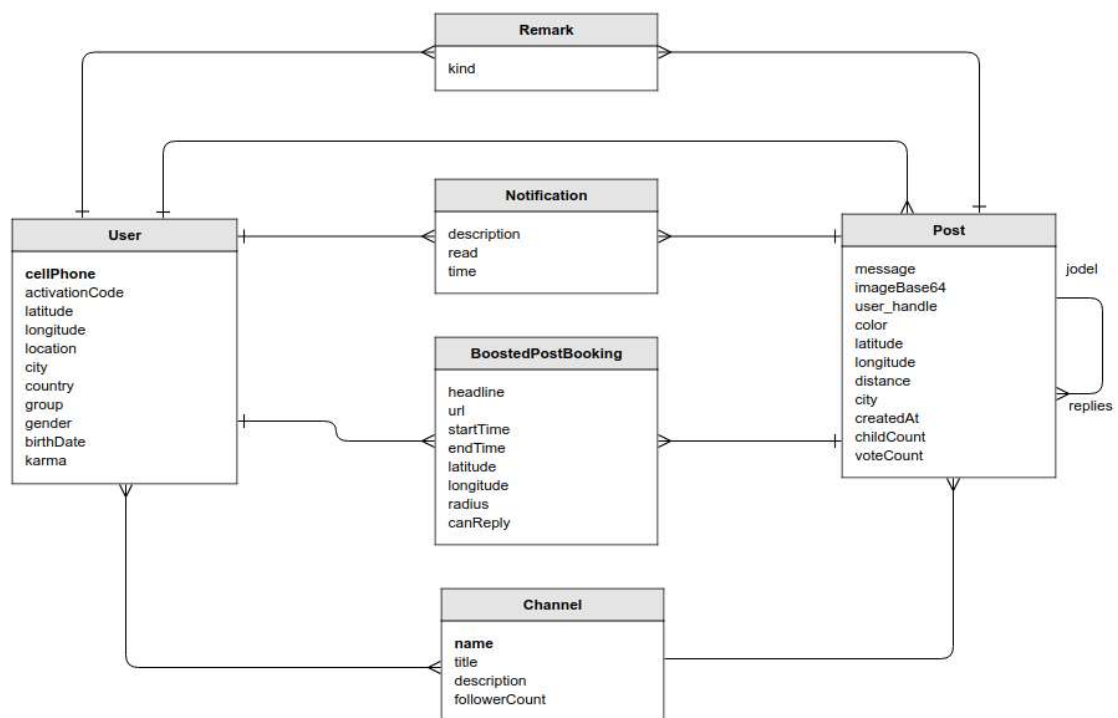


Our Jodel: Conceptual Design

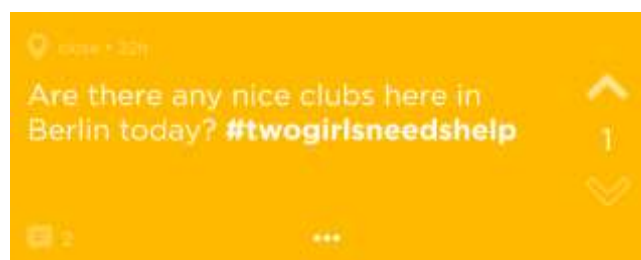
Data Model

Entity-Relationship Diagram



Data Dictionary

Post



A *Post* is a message, picture or video (up to 20 seconds) that is published by a User.

A *Jodel* is the initial Post that may start a thread.

A *Reply* is a Post written in answer or response to a Jodel.

Attribute	Description
message	Text can have a length of up to 240 characters.
imageBase64	Image encoded base 64. It can be a short video, up to 20 seconds.
user_handle	<p>This is a number uniquely identifies the posting user in the thread, i.e. when the first replier makes another reply on the same Jodel, that reply will have the same user_handle as the first. However, the user_handle is not unique for every user in every thread, i.e. when a replier makes another reply on a different Jodel, that reply will have a different user_handle.</p> <p>In other words, it is possible to know which replies on a Jodel was made by the same user, but it is not possible to reconstruct a user's Jodel activities from long-time observations.</p> <p>The <i>Original Jodeler</i> is the user who posted the initial Jodel. His user_handle is 0, and his posts on the thread are identified by the initials OJ.</p>
color	<p>The color has no actual meaning. The color of a Jodel is selected randomly when the user clicks the "+" button.</p> <p>The color of a Reply is always the same as the color of the parent Jodel.</p> <p>Posts can have seven colors:</p> <ul style="list-style-type: none"> • orange (#ff9908) • yellow (#ffba00) • red (#dd5f5f) • blue (#06a3cb) • teal (#8abdb0) • green (#9ec41c)
latitude	Signed latitude of the location of posting, in degrees, with a precision of 5 decimal places.
longitude	Signed longitude of the location of posting, in degrees, with a precision of 5 decimal places.

Attribute	Description
distance	<p>One of the following:</p> <ul style="list-style-type: none"> • here: less than 1 km; • very-close: between 1 and 2 km; • close: between 2 and 10 km; • far: more than 10 km; • hometown: if posted using the <i>hometown</i> feature. <p>The <i>hometown</i> feature allows users to read and write posts in a place they are not currently in. However, this location must be set once by the user and then it can only be changed once in a month. Only the current location of the user can be set as his hometown.</p> <p>At first, only posts posted within a 10 km radius are shown in the feed. When there are many users in the area, the users enjoy a lot of activity; less populated areas, on the contrary, can spot tumbleweed in their less engaged feeds.</p> <p>To mitigate this issue we introduce the <i>dynamic radius</i> feature. With the dynamic radius, the radius will be increased in 10 km steps until the area has more than 150 Jodels or the radius reach 100 km.</p> <p>The distance in kilometers between two points located at (φ_0, λ_0) and (φ_1, λ_1), where latitude φ and longitude λ are in degrees, can be calculated by the following approximate formula:</p> $d = 111.2 \sqrt{(\varphi_1 - \varphi_0)^2 + ((\lambda_1 - \lambda_0) \cos \varphi_0)^2}$ <p>This approximation is very fast and produces a fairly accurate result for small distances. Also in ordering locations by distance, it is much faster to order by squared distance eliminating the need for computing the square root.</p> <p>For instance, the distance between Praça da Sé in São Paulo, at $(-23.5503^\circ, -46.6334^\circ)$ and Praça XV in Rio de Janeiro, at $(-22.9028^\circ, -43.1733^\circ)$, using the above formula, is 360.0 km.</p> <p>Using an accurate geodesic calculator, the distance is 361.1 km.</p>
city	Name of the city. e.g.: São Paulo
createdAt	Date-time of the post
childCount	For Jodel, it is the number of replies. For replies, it is null.
voteCount	number of upvotes minus number of downvotes. When a post has voteCount of -5 it disappears.

User

Attribute	Description
cellphone	Cell phone number.
activationCode	Activation code.
latitude	Signed latitude of user's location, in degrees, with a precision of 5 decimal places.
longitude	Signed longitude of the user's location, in degrees, with a precision of 5 decimal places.
location	Name of the user's location normally equals to the name of the city.
city	Name of the city of the user's location, e.g.: São Paulo
country	Two-letter country code, e.g. BR
group	<ul style="list-style-type: none"> • Aprendiz • Funcionário • Colegial • Vestibulando • Universitário • Pós-graduando • Empresário / Autônomo • Servidor Público • Aposentado
gender	<ul style="list-style-type: none"> • male • female • other
birthdate	User's birthdate.
karma	User's score: <ul style="list-style-type: none"> • the user earns (looses) 2 karma for upvoting (downvoting) on a post • the user earns (looses) 10 karma when he receives an upvote (downvote) • the user earns 1 karma for thanking another user who replies to his post • the replier earns 5 karma for receiving thanks.

Remark

Attribute	Description
kind	<p>One of the following:</p> <ul style="list-style-type: none"> • upvote • downvote • subscribe: the user will receive push notifications on any updates to the subscribed Jodels. When the user posts Jodels and Replies, they are automatically subscribed; • thank: the OJ can thank for a reply from another user, after upvoting it; • pin: It allows the user to save and follow the Jodel. The user will receive push notifications on any updates to the pinned Jodels. The pinned Jodels will be visible in the "My Pins" section.

Notification

Push notifications are emitted in the background on events occurring on the Jodel you subscribed or pinned.

Attribute	Description
description	<p>It describes which event occurred:</p> <ul style="list-style-type: none"> • Reply from OJ: OJ replied on the Jodel; • Thanks from OJ: A reply of the user has received thanks; • Reply on Jodel: A reply was posted.
read	Flag to signal that the notification has been read.
time	Date and time of the event.

BoostedPostBooking



A *boosted post* is a paid ad post.

In each area, there can be only one boosted post at a time.

The boosted post appears first in the user's feed.

Each boosted post is a regular post, thus users can vote or reply on it (replying can be optionally disabled by the poster). The only difference: if the user downvote it, the boosted post will disappear for the user.

