Project Requirements

Project Name: MensaUniBe

Team: 6

Customer: Bledar Aga

Revision History

Version	Date	Revision Description
.01	2.10.13	Initial version of the SRS document
.02	9.10.13	Some general adjustments based on the customer feedback
.03	5.11.13	Actualization to the level of the app's v1 release

Date: October 2, 2013

Introduction

Purpose

The purpose of this application (app) is to provide various informations about the different mensas of the university of Bern. These informations help the user to decide where to go for lunch, find any mensa on the campus or share his mensa experience with his friends by inviting them for lunch and/or rating menus.

Stakeholders

Users

Students and university employees that are looking for lunch and have an Android device. The users need to have an app which allows them to quickly find out everything they need to know about the mensas and the served menus.

Client

Our customer Bledar Aga represents the mensa company. Bledar needs a working app which is delivered within the time schedule.

Developers

The developers create a reliable app suited for everyday use whilst incorporating all the requirements communicated from the client.

System Overview

MensaUniBe Android App:

This is the interface for the users to the whole system. This app interacts with the Mensa-Webservice and our Social-Webservice.

Mensa-Webservice:

Webservice which provides all informations about the mensas and their daily or weekly menu plans. (https://github.com/lexruee/Mensa-Webservice)

Social-Webservice:

Handles the menu ratings. Is separated from the external Mensa-Webservice.

Overall Description

Use Cases

Overview

0. Browse favorite mensas

Our average student or employee of the University of Bern has enough work to do besides looking for the best place to eat something as trivial as lunch. So to simplify this, he or she has the possibility to see all his or hers favorite mensas and the food they serve in just a glimpse at the moment they start the application.

1. Add mensas to favorites

In order to show all favorite mensas (see Use Case 0) the user actually needs to have a favorite mensa and also needs to add them to the system. So if the user wants to do this he can just press a button and the mensa is now a favorite. Pressing the same button again will remove the mensa from the list of favorites.

2. Browse all mensas

The user needs to get an overview of all mensas and their menus in order to select his favorites, find directions to any of them or just to look for decent food.

3. Browse all menus of the current day and rest of the week

The main meaning of the app is to have a daily or weekly overview of all the menus that are served in the mensas around the university of Berne. The app provides multiple ways to get such overviews. The users can either have a list of all menus of one mensa or they can see a list of all menus from the mensas they have chosen as favorites.

4. Find way to the mensas

The user wants to find the way to any mensa on the campus, so he is able to do so by just clicking the right button from the chosen mensa and gets guided. This feature includes that the closest mensa will be highlighted.

5. Invite friends for lunch

The user does not like to eat alone, so he decides to invite some friends for lunch. He starts the MUB-App and browses his options for lunch. As soon as he came to a decision he clicks the “Invite Friends”-Button next to his menu or mensa of choice. In the following dialogue the user can change the default values taken from his decisions so far (when “Invite Friends” is clicked next to a menu the place and date is determined by that menu). Then the user can choose who to invite from his Facebook-Friends and presses the “Send” button which then sends the invitation to his friends if an internet connection is available.

6. Reply to invitation

Deprecated Use-Case. Because Facebook handels invitations users can reply to invitations the same way the are used to.

7. Check invitation status

The user sent an invitation to his friends some time ago, so he wonders if they come or not. In the invitations list he sees all of his sent invitations. He clicks on the invitation of interest and sees the details of the invitation and also a list of persons he invited. Any person who accepted the invitation is marked with a green checkmark, friends who didn't want to eat with the user are marked with a red cross. Anyone who didn't answer yet just has a yellow question mark. If the user decides he wants to see more of his friends for lunch, he just presses the "Invite more" button and selects other friends which should receive the invitation from the friends list.

8. Rate a menu

Users want to share their experiences with others. That's why they have the ability to rate the menus in the app. It's just one click on the menu and a small feedback how the menu tasted. Anyone will be able to see the user's rating, which supports the user in making the decision where to eat.

