

Hochschule Mainz: University of Applied Sciences

MyUniLife: Community app to promote digital learning with focus on networking

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1 Idea

With this thesis we would like to present a concept on how an application could be used to enhance the connection between students at a university or other institution. This could include the following functions: a chat and group function, a mentoring concept, online surveys, event planner, webinars, onboarding for the 1st semester and FAQs.

2 Motivation

The goal of the application is to promote the community spirit of the students of the Mainz University of Applied Sciences. For this purpose, a prototype of the UI with a corresponding concept will be developed.

For simplicity we used our university as an example.

3 Functionality of the application

Below you can find a detailed description of the functionalities of the application.

3.1 Homepage

This is the landing page. On the homepage the user can see all news immediately. This overview enables the user to be up to date in the shortest possible time. Furthermore, notifications, e.g. messages, events or surveys are displayed there.

3.2 Newsfeed

The newsfeed will be the communication channel of the university. The AStA¹, universities, professors and staff can publish posts here. Students can read the latest contributions as well as publish events (see [3.4 Events](#)).

3.3 Channels

In the channels there will be a chat and group function. The channels are used to exchange information directly with each other. There are private, as well as public channels that you can join or be invited to. For example, you could create a channel for exam preparation to exchange information and generate synergies. In addition to that there will be permanent channels for each module where students in higher semesters can help those in lower ones by providing information about the exam or the professor. The chat function allows the exchange of files too.

¹ Allgemeiner Studierendenausschuss (General student committee)

3.4 Events

A simple calendar display allows the student to get a quick overview. Other calendars, e.g. a Google Calendar can also be imported. The event invitations sent to the students are accepted with a click on the link. Of course, this can be rejected afterwards in the calendar. In addition to that, there are detailed information about the events and webinars. If required, chats can also be opened specifically for the events or webinars.

3.5 Surveys

With the survey function you can engage the community, so you automatically have a broad reach and can achieve more accurate results for your homework. This could especially be useful for a bachelor or master thesis. Of course, you can also start general surveys like asking what peoples' favourite food is.

3.6 Help

A FAQ page answers the most frequently asked questions, to enable a quick start for the user. In addition to that, a tutorial should make the use of the application easier. The tutorial could work like a sort of guided journey through the app for first-time users.

3.7 Profile

The student logs onto the application using single sign-on from their institution. He can then set up his profile by providing information like a profile picture, alias, course of study, skills, and interests. These details automatically add the student to the appropriate channels by working as a tag.

3.8 myMentor

Mentors are students in higher semesters who offer their help to others. First-year students or people in a third attempt receive special support from assigned mentors by matching them based on their needs and interests (see [5 Concept of myMentor](#)).

4 Use Cases

We will take a closer look at some use cases. This gives you a better insight into the app and our vision.

4.1 First Login

The first described use case is the initial login to the app. After the app download and installation, the user will be presented with the single sign-on mask of his relative studying facility upon the first launch. Once logged in, the user will be presented with different preference options. He can pick from multiple interests, which will define which events will be presented to him in the future. Furthermore, he can decide for which events from which locations and which distance to his relative location he wants to be notified.

After choosing preferences the user will be presented with an onboarding that needs to be absolved. He gets to try out different app features and needs to interact with some mandatory functions to proceed with the tutorial.

Finally, the user is presented with the “HomePage” view of the app. This will show up on any future start of the app unless the user specifically signs out. The user will require neither a login nor setting up preferences or undergoing an onboarding process anymore.

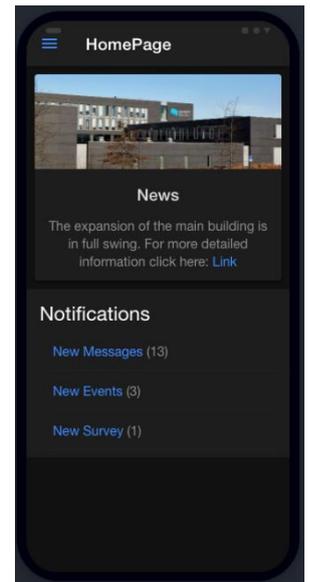


Figure 1: HomePage

4.2 Channel creation

When wanting to create a new interactive channel the user must be inside the “Channels” tab. There he can create a new communication channel by tapping the respective button. Afterwards he can add a description, choose fitting tags to be attached to the channel and optionally set a channel location. These options can be used to acquire and inform new channel members.