Attribute	Description
headline	The headline of the URL. E.g.: Jetzt Freikarte sichern!
url	The URL of the ad. E.g.: https://www.vodafone.de/freikarten/callya-digital
startTime	Date and time of the booking.
endTime	Date and time of the removal.
latitude	This is the signed latitude of the point of placement, in degrees, with a precision of 5 decimal places.
longitude	This is the signed longitude of the point of the placement, in degrees, with a precision of 5 decimal places.
radius	Boosted post coverage radius.
canReply	Flag to enable replies to this placement.

Channel

Channels are created to let the user find more tailored content and participate in a community of users who share the same interests or talk about specific topics.

Users will not be able to create their own channels, but they will be able to follow the ones we will create.

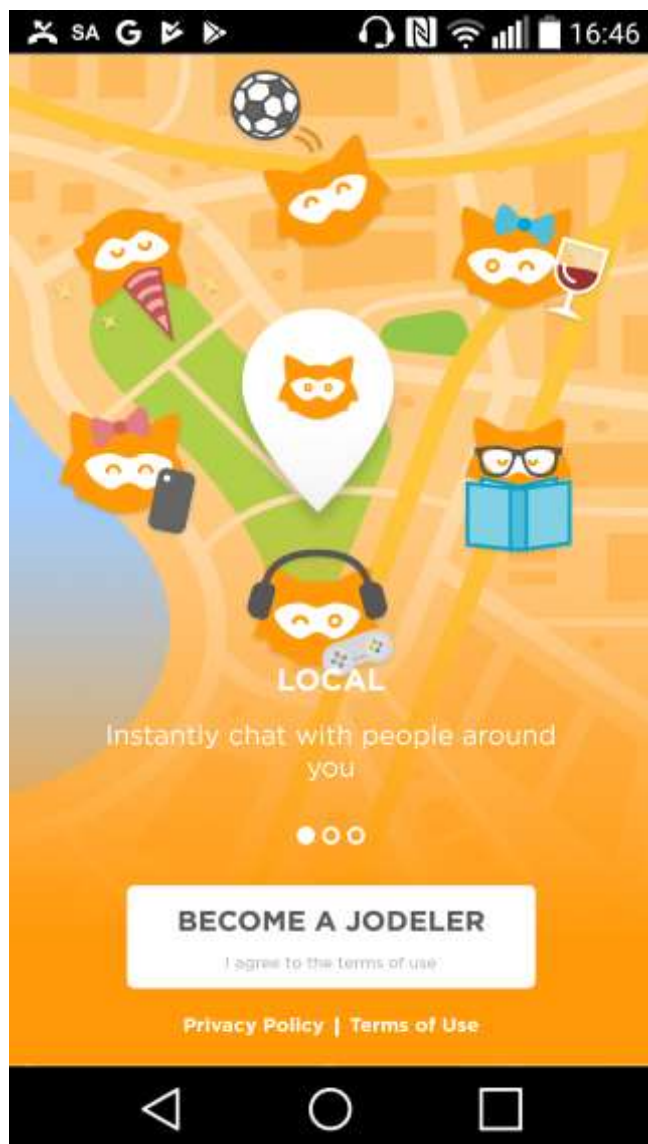
The feed will only show the Jodels from the main channel and the channels followed by the user.

Attribute	Description
name	Unique identifier of the channel.
description	Description of this channel.
followerCount	Count of the number of users in the local area that are currently following this channel.

Functional Processes

User Account Management

Signup







SA

08:39

What's your gender?


Female


Male


Other

No one will see your gender

segunda-feira

21

AGO

1967

agosto de 1967

D	S	T	Q	Q	S	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

setembro de 1967

OK

Which user group best describes you?

○○●



College student



Employee



Apprentice



High school graduate



High school student



Other

No one will see your user group



Which user group best describes you?

○○●



PhD



College Student



Middle Schooler



Employer/self-employed



Civil Service



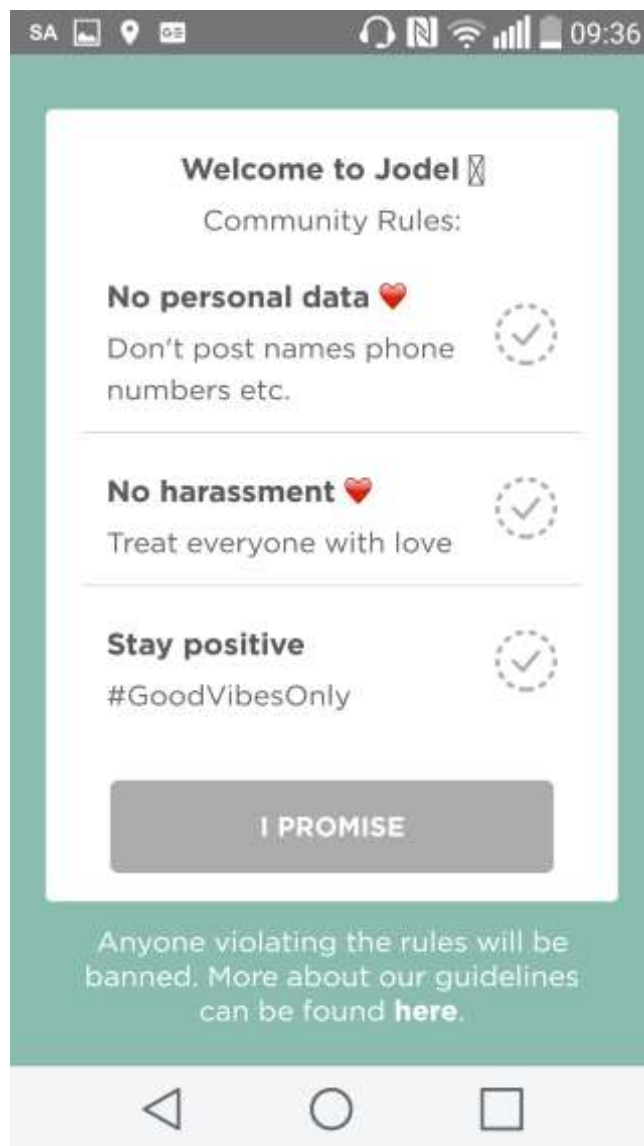
Pensioner



Other

No one will see your user group





Functional User	Sub-process Description	Data Group	Data Mvmt Type	CFP
User	The user enters his details.	User	E	1
	The server validates the entered data and checks if the user already exists.	User	R	1
SMS provider	The server sends a text message with activation code,	Activation record	X	1
	The app waits text message with activation code returns.	Activation Record	R	1
	The app authenticates the Activation Record	Activation Record	R	1
	The app creates a new User	User	W	1
	The app save Activation Record in the device.	Activation Record	W	1
	Initialize App			
..	The app displays confirmation/error	Confirmation		

User	message	/Error message	X	1
Functional User	Sub-process Description	Data Group	Data Mvmt Type	CFP
Total: 8 CFP				

