Lab Report 2 – Scenarios. Use Cases, Use Case Diagrams

**Actors**

At the beginning, we looked at the description and wrote down all kinds of roles found in the text. Afterwards we thought through the whole process of ordering food and noted down those actors. There is a customer that orders food, people that take care of the food and then someone who is responsible for the delivery.

Initial Actors:

1. Shipping Customer
2. Bill Customer
3. Delivery
4. Manager
5. System Manager
6. Cook
7. Online-Shop
8. Product Manager
9. Administrator
10. Banking
11. Supplier
12. Selfies
13. Local Shop

We wanted to give each actor a specification. Our result is written below. Afterwards we had to change many definitions because of changes in our cases.

1. A Shipping Customer receives the product. (member name)

2. A Billing Costumer receives the invoice and pays for it. (member name)

3. A Shop Assistant is a pick-up station where Hoagies get taken by each – the customer or the deliverer.

4. A Deliverer brings the Hoagies from the Shop to the Shipping Customer and (optionally) gets the money.

5. A Cook prepares and packs the food.

6. A Product Manager creates a section of available products (With pricing & statistic overview).

7. A Supplier is the place where the Shop gets the ingredients for the Hoagies.

8. The Database is connected to Twitter & the website to easily spread information and pictures. User of the website can interact with it.

9. The Online Shop is the place where Customer see the products, order them and (optionally) pay them.

10. The Banking Center manages the money if the Customer chooses to pay online.

11. The Admin is responsible for maintaining the information about available products.

12. The customer service deals with all kinds of customer requests and problems.

13. The customer database saves information about the customer and orders.

However, some of them did not really had an important role or work. Therefore, we removed some and added others. Some actors also did similar things or were just named differently. We simplified the scenarios and use cases, which resulted in a much smaller list.

Final Actors:

1. Customer (1 + 2)
2. Deliverer (3)
3. System Admin (4 + 5 + 8 +9)
4. Cook
5. Bank (10)
6. Supplier
7. Shop Assistant (13)

**Scenarios**

We thought about what scenarios we want to deal with in the lab. Therefor we used three scenarios for each member of our group. So, we had nine scenarios in total at the end. At this point we still had some actors left that we removed later on.

1. Customer places an order online. (member name)
2. Customer cancels an order. (member name)
3. Customer takes selfies and places them online. (member name)
4. Product Manager deals with statistics and updates the ingredient list. (Johanna)
5. Customer orders his own created Hoagie. (member name)
6. Deliverer delivers the Hoagie to the Shipping Customer. (Johanna)
7. Cook prepares order. (member name)
8. Customer gets his order at the Shop Assistant. (Johanna)
9. Customer gets his invoice. (member name)

Johanna:

Scenario 4:

While creating this scenario I saw that we only need one person who checks the statistics and orders the ingredients. I also defined what happens, if the ingredients are not available or had to be ordered more frequently.

Scenario 6:

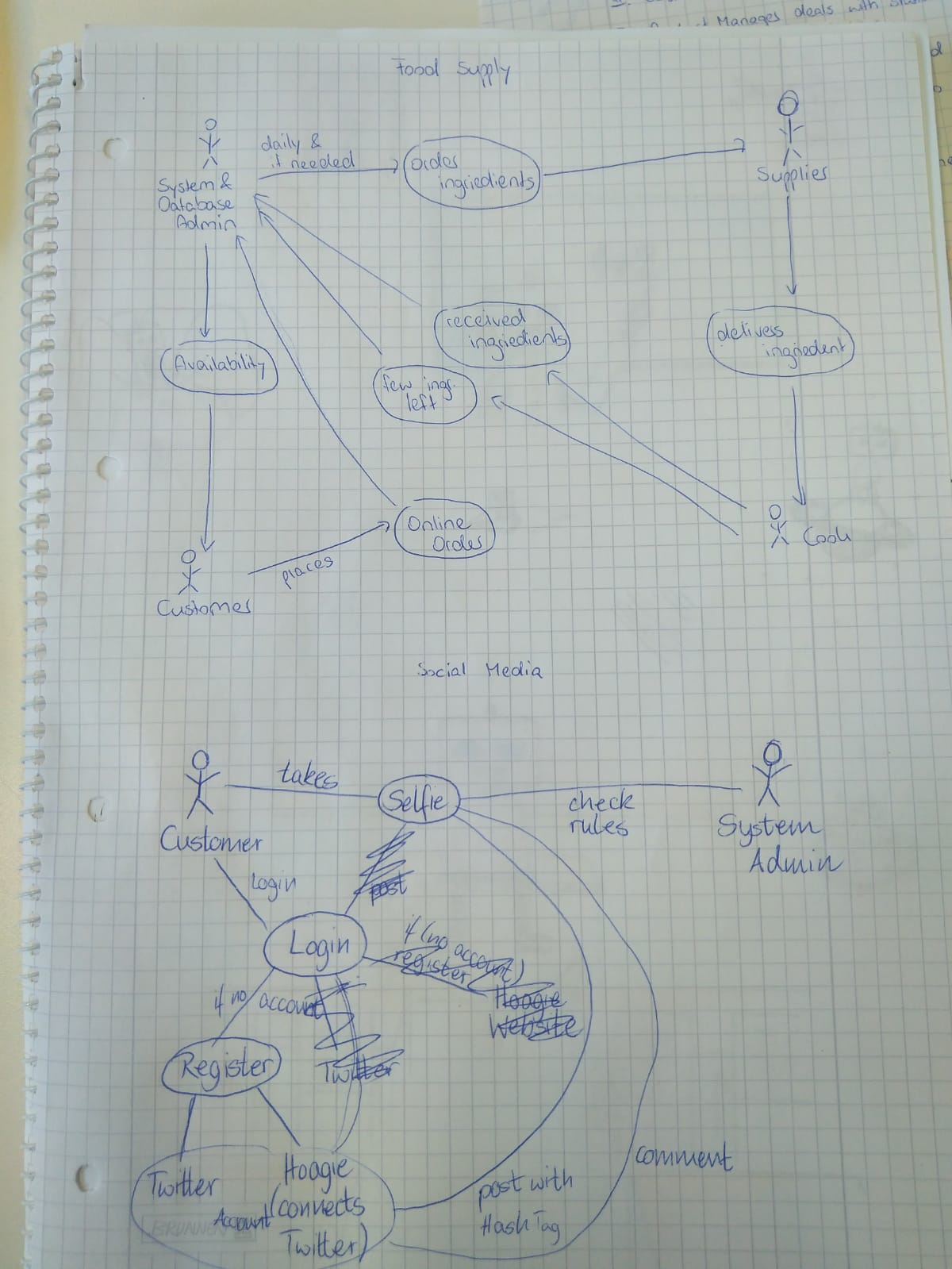
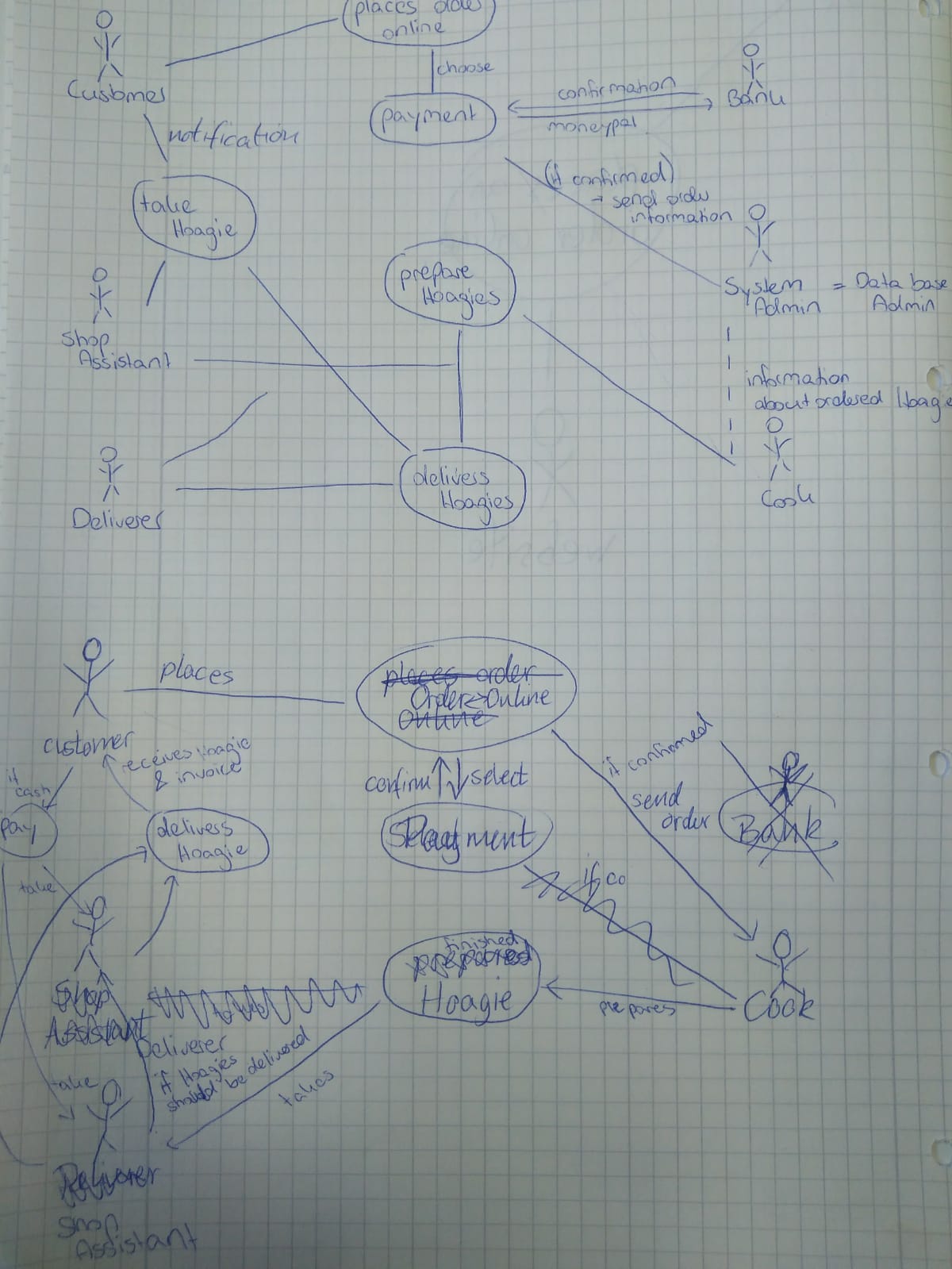
I saw that the Deliverer has to get the information from somewhere. This somewhere I defined as the Shop Assistant. The Deliverer also has to deal with the payment if needed.

