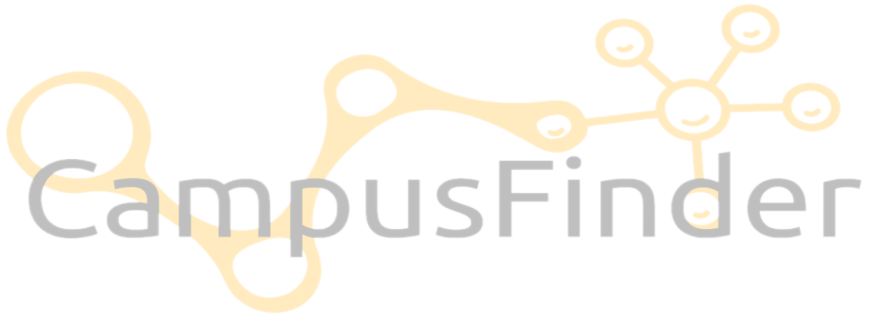


Reutlingen University



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Idea

Comparable Apps

Personas

Userstories

User Requirements

Activity Diagrams

Technical Requirements

Mockups

End

Tracking people on the campus and retrieve informations about buildings and offices, as well as events that take place on the campus. The **base** ideas needs to be present to go productive. The **additions** will be added on left time.

Tracking people on the campus and retrieve informations about buildings and offices, as well as events that take place on the campus. The **base** ideas needs to be present to go productive. The **additions** will be added on left time.

Base

- ▶ Track professors, students or colleagues
- ▶ Information about offices
- ▶ Information and location of Events
- ▶ Mensa capacity
- ▶ Parking Heatmap

Additions

- ▶ Friends List and Meetup Points
- ▶ Seek Help from professors, students or employees
- ▶ Appointments with professors and offices

- ▶ Plattform: IOs/Android
- ▶ Features:
 - ▶ Search
 - ▶ Buildinginformations
 - ▶ Roominformations
 - ▶ Roomschedules
 - ▶ Route calculation for Rooms
- ▶ Rating: 3.5 / 5.0 (Android Store)
- ▶ Problems:
 - ▶ "Failure on Update" |
 - ▶ "Crashing" ||
 - ▶ "Maps not loading" |||
 - ▶ "Loading time" |||
 - ▶ "Tracking not working" |

- ▶ Plattform: Webapp
- ▶ Features:
 - ▶ Dates
 - ▶ Campusnavigator
 - ▶ Institutes
 - ▶ News
 - ▶ Eating plans
 - ▶ Informations about the studium
 - ▶ Uni-Newsletter
- ▶ Rating: \emptyset
- ▶ Problems:
 - ▶ No reviews

- ▶ Plattform: WebApp/IOs/Android
- ▶ Features:
 - ▶ News , Map
 - ▶ Shuttle Tracking , Events
 - ▶ People Directory , Libraries
 - ▶ Dining , Building Services
 - ▶ Emergency , Tours
 - ▶ Student support
- ▶ Rating: 4.0 / 5.0 (Android Store)
- ▶ Problems:
 - ▶ "Loading time" |||
 - ▶ "Bugs" |||
 - ▶ "Crashing" |||||||||||
 - ▶ "Maps not loading" ||
 - ▶ "Tracking" |
 - ▶ "Compatibility" |

Alf



“I want to know where my colleagues are to ask them questions quickly”

Alf is a professor at Reutlingen University, he teaches at the Engineering faculty. Besides his teaching in the field of mathematics he's also the head of the examination board. As a consequence he has many appointments with students and professors of the university. At the moment he settles his appointments in various ways, via phone, mail or private conversations.