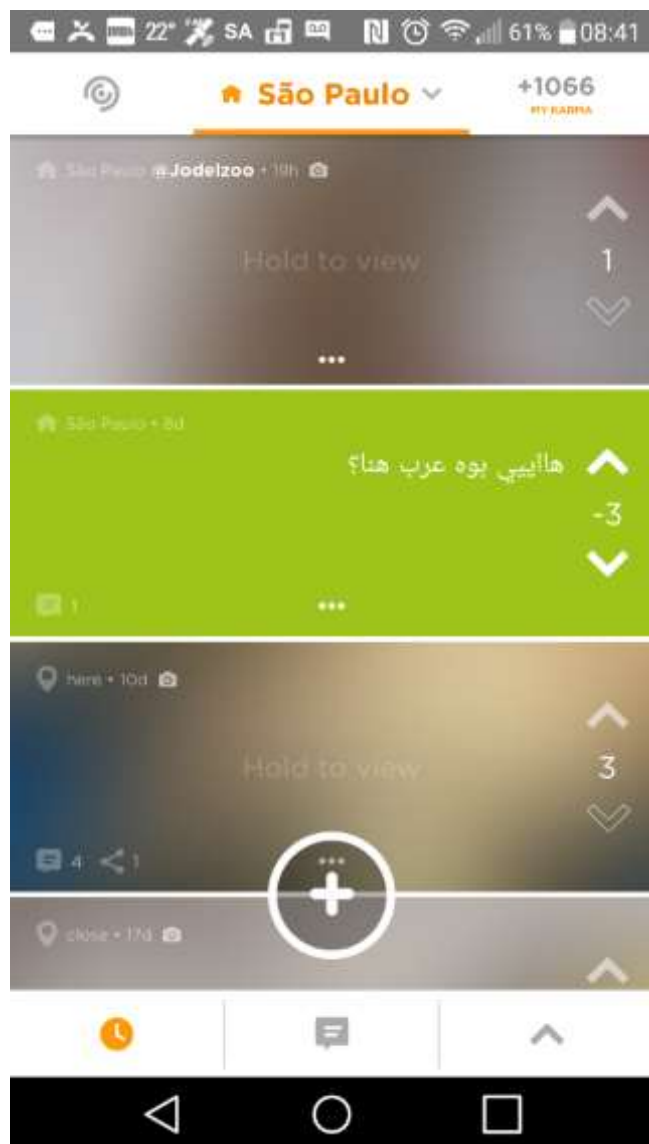
Initialize App

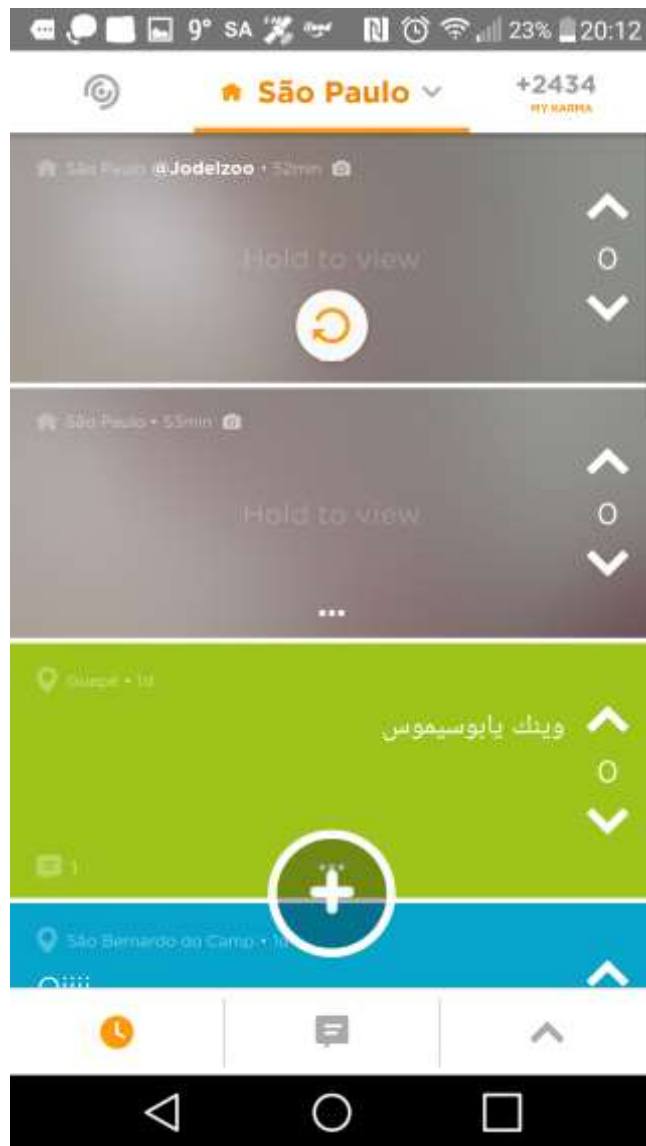
Functional User	Sub-process Description	Data Group	Data Mvmt Type	CFP
User	The user starts the app.	Control Command	E	1
	The app retrieves the Activation Record from the device storage.	Activation Record	R	1
	The server authenticates the user's Activation Record and returns a JWT Access Token, valid for 24 hours.	User, Access Token	R	1
	The app saves the Access Token in the device storage. The app will send the Access Token in the authentication header of the HTTP requests: "Authentication: Bearer {token}". This authorizes the user for seeing posts, voting, posting, etc.	Access Token	W	1
User	The app displays error message	Error message	X	1

Total: 5 CFP

Reading Posts

Display Feed





Functional User	Sub-process Description	Data Group	Data Mvmt Type	CFP
User	<p>A <i>Feed</i> consists of a set of three views listing Jodels only, no replies:</p> <ul style="list-style-type: none"> • 🕒 Newest: up to 150 Jodels in reverse chronological order; • 💬 Most discussed: up to 150 Jodels ordered by child count descending; • 📈 Loudest: up to 150 Jodels ordered by vote count descending. <p>The user can choose which view he wants to read by clicking one of the buttons at the bottom of the screen.</p> <p>The Feed is refreshed if the user swipes down on the first page.</p>	Control Command	E	1
User	The app displays a scrollable list of Jodels from the chosen view.	Jodel	X	2
User	The app displays error message	Error message	X	1

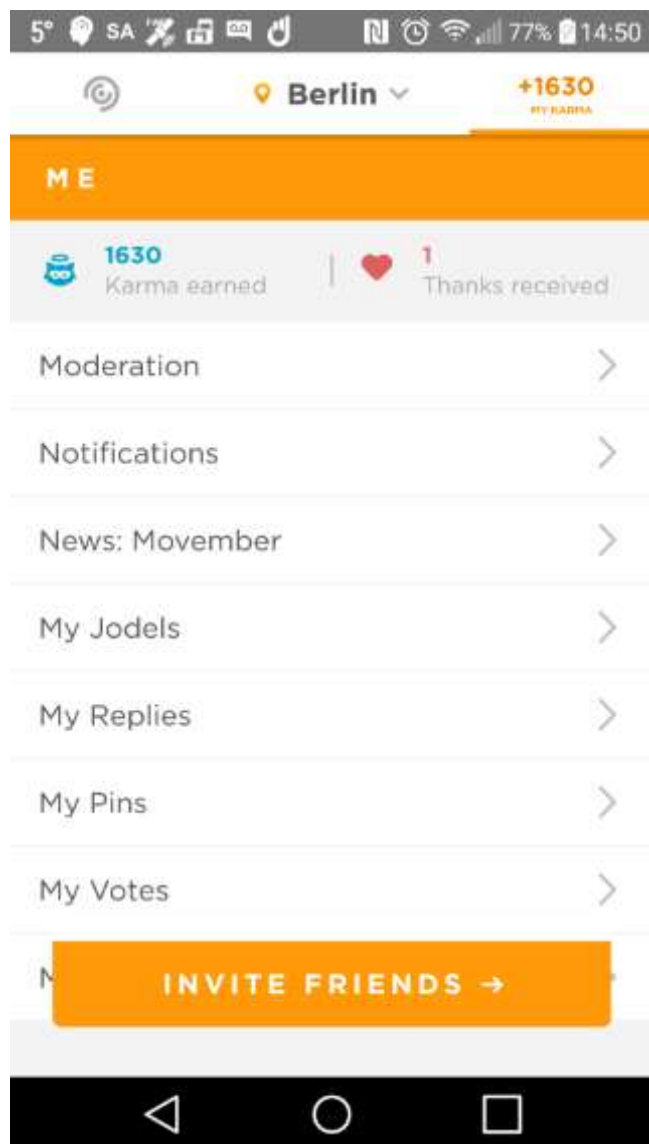
Total: 4 CFP

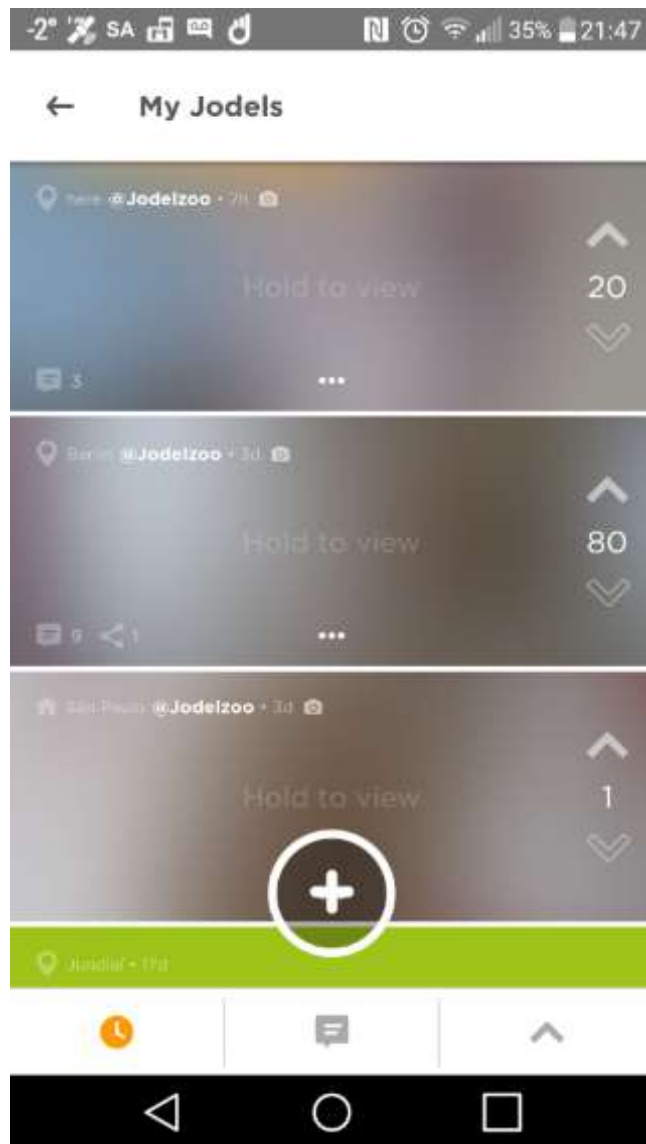
Display Main Feed

Functional User	Sub-process Description	Data Group	Data Mvmt Type	CFP
	Set Location	User Location, Dynamic Radius		
	App retrieves Main Feed: <ul style="list-style-type: none">• Newest: Up to 150 Jodels within the dynamic radius, from User's channels, sorted in reverse chronological order.• Most Discussed: Up to 150 Jodels within the dynamic radius, from User's channels, posted in the last 7 days, ordered by reply count descending.• Loudest: Jodels within the dynamic radius, from User's channels, posted in the last 7 days, ordered by vote count descending.	Jodel	R	3
User	Display Feed.	Post		
User	The app displays Error message.	Error Message	X	1