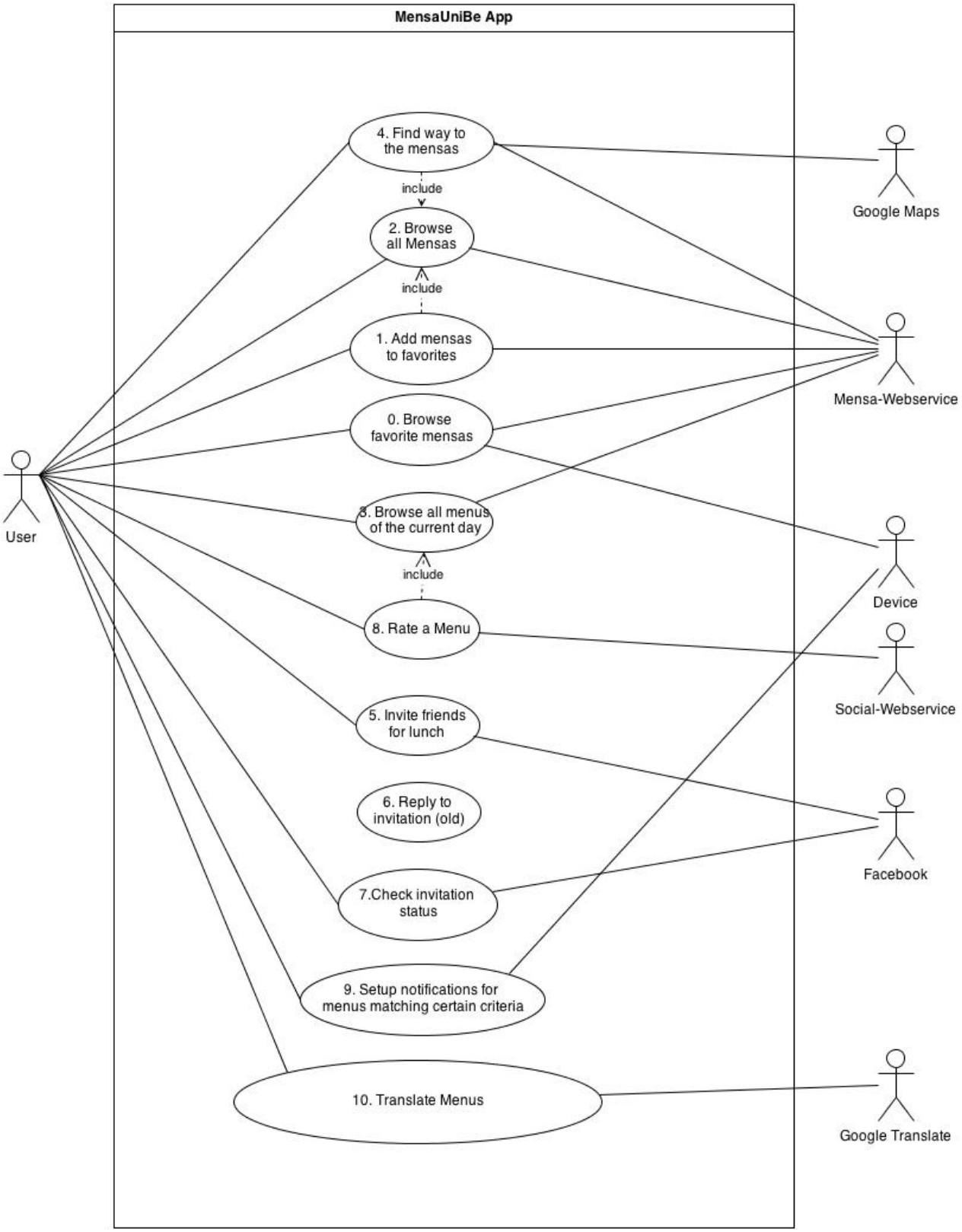
9. Setup notifications for menus matching certain criteria

Some users don't want to check the menus every single day, because they are might be a bit choosy of what they eat and they find only seldom something they like. So the app lets the user select criteria which he wants to be notified of the day its served. This is achieved in selecting a set of criteria and a set of mensas in the apps SetUp Notification Option.

10. Translate menus

There is a setting which allows the user to enable Google translations of the daily menus. While the apps language is English the menus are only provided in German. Since the company running the mensas does not provide an english translation, that is why there is an automatical machine translation.