Name: Alf
Gender: Male
Age: 63

Key characteristics

- Professor
- Head of examination board
- Would like to take less time investing in communication to settle appointments

Goals

- Quickly finding people on the campus to clarify questions
- Making Appointments through one central application

User Case Scenario

Alf has a meeting with a student in 30 minutes and needs information from one of his colleagues. He wants to know where he can find his colleague to avoid coming late to the meeting

Behaviors

Technical Skills



Social Media Skills



Interests in using mobile apps



Time spent on using mobile apps



Interests in technology



Hannah



"I love to meet new people, but i am not that familiar with events of the university"

Hannah just started studying on the university of Reutlingen. She moved to the dorm next to the campus. Hannah likes to go to events and meet new friends. She would like to be able to have information about upcoming events on the campus or parties arranged by other students.

Name: Hannah
Gender: Female
Age: 18

Key characteristics

- Student
- Wants to find new friends
- Would like to go to faculty crossed events on the campus

Goals

- Get an overview on which events take place at the campus
- Information on upcoming partys for students

User Case Scenario

Hannah has a free weekend and her roommates are out of town. She would like to know if there is a party or an event of the university or of other students where she can go to. She would also want to know what kind of events take place.

Behaviors

Technical Skills



Social Media Skills



Interests in using mobile apps



Time spent on using mobile apps



Interests in technology



Florian



“I don't want to miss time on my lectures, but searching a parking slot always gets in the way“

Florian is a student of Reutlingen University and is studying International Business Management. He lives in a neighboring village and arrives to the university by car. Florian uses every minute in the morning to stay in bed as long as possible. Florian would like to know where there is a free parking space in the parking lot of the university so that he wastes as little time as possible to find a parking space.

Name: Florian

Gender: Male

Age: 21

Key characteristics

- Student
- Likes to sleep in every morning
- Would like to take less time investing in searching a parking slot

Goals

- Remember the place where he parks his vehicle
- Wants to know where free parking slots are available

User Case Scenario

Florian arrives at the university parking lot at 9:30. He wants to know where he can park as fast as possible and as close to his lecture.

Behaviors

Technical Skills



Social Media Skills



Interests in using mobile apps



Time spent on using mobile apps



Interests in technology



"As a student, I want to know where i can find a free parking slot because it can take a lot of time to find one."

Florian Keller, 21 , TEC student

"As a masters degree student, I often need to find my responsible professors, to be able to continue my work."

Mark Roller, 24 , ESB master student

"As a interested pupil, I want find to immediately every interesting lab,
when I visit on student information day."

Tim Poltringer, 14 , school pupil

"As a first year student from Berlin, I want to know where and when
events of the university take place to meet new people."

Hannah Wirth, 18 , TD student

User Requirements

Show Map and Map Interactions



Requirement	Show Map and Map Interactions
Number	1
Description	When the user is logged he needs to see a map in which he can move in every direction and zoom in and out
Success criteria	Map is shown on the screen and the user is able to navigate
Level of importance	5, basic requirement

User Requirements

User Interface Map



Requirement	User Interface Map
Number	2
Description	The user must be able to either go to his settings or to the search while in the main window
Success criteria	The user can reach the search or settings window with one tap
Level of importance	5, basic requirement

Requirement	Search
Number	3
Description	The user can search for persons, offices, buildings, events and parking
Success criteria	The user gets results while typing, so the search is working incremental
Level of importance	4

User Requirements

Parking Map



Requirement	Parking Map
Number	4
Description	The user sees a heatmap of the approximately free parking spots on the university parking lot. It should also be possible to save the spot where the user has parked his car
Success criteria	The user sees a heatmap that is dynamically calculated and is able to see the place where he parked his car
Level of importance	2

Requirement	Building Interaction
Number	5
Description	The user can interact with buildings by either tapping on them or zooming in. He then gets informations about the building and can look at floor plans to get further informations
Success criteria	The user gets a pop-up with informations, where he can choose further interactions like watching the floor plans.
Level of importance	4