Total: 4 CFP

Display My Jodels Feed





Functional User	Sub-process Description	Data Group	Data Mvmt Type	CFP
User	User clicks on MY KARMA button, at upper right corner of main feed screen. The app displays ME screen. the user clicks on My Jodels button.	User	E	1
	App retrieves My Posts Feed: <ul style="list-style-type: none"> • Newest: Jodels posted by the user, sorted in reverse chronological order. • Most Discussed: Jodels posted by the user, ordered by reply count descending. • Loudest: Jodels posted by the user, ordered by vote count descending. 	Jodel	R	3
User	Display Feed.	Jodel		
User	The app displays error message	Error message	X	1

Total 5 CFP

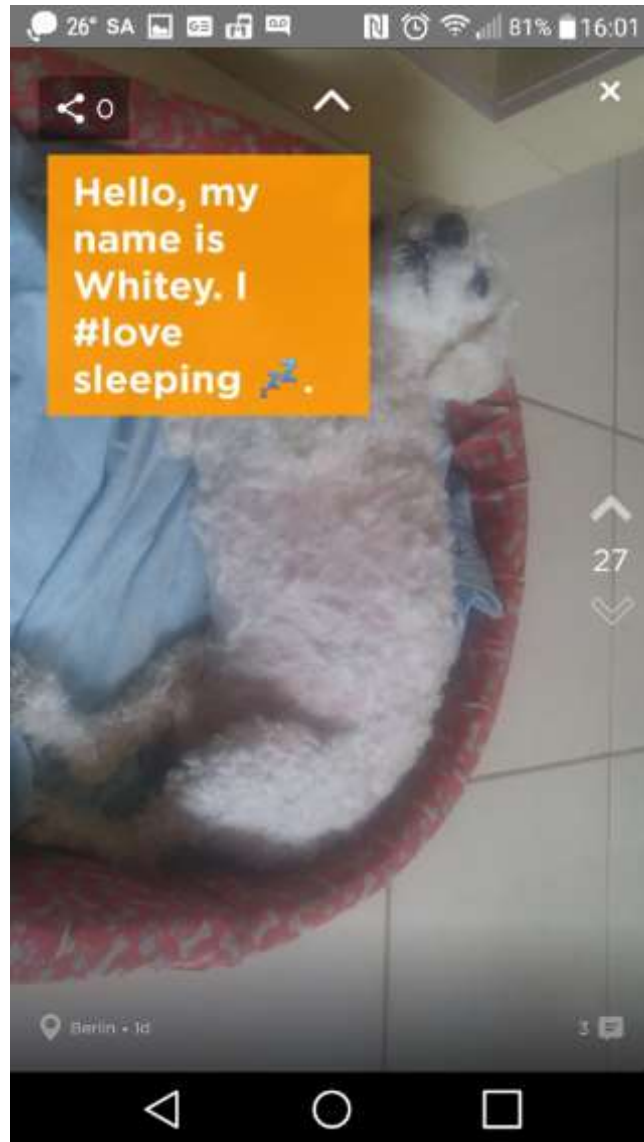
Display My Remarks

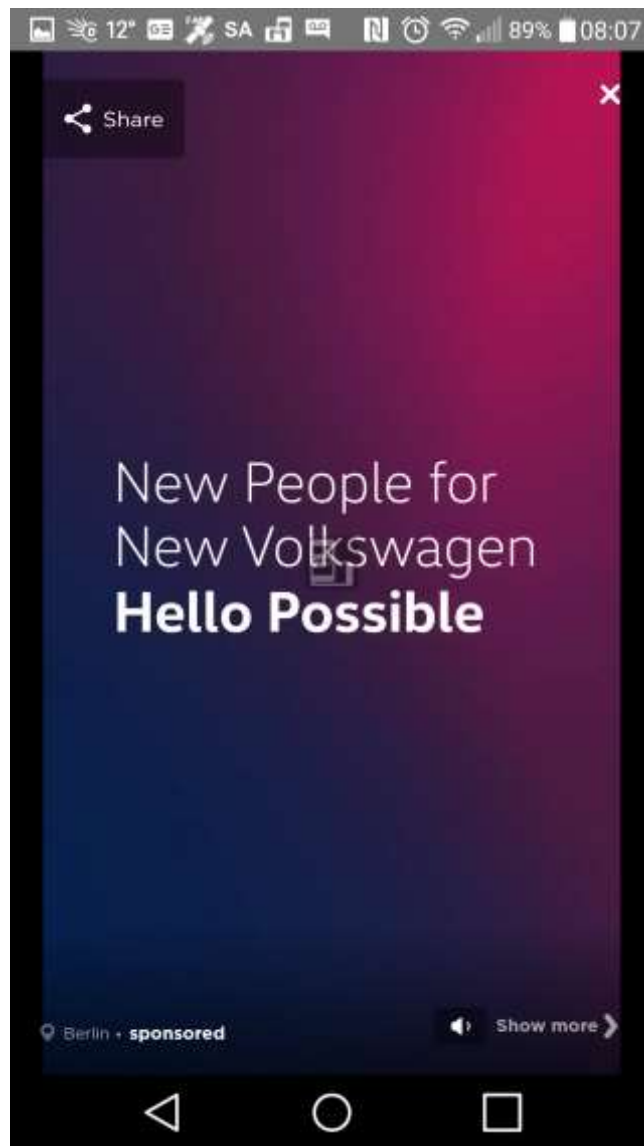


Functional User	Sub-process Description	Data Group	Data Mvmt Type	CFP
User	On ME screen, User clicks on My Replies, My Pins or My Votes button.	Remark Kind	E	1
	<p>The App retrieves posts in reverse chronological order according to the chosen remark kind:</p> <ul style="list-style-type: none"> • reply: Jodels the user replied . Note that the replies does not show up in this screen, only the Jodels that the user replied; • pin: Jodels the user pinned; • vote: Jodels the user upvoted. Note that, even the user upvoted a reply, only Jodels appear in this screen, 	Jodel	R	1
User	Display the retrieved list.	Post	X	1
User	The app displays error message	Error message	X	1

Total: 4 CFP

Display Picture Feed





Functional User	Sub-process Description	Data Group	Data Mvmt Type	CFP
User	In Feed Screen, User hold button "Hold to view", then Swipe up to access Picture Feed.	Picture	E	1
	App retrieves one picture at a time as User scrolls through the Picture Feed screen.	Picture	R	2
User	Display the current Picture with message overlaid at top left. Sponsored ads may be inserted in the Picture Feed.	Picture	X	2
User	The app displays error message.	Error message	X	1

Total: 6 CFP

Interacting with Single Posts

Create Jodel



Next

Share your thoughts and experiences with the people around you.