Diagram


MensaUniBe App
4. Find way to the mensas
include
2. Browse all Mensas
include
1. Add mensas to favorites
0. Browse favorite mensas
3. Browse all menus of the current day
include
8. Rate a Menu
5. Invite friends for lunch
6. Reply to invitation (old)
7.Check invitation status
9. Setup notifications for menus matching certain criteria
10. Translate Menus
User
Google Maps
Mensa-Webservice
Device
Social-Webservice
Facebook
Google Translate

Detailed Use Cases

0. Browse favorite mensas

1. Actors

User (primary)
Mensa-Webservice (secondary)

2. Description

The average student of the university of Bern wants to see his favorite mensas and is able to see their menus in just a glimpse.

3. Trigger

The user starts the application by pressing the application's Icon.
The application starts and automatically shows all the mensas' menus which are previously marked as favorite mensas.
If there are no mensas marked as favorites, a text will appear that describes how to add favorite mensas.

4. Preconditions

1. For optimal use favorite mensas must have been added.
2. If it is the first use of the application a welcome is displayed.
3. If the app is started for the first time an internet connection is needed.

5. Postconditions

1. Student is now informed about the food served in his favorite mensas.

6. Main Scenario

1. App retrieves mensa and menu information from the Mensa-Webservice if possible
2. App shows the favorite mensas' menus they serve
3. User has the information he needs

7. Alternative Scenarios

4a. The user has no favorite mensas yet
   1. A description for adding favorites is displayed
   2. User follows the description and can add a mensa to his favorites by pressing the star button next to a mensa name

4b. App is started for the first time
   1. A welcome note is displayed followed by instructions

4c. There's no connection to the Mensa-Webservice
   1. Message on the screen "Cannot download mensa data."
   2. The app displays the latest downloaded data.

8. Notes

The following is valid in each use case but only described once in this use case:
1. Starting the app.
2. Each time the app is started it retrieves mensa and menu information from the Mensa-Webservice if there's a connection to the internet.

1. Add Mensa to Favorites

1. **Actors**
   User (primary)
   Mensa-Webservice (secondary)

2. **Description**
   If you are in the Mensa List or have selected the view ‘All mensas’ it is possible to add a mensa to your favorites.

3. **Trigger**
   The user either navigates to the Mensa List and then the application shows all the mensas which are previously marked as favorite mensas. Or the user selects ‘All mensas’ from the Spinner at the top in the Home screen.
   If there are no mensas marked as favorites, a description of how to add mensas will appear in the ‘Favorites’ view of the Home screen.

4. **Preconditions**
   1. User has a connection to the internet or has already downloaded the menus of the whole week
   2. The user is in the Home screen or the Mensa List

5. **Postconditions**
   1. From now on the mensa is shown as favorite mensa and when then app is started the mensa’s menus are shown

6. **Main Scenario**
   1. He or she searches for a mensa in the Mensa List
   2. The user presses the star button next to the chosen mensa’s name for marking as favorite
   3. User can now find this mensa’s menus under ‘Favorites’

7. **Alternative Scenarios**
   Adding a mensa directly from the Home screen
      1. No matter which view of the Home screen is displayed, the user can press the star button beneath any mensa to add this mensa to the favorites

8. **Notes**
   1. To remove the mensa the user just has to press the star button again. The color of the star will change between grey (not a favorite) and yellow (favorite).
   2. The user can also favorite more than one mensa.

2. Browse all mensas

1. **Actors**
   User (primary)
   Mensa-Webservice (secondary)

2. **Description**
   As a user I want to browse the mensas for their menus. That is, I want to switch between the mensas and get their menuplan for the whole week.

3. **Trigger**
   User is on the Home screen

4. **Preconditions**

1. User has a connection to the internet or has already downloaded the menus of the whole week
2. Home screen is displayed

5. Postconditions

1. All menus of one mensa are listed on the screen.

6. Main Scenario

1. User activates the spinner at the top and selects ‚Weekly plans'
2. For one mensa all menus of the current day are displayed, the other menus are hidden behind the displayed days of the week
3. By tipping on a day of the week its menus are displayed as scroll-down

7. Alternative Scenarios

1.