User Requirements

Floorplan Interaction



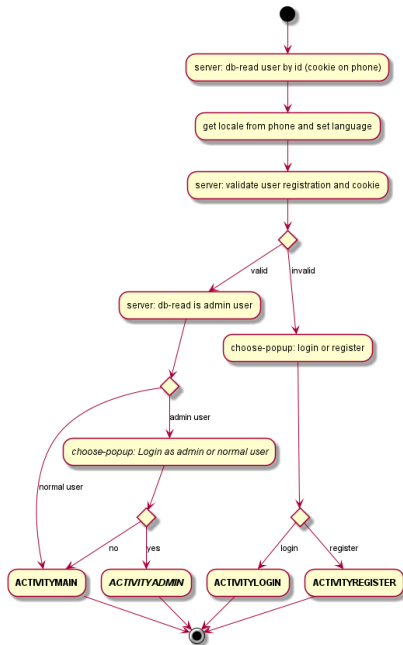
Requirement	Floorplan Interaction
Number	6
Description	The floorplans have the same interactions as the main map, so it must be possible to move and to zoom in and out
Success criteria	The user can move in every direction and can zoom in and out.
Level of importance	4

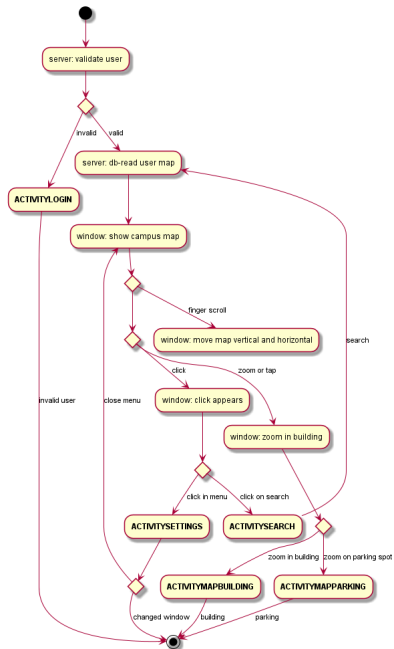
User Requirements

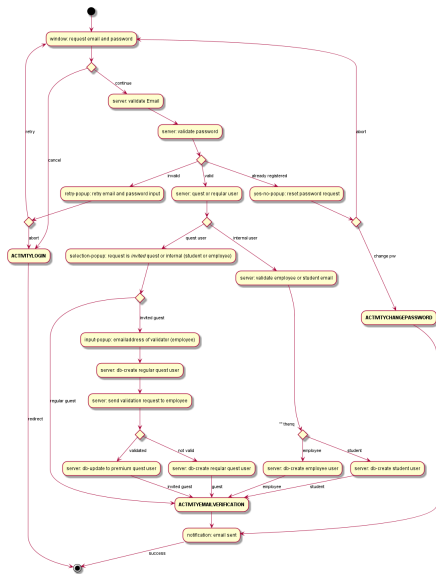
User Tracking

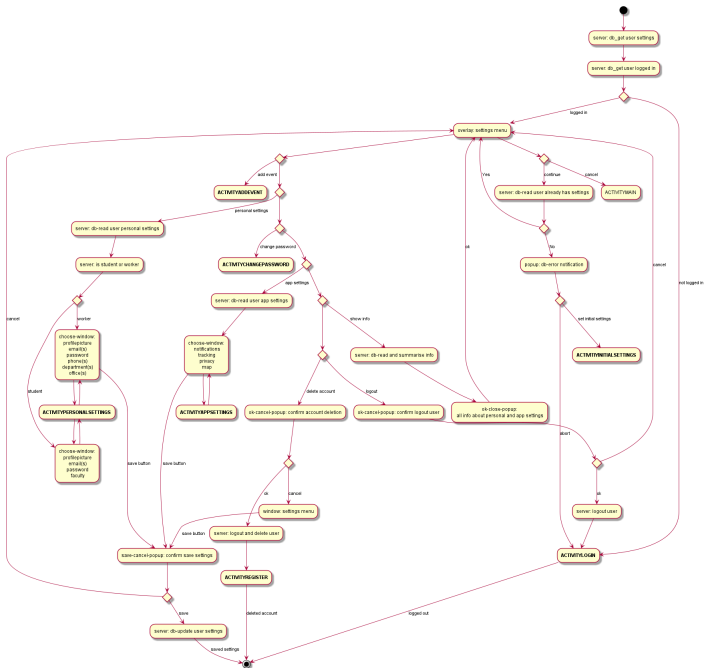


Requirement	User Tracking
Number	7
Description	The user must be able to track persons and see them on the map. The other users must agree with the tracking in the form of a notification
Success criteria	The user can see where another person is located at the campus. The other person has to get a notification for it
Level of importance	3