O teclado AirDroid está pronto





Next

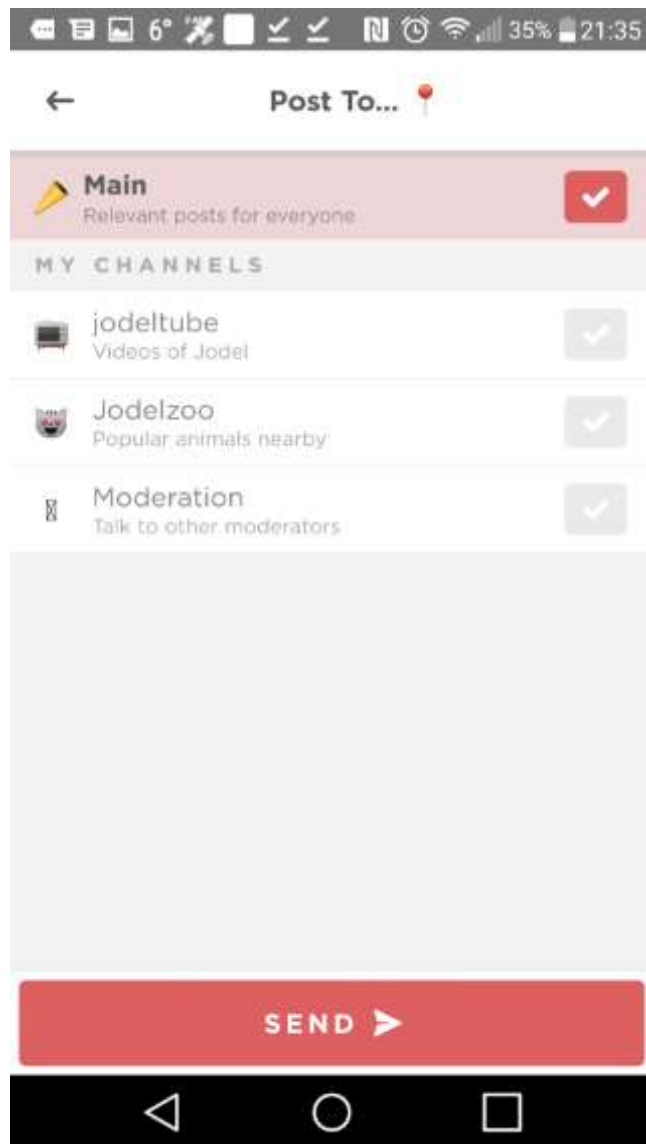
This is an automated #test message.

#addhashtag



O teclado AirDroid está pronto





Functional User	Sub-process Description	Data Group	Data Mvmt Type	CFP
User	User types message and clicks "Next".	Post Message	E	1
	App retrieves User's channels and displays "Post To..." to screen.	Channel	R	1
User	User selects the Channel to post and clicks the SEND button.	Channel	E	1
	App creates Post.	Jodel	W	1
	Display Feed			
User	The app displays error message.	Error message	X	1

Total: 5 CFP

Create Picture Jodel



Functional User	Sub-process Description	Data Group	Data Mvmt Type	CFP
User	On Create Post Screen, User clicks 📷 button. the user takes a picture and clicks over the taken picture to type the Post message.	Jodel	E	1
	Create Jodel			

Total: 1 CFP

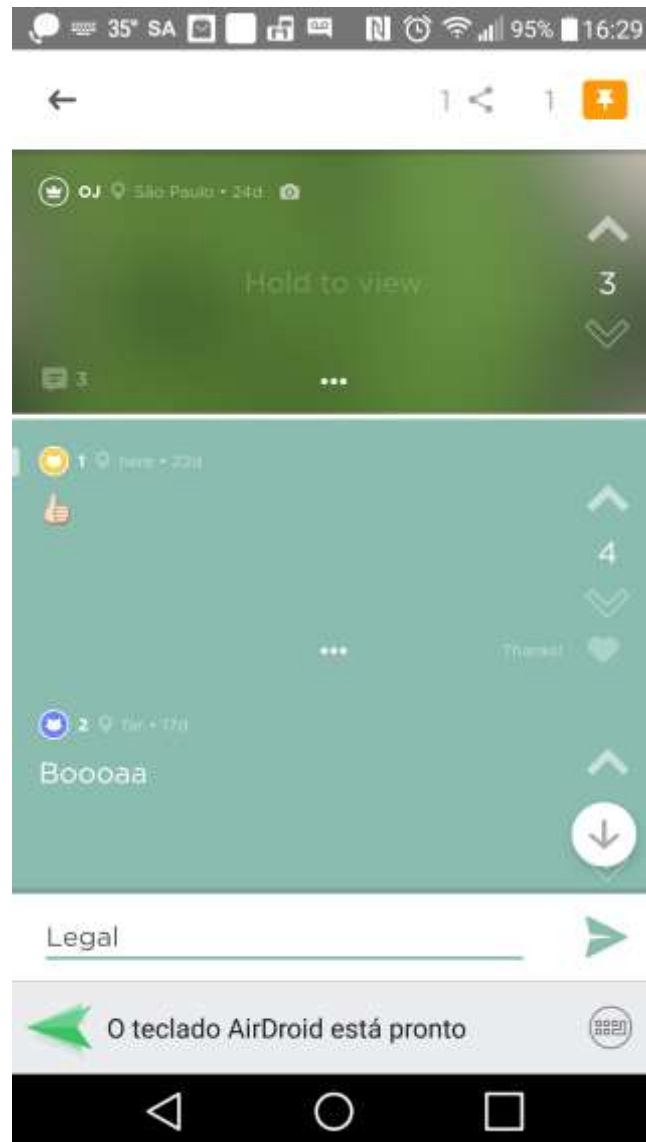
Display Jodel Details



Functional User	Sub-process Description	Data Group	Data Mvmt Type	CFP
User	On the Feed screen, User clicks on a Jodel.	Jodel	E	1
	App retrieves the replies and the Notifications associated to the Jodel.	Reply , Notification	R	2
	App marks any existing Notification on the Jodel as read.	Notification	W	1
User	The app displays the Jodel and a scrollable list of Replies. Note that each Reply on the list is labeled with the user_handle. The Jodel Details Screen is refreshed if the user swipe down on the first page.	Reply	X	1
User	The app displays error message.	Error message	X	1

Total: 6 CFP

Send Reply




Functional User	Sub-process Description	Data Group	Data Mvmt Type	CFP
User	The user types message and clicks Send button	Reply Message	E	1
	App creates Reply.	Reply	W	1
	The app displays Jodel Details Screen with the reply added at the end.	Reply	X	1
User	The app displays error message.	Error message	X	1

Total: 4 CFP

Send Picture Reply



Functional User	Sub-process Description	Data Group	Data Mvmt Type	CFP
User	On Jodel Details Screen, User clicks  button. the user takes a picture, clicks over the taken picture to type the reply message.	Reply Picture	E	1
	Send Reply	Reply		

Total: 1 CFP

Share a Jodel



Functional User	Sub-process Description	Data Group	Data Mvmt Type	CFP
	App retrieves sharing count.	Jodel Sharing Count	R	1
User	The app displays sharing count.	Jodel Sharing Count	X	1
User	On Jodel Details Screen, User clicks share button at the top right.	Jodel	E	1
	App retrieves the share URL of the Jodel, that shows the parent Jodel and all the replies, messages and pictures. E.g.: https://shared.jodel.com/YTr85rK5l1	URL	R	1
Sharing Service	App sends the URL to the recipient.	URL	X	1
	App updates sharing count on the database.	Jodel	W	1
User	App updates sharing count display.	Jodel	X	1
User	The app displays error message.	Error message	X	1

Total: 8 CFP

Pin / Unpin a Jodel



Functional User	Sub-process Description	Data Group	Data Mvmt Type	CFP
	App retrieves pin count.	Jodel Sharing Count	R	1
User	The app displays pin count.	Jodel Sharing Count	X	1
User	On Jodel Details Screen, User clicks share button at the top right.	Jodel	E	1
	App updates the database.	Jodel, Remark	W	1
User	App updates the pin display.	Jodel	X	1
User	The app displays error message.	Error message	X	1

Total: 6 CFP

Upvote / Downvote a Post



Functional User	Sub-process Description	Data Group	Data Mvmt Type	CFP
User	On a Post Display, the user clicks ^ or v buttons to upvote or downvote a post. Each user can vote once for each post.	Post, Remark	E	1
	App updates data base.	Post, Remark	W	1
	App updates Post Display.	Post	X	1
User	The app displays error message.	Error message	X	1