The creator also declares his channel as public or private. This defines whether it can be found by everyone through searching or only through invitation by members. Additionally, he can specify write permissions and allowed message types (e.g. text messages, weblinks, documents).

After he confirms the details, he can share his newly created channel in existing groups or with contacts. If the user has the corresponding permission, he can share it in the facility specific newsfeed.

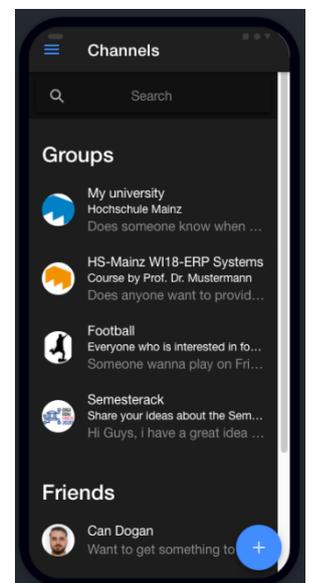


Figure 2: Channels

4.3 Event creation

Users wanting to create an event must navigate to the “Events” tab. There he can create new events like the creation process of group channels. He can add a description, chose fitting tags and set a location and date. The user also must declare visibility of the event as public or private.

After he confirmed the event creation, he can share the event in his groups or with his contacts directly.

4.4 Joining channels and events

The user can join channels in two ways. Either he can enter by searching his desired event or group in the “Events” or “Channels” tab respectively or by tapping on an event or channel link in a chat. These will be highlighted to stand out in a discussion.

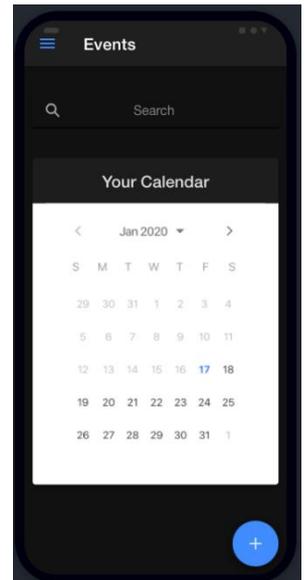


Figure 3: Events

Once he clicked the event the user will be presented with additional information. These are planned to be the name, the description, the location and for events, specifically the date.

When the user decides to join the group or event, he confirms the entering and will be redirected. If he joined an event, he will be shown the calendar entry. If he joined a group, he will be redirected to the recent group chat and can begin to e.g. take part in discussions, share documents or gather information.

4.5 Taking a survey

To take a survey, the user hast to navigate to the “Surveys” tab. There he will immediately be presented with a survey. By swiping sideways, he can switch through different active surveys. For each survey there will be some descriptive information shown immediately. The user can see the current question, the given answering options and how many questions are left.

By clicking one of the possible answers the entry will be saved, and the next question will appear. After answering all questions, the survey will be removed from the active surveys and the user will be thanked for his participation.

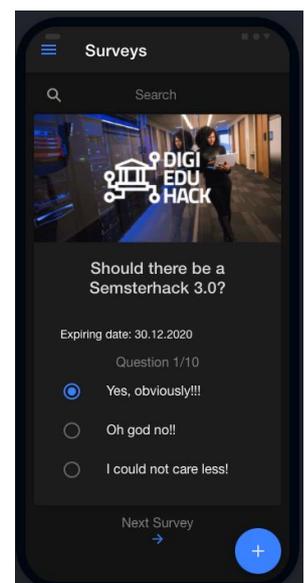


Figure 4: Surveys

5 Concept of myMentor

With myMentor we want to match mentors with students in their first semester or people in need of help in an exam. A mentor makes it easier to start studying and get to know basic things like mail account, exam registration, tutoring etc. The mentor can also help making new friends and contacts beyond one's own horizon. The matching is based on skills and needs as well as personal interests such as hobbies etc.

A mentor must have studied at the university

for at least one year. Mentoring lasts for a whole

semester and can be extended for another semester if both parties agree. Although the mentoring should end after one semester, we really do not want to forbid people to stay in touch. We want exactly that!

A little example: Say you were in third term business studies and needed help in a math course because you failed the first attempt. You decide to hop on MyUniLife in search of an adequate mentor. There are two mentors available and the app decides based on interests that you get matched with mentor A because you both like football for example.