8. Notes

1. The user can switch between the different mensas by sliding his finger horizontally.
2. A quick context sensitive search has been proposed.

3. Browse all menus of the current day and rest of the week

1. Actors

User (primary)
Mensa-Webservice (secondary)

2. Description

a) As a user I want to see what menus are served at the current day.
b) As a user I want to see what menus from the list of my favorite mensas are served at the current day.

3. Trigger

User is on the Home screen.

4. Preconditions

1. User has a connection to the internet or has already downloaded the menus of the whole week
2. User has added at least one favorite mensa.
3. User is on the Home screen

5. Postconditions

1. All menus of the current day are listed on the screen
2. All menus of the current day from the list of the favorite mensas are listed on the screen

6. Main Scenario

a)

1. A list of the current day's menus from only the favorite mensas is shown
2. User selects ‚All mensas' from the action bar at the top
3. All the menus served at the given day are sorted by mensa. If the user tips on one mensa its menus appear as a pull-down menu
4. The User can switch between the days of the week

b)

1. If the user sees the list of ‚All mensas' or ‚Weekly plans' he has to choose ‚Favorites' from the spinner in the action bar
2. User sees the list of today's menus (only those of his favourite mensas)
3. The user can switch between the days of the week

7. Alternative Scenarios

1.

8. Notes

With a slider the user can also choose other days than the current day as long there are menus for these days (i.e. he will never see any menus for sunday as the mensas are only open during working days).

4. Find way to the mensas

1. Actors

User (primary)
Mensa-Webservice (secondary)
Google-Maps (secondary)
GPS-Module (secondary)

2. Description

a) As a user I want to know where the mensas are.
b) As a user I want to get directions to the different mensas.

3. Trigger

a) User navigates to the “Navigation”-Tab
b) User clicks on the “Get directions” button next to a specific mensa

4. Preconditions

1. User has a connection to the internet
2. Connection to google maps is possible
3. GPS is turned on

5. Postconditions

a. All mensas are displayed in a map
b. The directions to the selected mensa is displayed on a map

6. Main Scenario

1. Trigger a) or b) applies:
2a. All available mensas are displayed on a map
3a. Clicking on the mensa opens an overview trigger
2b. The directions between the phone's location and the selected mensas are displayed on a map

7. Alternative Scenarios

1. If there's no connection to the internet:
   Message on the screen "No connection to the internet."
2. If no GPS signal:
   Message on the screen "No GPS signal."
3. Google Maps not accessible:
   Message on the screen "No connection to mapping service."

8. Notes

1. Google maps will probably give good results. No alternative needed.

5. Invite friends for lunch

1. Actors

User (primary)
Facebook (secondary)
Mensa-Webservice (secondary, only used in alternative scenario 3a)

2. Description

As a user I want to invite some friends for lunch in a mensa. Since Facebook is the de facto standard in social media all invites will be handled by it.

3. Trigger

The user clicks on “Invite friends”

4. Preconditions

1. User has a connection to the internet
2. The user has chosen where to go for a meal

5. Postconditions

1. The invitation is distributed to the addressees via Facebook
2. The invitation gets listed as “Sent invitation” in the invitations list

6. Main Scenario

1. User clicks on “Invite friends”
2. A form to specify the event details shows. Most default values can be derived from previous selections
3. App connects to Facebook and displays a searchable list of friends to invite
4. Facebook takes care of the invitation

7. Alternative Scenarios

3. Facebook not available: App gives Error Message “Connection to Facebook not possible”

8. Notes

1. Could the connection testing for Facebook be done before even opening the create invitation dialog?

6. Reply to invitation

Deprecated Use-Case.
Since the invitations are managed by Facebook this app no longer has the responsibility to be able to reply to invitations.

7. Check invitation status

1. Actors

User (primary)
Facebook (secondary)

2. Description

As a user I want to see the replies to my invitation(s).