Total: 4 CFP

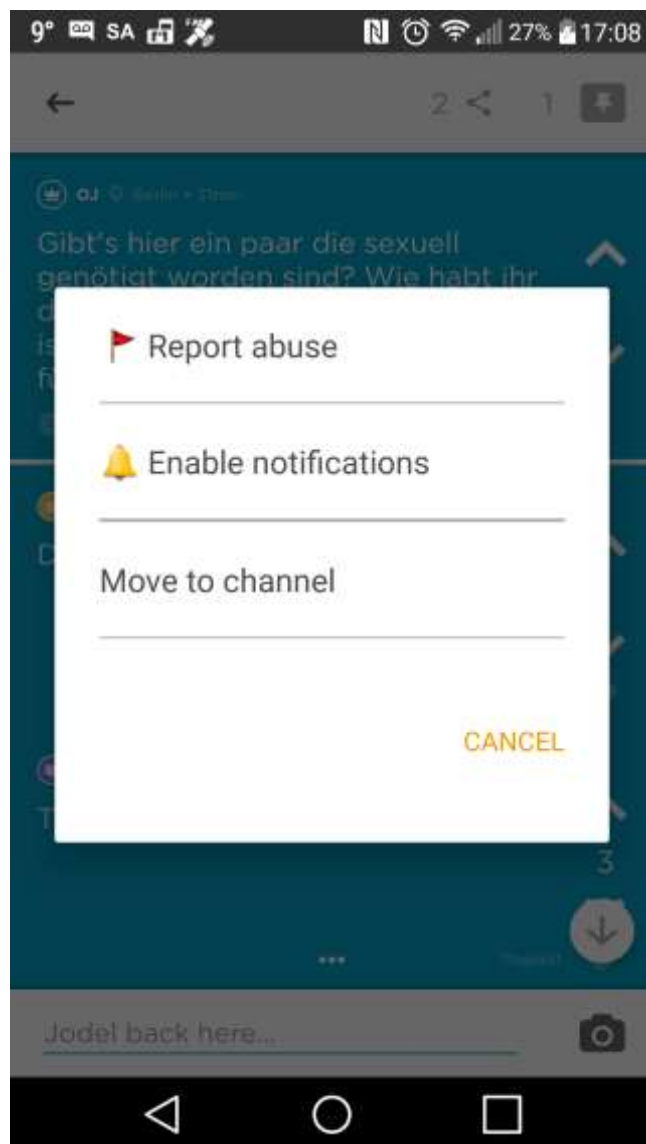
Give Thanks

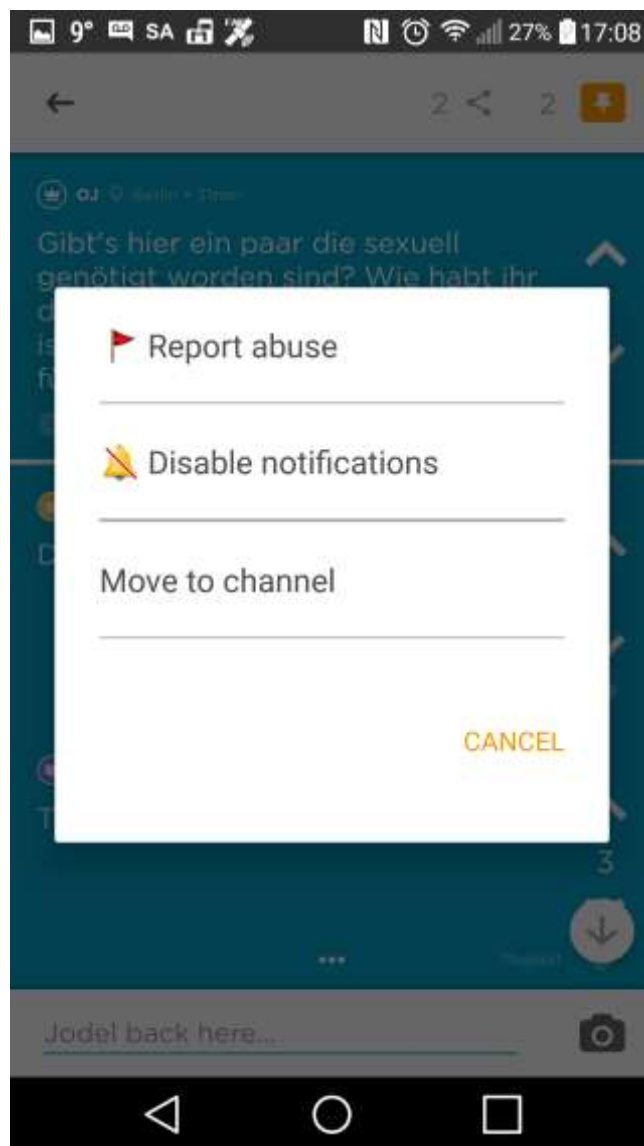


Functional User	Sub-process Description	Data Group	Data Mvmt Type	CFP
User	After OJ upvotes a reply, the ^ becomes a ♥. The OJ clicks the ♥ to give thanks.	Post, Remark	E	1
	App updates data base.	Post, Remark, User	W	1
	App updates Post Display.	Post	X	1
User	The app displays error message.	Error message	X	1

Total: 4 CFP

Enable / Disable Notifications

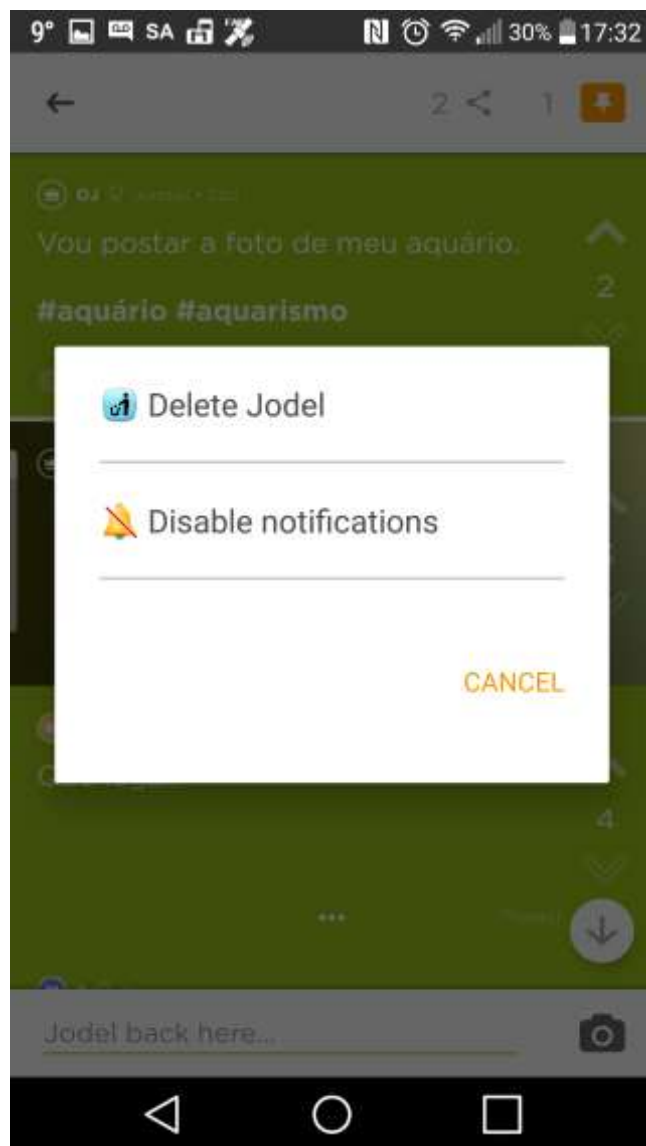




Functional User	Sub-process Description	Data Group	Data Mvmt Type	CFP
User	On Jodel Detail Screen, the user taps on the 3 dots (...) at the bottom of the Jodel. Then he selects "Enable notifications" or "Disable notifications" to toggle notification status.	Post, Remark	E	1
	App updates data base.	Post, Remark	W	1
User	The app displays error message.	Error message	X	1

Total: 3 CFP

Delete Post



Functional User	Sub-process Description	Data Group	Data Mvmt Type	CFP
User	On Jodel Detail Screen, the user taps on the 3 dots (...) at the bottom of his own Jodel or Reply. Then he selects "Delete Jodel".	Post, Remark	E	1
	App updates data base. When a Reply is deleted, the notifications status of the Jodel remains unchanged. When a Jodel is deleted, all the replies associated are also deleted.	Post, Remark	W	1
User	When a Reply is deleted, the App continues to display the Jodel Detail Screen. When a Jodel is deleted, the App returns to Main Feed Display.	Jodel, Reply	X	1
User	The app displays error message.	Error message	X	1

Total: 4 CFP

Interacting with Notifications

Push Notifications

Functional User	Sub-process Description	Data Group	Data Mvmt Type	CFP
Another User	Another User replies on a Jodel.	Reply	E	1
	Server checks the users who should receive push Notifications.	User, Remark	R	1
	Server creates and sends the Notifications.	Notification	W	1
Notification Service	The background process in each recipient device receives the notification and dispatches it to the Notification Service.	Notification	X	1
User	User opens Notification.	Notification	E	1
Notification Service	App opens.	Notification	X	1
	Display Jodel Details	Jodel		