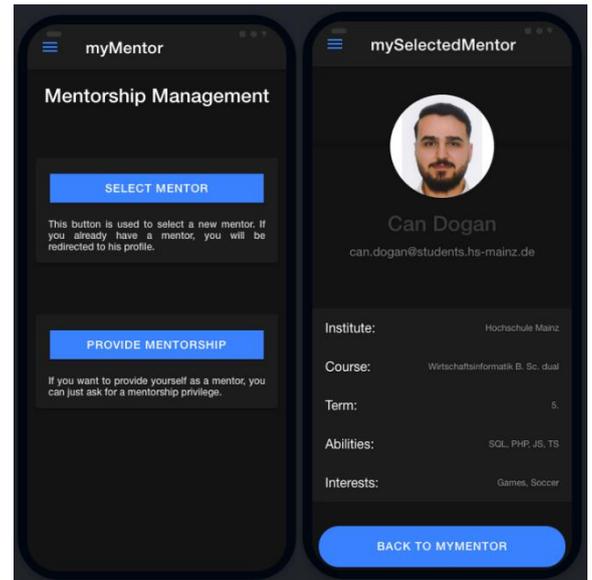


Figure 5: myMentor

6 Requirements for implementation

To put costs and development into perspective, we did a cost analysis covering the first twelve months of developing and running the application. Initial costs of the project are estimated at 100.000 euros. We calculated with 250 days of development at 8 hours per day and an hourly rate of 50 euros. For each new iteration of the application we assumed a further 30 days at 8 hours each. Furthermore, we assumed running server costs of 250 euros per month. Regarding distribution of the application via Play Store and App Store we have initial costs of 124 euros and further costs of 99 euros annually.

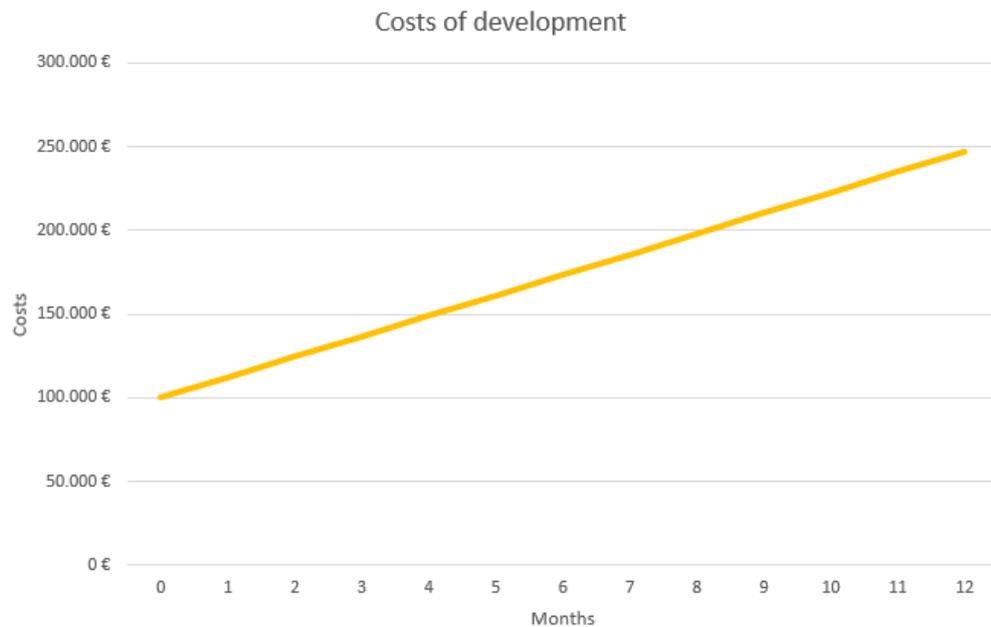


Figure 6: Costs of development

7 Conclusion

At the end we are looking at the finished UI and the concept, we developed. But it was more than just this. We learned a lot about teamwork, team organisation and development of applications. For example, the developers used a framework named “ionic” to set up a development environment for both, an IOS and Android. Further it was even possible to set up a web application with the same code and frameworks. As a team we achieved to write a concept and develop a corresponding UI for the mobile application. The functionalities have not been implemented yet, but it is enough to risk a first look at an app which might be developed in the future.

Our group consists of five people, all from the same course, so we knew each other beforehand. Prior to the event we met on Discord and brainstormed ideas for two hours before we decided to submit an idea. As a personal learning we took away that organisation and communication are key factors regarding such an event. It was great fun throughout and it will stay in our minds for a long time. We are already looking forward to the next Hackathon.