3. **Trigger**
   The user navigates to the "Invitations”

4. **Preconditions**
   1. User has a connection to the internet
   2. User has sent at least one invitation which has not passed yet

5. **Postconditions**
   2. User knows who accepted, declined or ignored the invitation

1. **Main Scenario**
   4. User clicks on an invitation he sent
   5. App connects to Facebook
   6. App retrieves replies from all invitees from Facebook
   7. App opens a dialog which shows the details of the invitation and the replies (shows with green checkmark who accepted, red cross who declined and orange question mark who did not reply yet)

2. **Alternative Scenarios**
   2a. App cannot connect to Facebook
      2. App shows an error: “Cannot retrieve replies at the moment, please try again later”

3. **Notes**

8. Rate a menu

1. **Actors**
   User (primary)
   Social-Webservice (secondary)

2. **Description**
   As a user I want to see the ratings of a menu and be able to rate it.

3. **Trigger**
   User opens the app with the intention to rate a menu

4. **Preconditions**
   1. User has a connection to the internet

5. **Postconditions**
   1. The rating has been sent to the Social-Webservice.
   2. The MensaUniBe app has updated the ratings so that the user is sure his rating has been uploaded

6. **Main Scenario**
   2. User navigates to the menu he wants to rate
   3. User taps on the Rate-Button
   4. User defines how to rate the menu and accepts
   5. App sends the rating to the Social-Webservice
   6. App downloads the rating-content from the Social-Webservice
   7. The ratings from the displayed menu are being updated and the user can see his new rating

7. **Alternative Scenarios**
   If there's no connection to the internet:
   1. Rating screen does not open
   2. Message on the screen "Connection to the internet required."

8. **Notes**
   1. If there's no connection to the internet, the Rate-Button could also be greyed out so that it couldn't be activated.

9. Setup notifications for menus matching certain criteria

1. **Actors**
   User (primary)

2. **Description**
   The user has the possibility to select criteria he wants to be notified of if a menu that matches is served that day. He can choose to be notified of all the mensas or his favorite mensas.

3. **Trigger**
   User presses the Setup Notification Button in the Application's Options

4. **Preconditions**
   If the user wants to be notified of his favorite mensas, favorites must have been chosen before. If he hasn't chosen favorites before a message will be displayed.

5. **Postconditions**
   From this on the application sends push messages via android notification when a menu in the selected set matches a criteria

6. **Main Scenario**
   1. User goes to "Setup Notification" in the app's options
   2. User selects one or more criteria from the criteria set which is displayed
   3. User selects a set of mensas
   4. The view closes after the "ok" button is pressed

7. **Notes**
   1. When the notification is clicked, the user sees the view of the mensa the menu is served.
   2. Where is the button exactly implemented in the design e.g. Tab or Menu Point?
   3. When should the Notification be displayed (can the user determine this)?

10. Translate menus

1. **Actors**
   User (primary)
   Device

2. **Description**
   The User has the possibility to enable a setting so that all menus are translated to English by Google translate.

3. **Trigger**
   In the settings menu

4. **Preconditions**
   The menus have been downloaded before they can be translated

5. **Postconditions**
   All menus are displayed in their translated form

6. **Main Scenario**
   1. User enables “Auto Translate Menus” in the app’s settings
   2. From now on all menus are displayed translated

7. **Notes**

Specific requirements

Functional requirements

- Retrieve and display menu data from the mensa webservice
- Cache menu and mensa data to allow the app to be used without internet connection.
- Get location of a specific mensa and show this mensa on the map (using a third party map API, i.e. google maps).
- Calculate directions and distance to a mensa.
- Manage the list of favorite mensas.
- Manage menu criteria and notify user if a menu matches the user’s criterias.
- Translate mensa menus at least into english.
- Send message to other users (invitation or reply to invitation) using the Social-Webservice
- Social-Webservice needs to distribute user messages to the addressees.
- Retrieve messages from the Social-Webservice.
- Send a rating to the Social-Webservice and receive ratings from the Social-Webservice. The ratings need to be associated with a the menu’s string representation to reuse ratings if a menu is served again.
- Manage a list of friends who also use the MUB-App. (probably via the already existing contacts)

Non-Functional requirements

- The Mensa-Webservice and Social-Webservice should be available. If not, the app can only display already downloaded data and not manage ratings, invitations and replies.
- The app should be self-explanatory.
- It should be more comfortable to view the mensa menus via the MUB-App than the mensa homepage. If not, there is no use for the app.
- The project should be finished in time.