Technical Requirements

App Start



Requirement	App Start
Number	subsubsection
Description	Loading Maps and Pictures to the RAM. Searching for Updates. If a Cooke with a unique token exists, sends sends it to the server. Server validates the cookie. If a user is already logged in, he has to log out the other device. When no valid cookie is on the server he will be redirected to the login.
Failures	No cookie existent (User Registration) Cookie not valid or user already logged in(User Login) Update required (Notify User)
Success Criteria	The user cookie is valid (MainApp)
Level of Importance	5, basic requirement

Technical Requirements

User Registration



Requirement	User Registration
Number	subsubsection
Description	<p>The user sends the server his E-Mail address and password. The server verifies the E-Mail address by analyzing the domain. If the E-Mail address is not a university address a confirm Pop-up with the information that this only will be a guest account shows up. If he confirms it he will be registered as a guest user. With a valid university E-Mail address the server inspects the subdomains, if it begins with student. The user will be registered as a "Student User", otherwise he will be registered as an "Employee User".</p> <p>The client app first looks if the passwords are equal. If not a little warning icon is shown, that the passwords don't match. The password will be checked on the server. It has to be minimum of 8 characters long, containing upper and lowercase letters. It also has to contain a number and a special character (!#\$%&). The password has to a second field where the same password is put in.</p>
Failures	<p>The two passwords doesn't match (User Registration)</p> <p>E-Mail adress is already registered (Change Password)</p> <p>Password is not safe enough (Notify User)</p>
Success Criteria	<p>The user has entered an not registered E-Mail adress and a safe password (E-Mail Verification)</p>
Level of Importance	5, basic requirement

Technical Requirements

E-Mail Verification



Requirement	E-Mail Verification
Number	subsubsection
Description	The user sends the server a mail address within the registration or in the settings under "Change E-Mail", the server sends a builds a unique Token and creates a Link with the token integrated within the GET-Request. As soon as the Link is called, the E-Mail is verified and the user can login
Failures	The user hasn't verified his E-mail yet and wants a new verification link (E-Mail Verification) The email is already registered (Change Password)
Success Criteria	The user has verified his E-Mail adress (User Login)
Level of Importance	4

Technical Requirements

Change Password



Requirement	Change Password
Number	subsubsection
Description	<p>The user wants to change his password. For this a password reset link with a tokenized link is send to his E-Mail adress or a link is send to his mobile phone via SMS. The link sends the user to a page, where he can type in the new password. It has to be at least 8 characters long contain lowercase and uppercase letters, as well at least one number and a special character (!#\$%&). The password is double checked with a confirmation field. The equality of password and confirmation field is verified on the client side. After a successful change the user cookie will be removed from the valid cookie database.</p>
Failures	Password and password confirmation don't match (Change Password)
Success Criteria	The user has successfully changed his password (User Login)
Level of Importance	3

Technical Requirements

Change Password



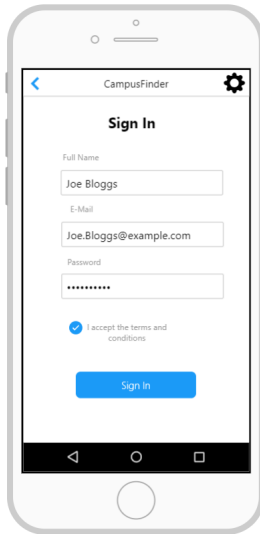
Requirement	Track Person
Number	subsubsection
Description	The user selects a user from the search dropdown list (Search). The user name is send back to the server. The server sends a tracking request to the user to track. On the mobile phone of the user to track appears a "accept"-"decline" notification window.(Notify User) When the tracking is accepted the server receives the location and sends it to the user who requested the tracking. On the map of the user, who requested the tracking, the person appears as a small icon. The tracking request will be actualized every 5 seconds.
Failures	User declines tracking(Notify User) Tracking request circle breaks(Notify User) User to track is not logged in (Notify User)
Success Criteria	User who requested tracking reaches tracked users location ()
Level of Importance	5

