University for Applied Sciences

Informatics Department

Applied Informatics

Title - Title - Title

Documentation for the Architecture of an Mobile Application for Preventing Food Waste

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Abkürzungsverzeichnis

FAO Food and Agriculture Organization of the United Nations.

UN United Nations.

1 Introduction and Goals

According to the Food and Agriculture Organization of the United Nations (FAO) in 2019 931 millions tonnes of food were wasted [FAO, 2013]. This has environmental, but special social consequences. In a world were approximately 9.9% of the [AAH, 2022] population suffers from hunger that waste percentage sounds paradoxal.

According to United Nations (UN) 5% of the globally food loss and waste comes from restaurants [UN, 2022]. The solution for this problem muss be locally applied so its effects can be seen in a global structure. To do so we propose to develop a mobile application that connects restaurants, bakeries and or pastries to clients. The former would offer their remaining products, which are still consumable, prior to the closing time, to a small price and the latter would browser in the app to find which shops are offering products.

Use cases

The following use cases were defined according to the main purpose of the application:

Use Case	Description
UC-1: Register as client	The user register an e-mail address.
UC-2: Login	The user logins in to the system.
UC-3: Place order	The user chooses a provider.
UC-4: Register payment	The user register a payment method.
UC-5: Register as provider	The provider register their facility and products.
UC-6: Update availability	The provider upload their availability to provide a product.

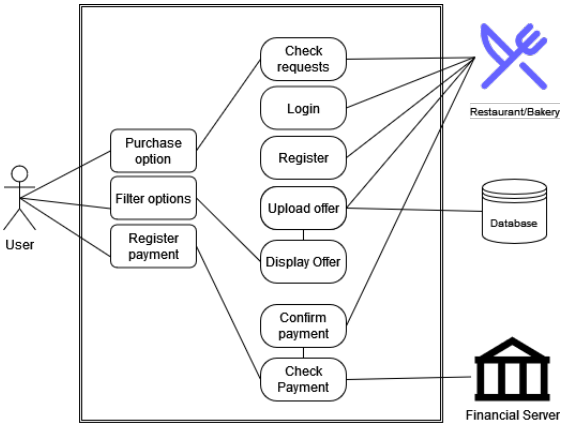

Abbildung 1: Preliminary functions

Quality Attributes

ID	Quality Attribute	Scenario	Associated Use Case
QA-1	123	A client register their e-mail address and he can immediate browse in the app.	UC-1
QA-2	123	A client login in the app and he can immediate browse in the app.	UC-2
QA-3	123	A client choose a provider and place his order. After the confirmation of payment, a push-message is displayed in the app confirming the purchase.	UC-3
QA-4	123	A client register his credit card or select another payment method and the confirmation as soon as he confirmed with his provider.	UC-4
QA-5	123	A provider is able to register his company, specify the kind of products he offers and upload a logo or picture of his shop.	UC-05
QA-6	123	A provider is able to update in the app if he is offering for that day any product.	UC-6

- *Usuability*: Offering and selecting options should be intui
- *blablabla*

- *blablabla*

Check Add 3.0 Check FAO for reasoning Define Drivers:

- Design Purpose: prototype, check acceptance
- Quality
- Primary Functionality: realy first to get the system to start, food ordering, registering, offering
- Constraints: laws, deadlines, standards
- Concerns: can be left blank

pick 3 qualities

Quality: A ==> Create Scenarios ==> Prioritize High, Medium, Low for (Arch, Customer) Quality: usability ==> Create Scenarios ==> Prioritize (for Arch, for Customer) Quality: availability ==> Create Scenarios Quality: modifiability ==> Create Scenarios Quality: security ==> Create Scenarios

2 Constraints

3 Context and Scope

4 Solution and Strategy

5 Building Block View

6 Runtime View

7 Deployment View

8 Crosscutting Concept

9 Architectural Decisions

10 Quality Requirements

11 Risk and Technical Debt

Literaturverzeichnis

[AAH, 2022] AAH (2022). World hunger: Key facts and statistics 2022. *actionagainsthunger.org*. https://www.actionagainsthunger.org/world-hunger-facts-statistics, Zugriff: 18.05.2022.

[FAO, 2013] FAO (2013). Food wastage: Key facts and figures. *fao.org*. https://www.fao.org/news/story/en/item/196402/icode/, Zugriff: 18.05.2022.

[FAO, 2022] FAO (2022). 17 *fao.org*. https://www.fao.org/food-loss-reduction/news/detail/en/c/1378973/, Zugriff: 18.05.2022.

[UN, 2022] UN (2022). Stop food loss and waste, for the people, for the panet. *un.org*. https://www.un.org/en/observances/end-food-waste-day, Zugriff: 18.05.2022.