Scenario 8:

In this scenario the Customer needs to know the address of the Shop and has to deal with the different methods of payment. The Hoagie has to be prepared as soon as possible, when the Customer wants to get it at the Shop.

**Use Cases**

Tool: <https://www.draw.io/>



Modeling the Use Cases was a pretty hard job. We often had ideas and did not use them because of other ideas. We used pen and paper first to model our use cases. The first diagrams looked really chaotic. In the end we specified three use cases as you can see below.

The first use case is the process of ordering a Hoagie in our shop. The important actors are the Shop Assistant, the Customer, the Bank, the Deliverer and the Cook. We had to think about the simplest scenario first and then make our way to the whole use case. This was not easy for this use case, because we had different thoughts about our scenarios and we had to figure out in which way we can display our ideas best.

The second use case is about the supply chain for the Hoagie store. This use case was a little bit easier to model as we already had ideas and concepts from our first use case.

The last use case that was about the social media aspect of our Hoagie store was a little bit trickier again. We were not sure if we can use something like an account or a database as an actor, too. In the end we stayed with our old actors for a better overview and modeled the use case below.

**Reflection**

**Johanna**

Time: I used the time in the lab (90 minutes + 90 minutes) plus

- one hour at for writing down my scenarios

- two hours and 30 min for writing down the use cases and the report

This time I sometimes thought that we take a step forward to go two steps back afterwards. It was hard to come to one solution that fits everyones expectation. And we were only three people. Sometimes there were little details that costed us much time. Nevertheless I am quiet happy with our result. I also think that I understood how important good scenarios are. We had some scenarios that could be included in some others. So we had to think about scenarios again together in the second lab. This costed us much time.

**Sao Chi**

Time:

**Florian**

Time:

**Appendix [Material]**

* Use Case Diagrams
* Scenarios

**Appendix**

**Detailed try of a main case**

|  |  |
| --- | --- |
| Scenario Name | Customer places an order online |
| Precondition | Customer needs access to the internet via a computer, smartphone or tablet. |
| Sequence of steps | 1. Customer goes to our website with one of the devices of our precondition. 2. A button appears, where the customer can start placing an order. 3. The customer gets to a new site, where she/he chooses one of our suggested sandwiches or a menu (both options will display pictures and a short description) or wants to create its own sandwich/menu from the scratch (Step 4).   When one of the first two options was chosen, it goes directly into the cart and is indicated to the user. This step repeats until the customer choses one of the following: On the same page are two other buttons leading to a new site, one for seeing all the things of the cart (step 5) and the other to finish the order by proceeding to the payment options (step 6).   1. This step only appears, if the customer decided to create its own sandwich/menu from the scratch. A new page will appear, where different breads, ingredients and toppings for making their own sandwiches or alternatively (or optionally) other products (e. g. drinks, French fries) can be added to the order. When the customer has finished her/his order, she/he can click on a button like “add to the cart”, it gets indicated to the user and she/he returns to step 3. If a bread, topping or ingredient is chosen it appears to a list on the same page. A short description can be found on the very page, what ingredients are necessary in order to fulfil the basic requirements of a sandwich (e. g. bread and probably something onto it). The order of choosing any product is not important. The customer cannot add a sandwich to the cart, until it fulfils the requirements. When the user tries to click on the button “add to the cart” when the order is nor finished, a message with the missing products will appear. 2. When the user clicked on their cart, a new page with all added products (including the amount of them), which are currently in the cart, will appear. The customer can delete or change the number of chosen products of that kind. From here, the user has the options to go back to step 3 (adding a new product to the cart) or to step 6 (payment options). 3. The payment options appear on a new page. The user will see all products added to her/his cart and can choose between four payment options: Money transfer, credit card, MoneyPal (when one of these three options are chosen, they will later go to step 7) or in cash (will later go to step 8). Furthermore, the customer can choose if she/he wants the order delivered or picking it up at our shop. The approximately time when the order is finished/delivered is shown (calculated from our statistics of the average time). The user can also decide to receive or pick it up later, if possible. Last, if the user is not logged in to her/his customer account, she/he must enter a billing address (including an email address) and optionally a different delivery address (in case it was chosen to be delivered before). Alternatively, the custom can login and choose from the saved addresses and edit them if wished. The user has still the option to go back to add another product (step 3) or to review her/his cart in the overview again (in case she/he wants to change the order amounts, step 5). If the user is happy with the order, she/he can find a button to checkout. 4. If the user did not choose to pay with cash, she/he gets forwarded to the payment organisation to finish the payment. When the payment has been confirmed, the user gets an information and is redirected back to our website (step 8). When something went wrong, she/he gets back to step 6. 5. The successful order is saved to the costumers account (in case she/he has one) and it appears to our staff for preparing the order. The user will see a notification and receives an email about the successful order with all the information from step 6. Additionally, the user can download the invoice in the PDF format (when she/he paid through a payment organisation already). In case the customer decided to pay with cash, she/he gets the receipt after the payment. When the customer decided to pay with cash and picking it up from our shop, necessary instructions will be displayed as well (e. g. going to the shop and showing the order confirmation to our staff). |
| Postcondition | Customer got a fresh pizza to the time she/he ordered it. We received the money from the customer. |

**Specific try of the same scenario**

|  |  |
| --- | --- |
| Scenario Name | Customer places an order online. |
| Precondition | Betty has access to the internet via a computer (and a kind of up-to-date browser). She has a MoneyPal account and all necessary data to login. Betty got enough money on her account and she has a billing and a delivery address (which is the same one) in Berlin (Germany). |
| Sequence of steps | 1. Betty opens our website with her Computer and Firefox 65. 2. On the appearing website, she clicks on a button “Order”. 3. Betty gets asked, if she wants to choose one of the suggested sandwiches, a menu or if she wants to create her own sandwich. Betty wants to make her own sandwich. 4. In the new menu, she has buttons for choosing different kind of breads, one for toppings and one for additionally products. Betty clicks on the “Blue bread” with mozzarella, tomato and corn. Additionally, she takes an order of fries and a Sprite. She confirms her choices by adding them to the cart. She gets redirected to the former page (of step 3). 5. Betty clicks on “checkout”. 6. Betty now sees her order again. She chooses to get the order delivered. 7. Betty fills out her billing address, which is the same one as the delivery address. She also fills out a field for her email address and another one for her mobile phone number. 8. Betty selects to pay via MoneyPal. She enters her email-address 9. Betty clicks on “confirm order”. She gets forwarded to the website of MoneyPal. 10. Betty successfully finished the transaction and gets redirected to our website again. 11. Betty sees the message “Order successfully sent” with all information of her order with the information of her order arriving at 6:35 pm, which is in 25 minutes from now. She sees also a button to print the invoice. 12. Betty clicks on the invoice button. 13. A download with the invoice in the PDF format starts immediately. 14. After 25 minutes, her bell is ringing, and she receives her sandwich, fresh and just as she ordered it before. |
| Postcondition | Customer got a fresh pizza to the time she/he ordered it. We received the money from the customer. |