Technical Requirements

All requirements

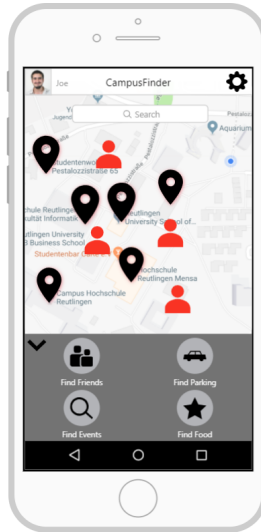


- ▶ App Start
- ▶ User Registration
- ▶ E-Mail Verification
- ▶ Logout User
- ▶ User Login
- ▶ Change Password
- ▶ Change Setting
- ▶ Notify User
- ▶ Search All
- ▶ Track User
- ▶ Retrieve Information
- ▶ Delete User
- ▶ Get all saved user data



Mockups

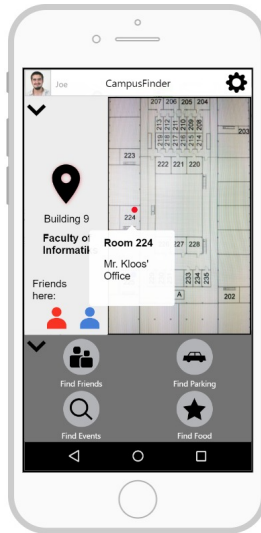
Main Map



Mockups

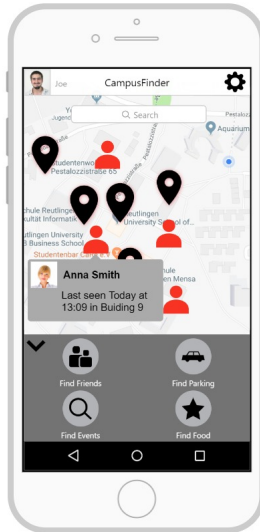
Buildings Map

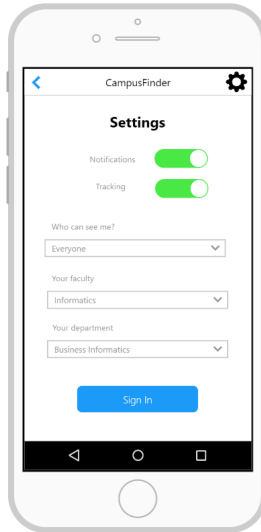


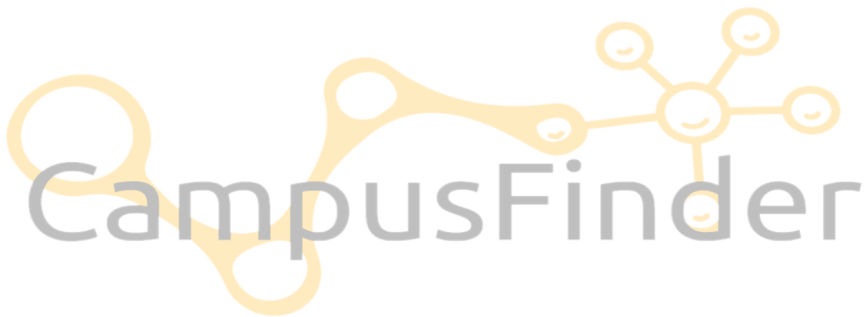


Mockups

Tracking Notification







Thank You!