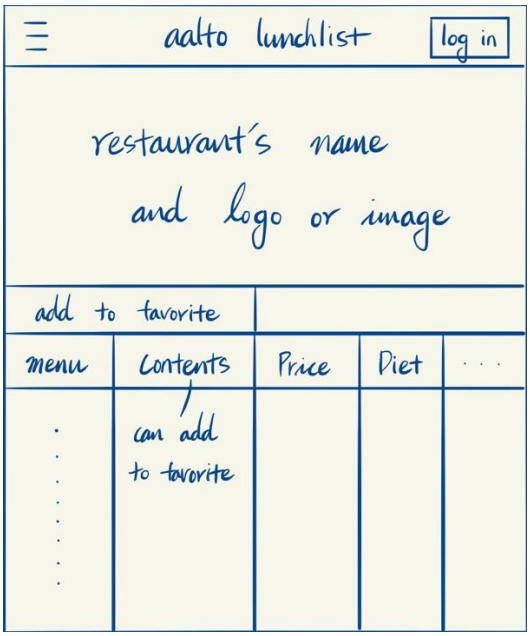

Figure 1. General layout of the Graphical User Interface

4. Files and File formats

The project is planned to use API as a JSON format, as for now. However, XML is also under a consideration. The text from the JSON parse or XML will be presented in the program and also images (the restaurant, or map) will be added to GUI, if time allows. Since the project will be done with the real-time data, it is not necessary to have locally saved data. In case of JSON implementation, either 'Lift-json' or 'Play-json' will be used as a json parser library. And in case of XML implementation, the library 'Jsoup' is under the consideration.

5. Plan for system testing

The crucial part of the lunch list program is whether or not the data brought from the API is in accordance with date and restaurant of interest. The program should provide correct information in detailed sections (name of the meal, ingredients, price, diet and etc.) to the user. This can be tested and confirmed by comparing the data parsed into the program with the data on the restaurant website. User Interface (Convenience, Intuitiveness, Accuracy and etc.) can be tested by handful of fellow students in case the Graphical User Interface is implemented.