Total: 6 CFP

Display Notification Center

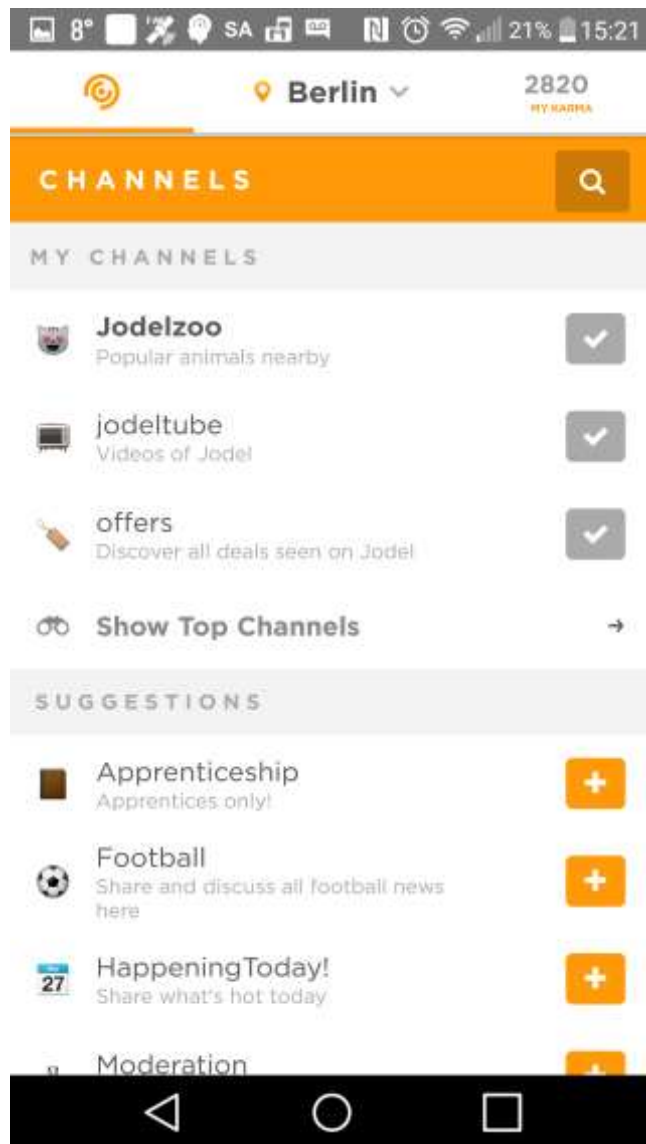


Functional User	Sub-process Description	Data Group	Data Mvmt Type	CFP
User	On ME screen, User selects Notifications.	User	E	1
	The app retrieves Notifications in reverse chronological order.	Notification	R	1
User	The app displays scrollable list of Notifications.	Notification	X	1
	The user opens a Notification,	Notification	E	1
	Display Jodel Details			
User	The app displays error message	Error message	X	1

Total: 5 CFP

Interacting with Channels

Display Channels Screen



Functional User	Sub-process Description	Data Group	Data Mvmt Type	CFP
User	The user clicks Channels button at the top left corner of the Feed screen. The App retrieves the list of User's Channels and the list of recommended Channels (most popular Channels not followed by the user).	Channel	R	2
User	The The app displays the Channels screen with the list of User's Channels and the list of recommended Channels . If there are new unread Jodels in one of the user's Channels, its name is written in boldface and goes to the top of the list.	Channel	X	2
User	The app displays error message.	Error message	X	1

Total: 9 CFP

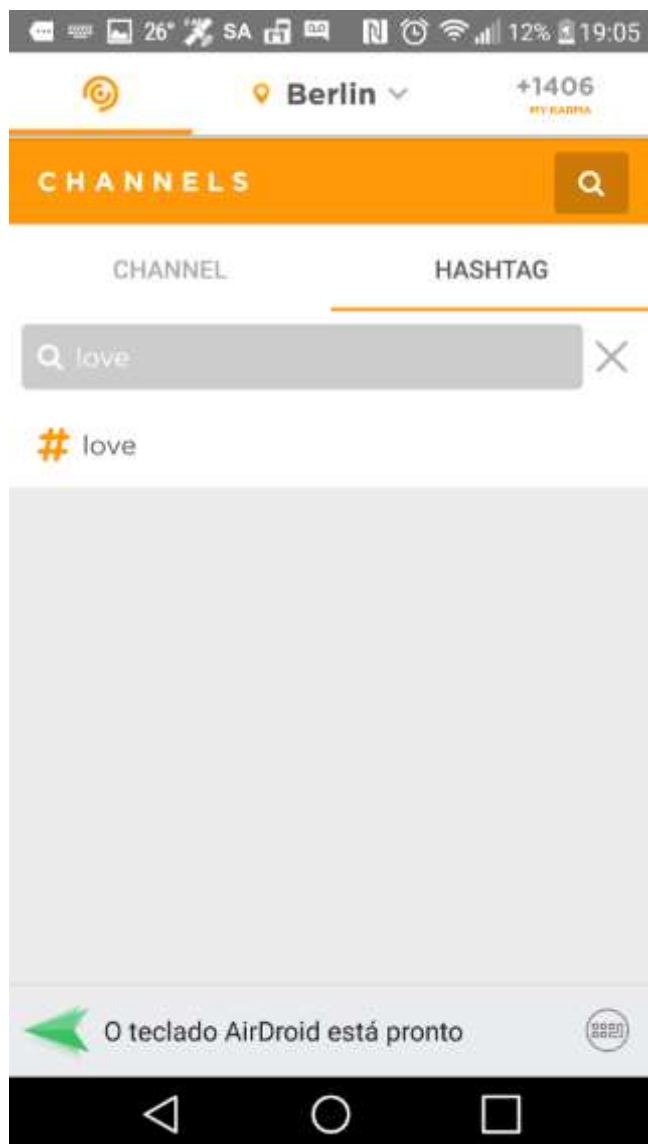
Display Channel Feed

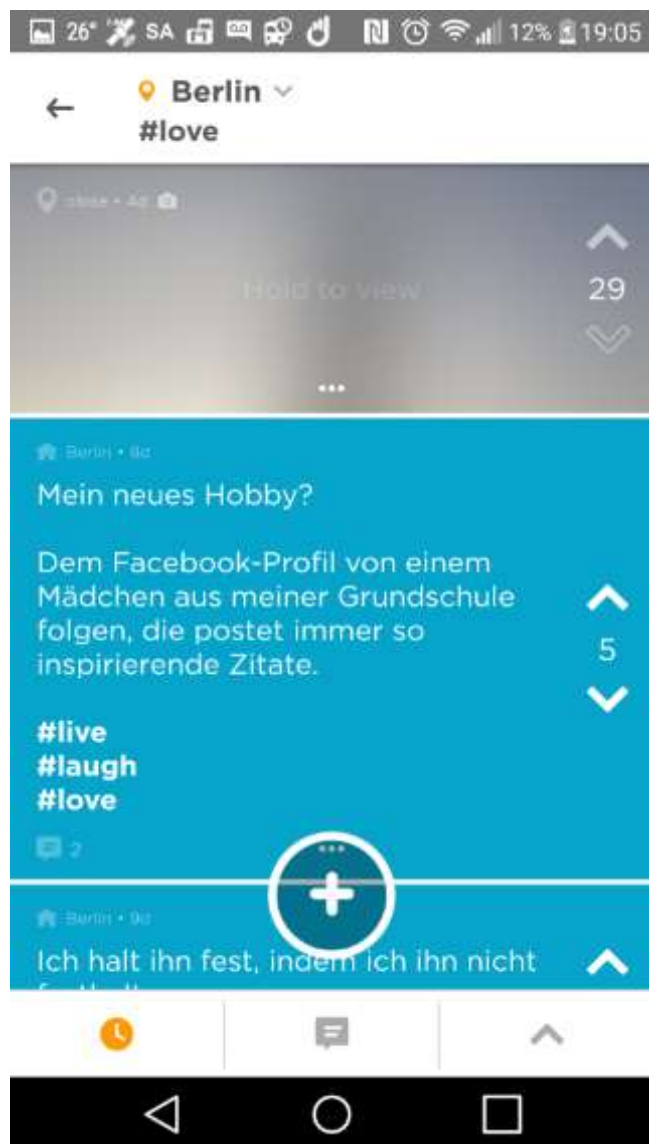


Functional User	Sub-process Description	Data Group	Data Mvmt Type	CFP
User	User clicks on Channel he wants to read.	Channel	E	1
	<p>App retrieves the Channel Feed:</p> <ul style="list-style-type: none"> • Newest: Up to 150 Jodels within the dynamic radius, from the chosen Channel, sorted in reverse chronological order. • Most Discussed: Up to 150 Jodels within the dynamic radius, from the chosen Channel, posted in the last 7 days, ordered by reply count descending. • Loudest: Up to 150 Jodels within the dynamic radius, from the chosen Channel, posted in the last 7 days, ordered by vote count descending. 	Jodel	R	3
User	Display Feed.	Post		
User	The app displays error message.	Error message	X	1

Total: 4 CFP

Display Hashtag Feed

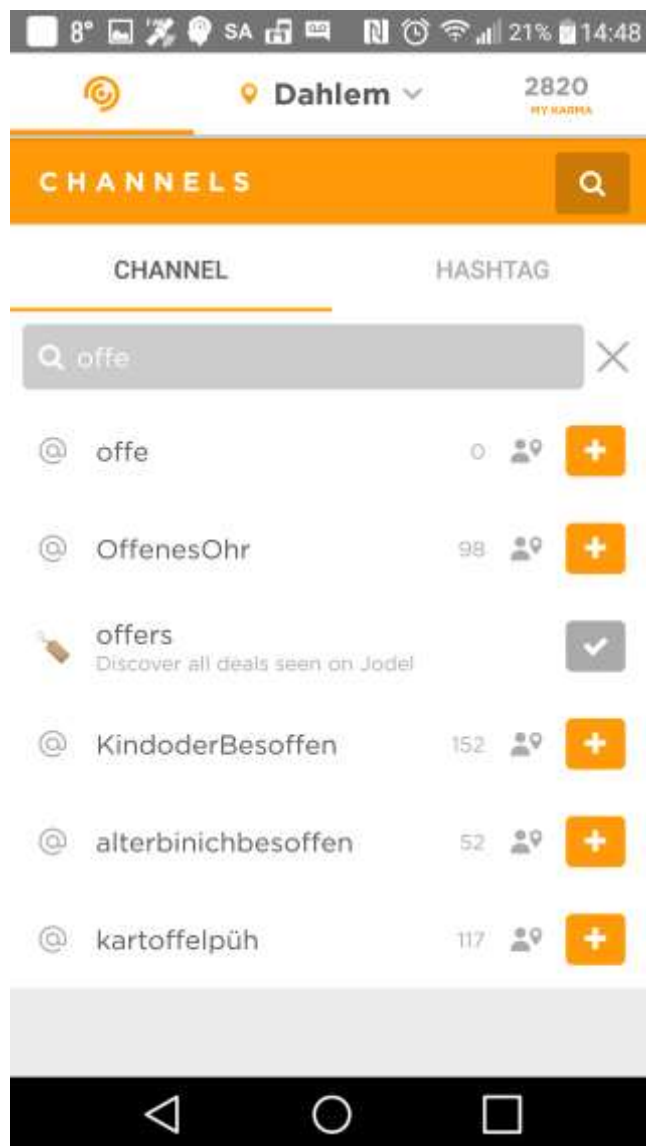




Functional User	Sub-process Description	Data Group	Data Mvmt Type	CFP
User	<p>On Channels screen, User clicks on the magnifying glass.</p> <p>A bar will show up where the user can switch the search to hashtags instead of Channels.</p> <p>The user then types the hashtag on the search box.</p> <p>The button with the hashtag will show up 2 seconds after the user finishes typing.</p> <p>The user then clicks on the hashtag button to begin searching.</p>	Hashtag	E	1
	<p>App retrieves the Hashtag Feed. The hashtag can occur in the reply, but only parent Jodels are retrieved:</p> <ul style="list-style-type: none"> • Newest: Posts within the dynamic radius, with the chosen hashtag, sorted in reverse chronological order. • Most Discussed: Posts within the dynamic radius, with the chosen hashtag, ordered by reply count descending. • Loudest: Posts within the dynamic radius, with the chosen hashtag, ordered by vote count descending. 	Jodel	R	3
	Display Feed.	Jodel		
User	The app displays error message	Error message	X	1

Total: 5 CFP

Search a Channel



Functional User	Sub-process Description	Data Group	Data Mvmt Type	CFP
User	On Channels screen, User clicks on the magnifying glass. the user types on the search box.	Channel Name	E	1
	While the user types, the App searches existing channels that match the search.	Channel	R	1
User	While searching, the app displays the result of the search. The counter at the right shows how many Users in the dynamic area are currently following the channel.	Channel	X	1
User	The app displays error message	Error message	X	1

Total: 4 CFP

Follow / Unfollow Channel



Jodelzoo
Popular animals nearby



Jodelzoo
Popular animals nearby

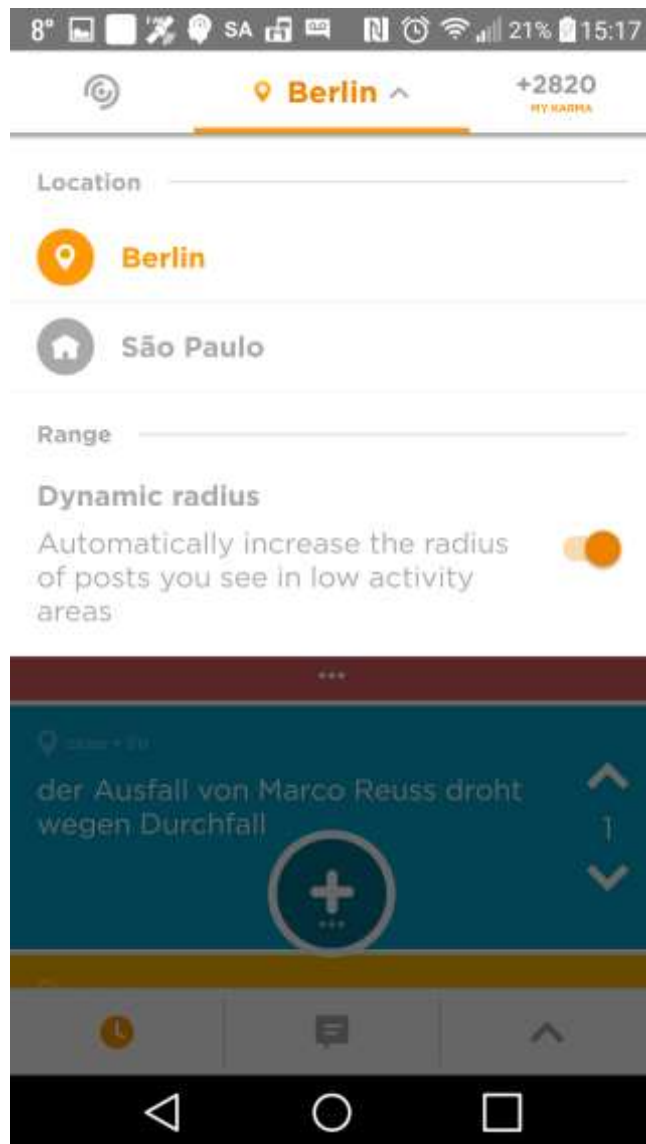


Functional User	Sub-process Description	Data Group	Data Mvmt Type	CFP
User	On a Channel Display, the user clicks + to follow or ✓ to unfollow a Channel.	Channel	E	1
	App updates data base.	User, Channel	W	1
	App updates Channel Display.	Channel	X	1
User	The app displays error message.	Error message	X	1

Total: 4 CFP

Interacting with User Profile

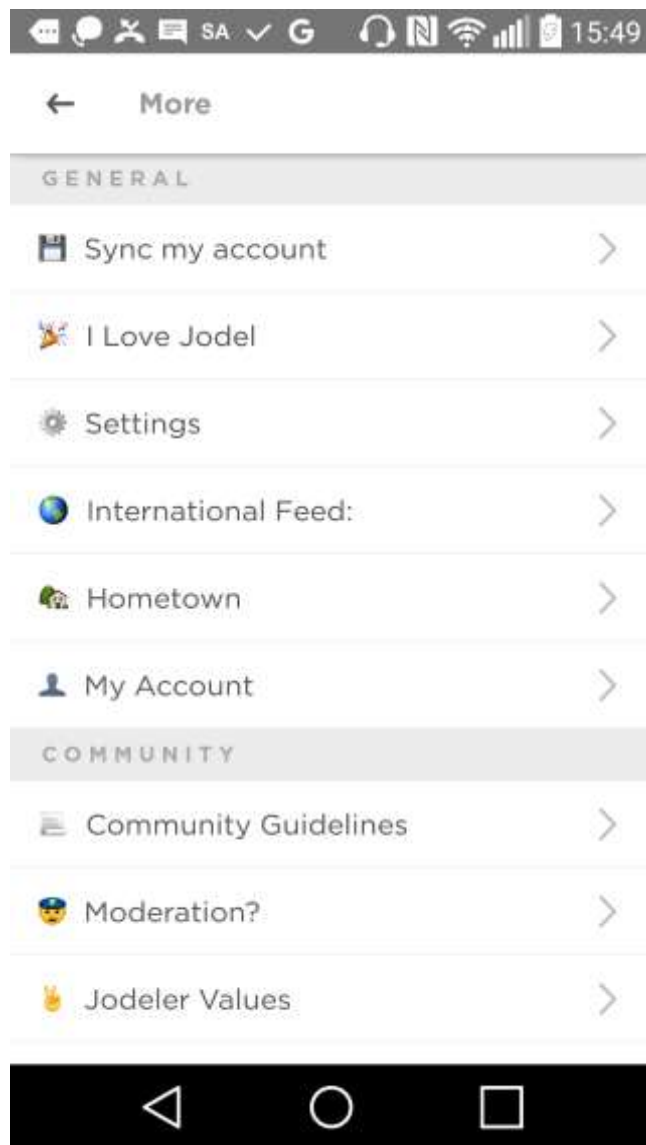
Set Location



Functional User	Sub-process Description	Data Group	Data Mvmt Type	CFP
Location Service	App gets User current Location.	User Location	E	1
	App retrieves User Hometown.	User Location	E	1
User	User select between current location or hometown on drop down city menu.	City	E	1
	App updates User Location	User Location	W	1
	App retrieves the nearest 150 Jodels in order to determine the dynamic radius.	Post, Dynamic Radius	R	1
User	The app displays error message.	Error message	X	1

Total: 6 CFP

Set Hometown



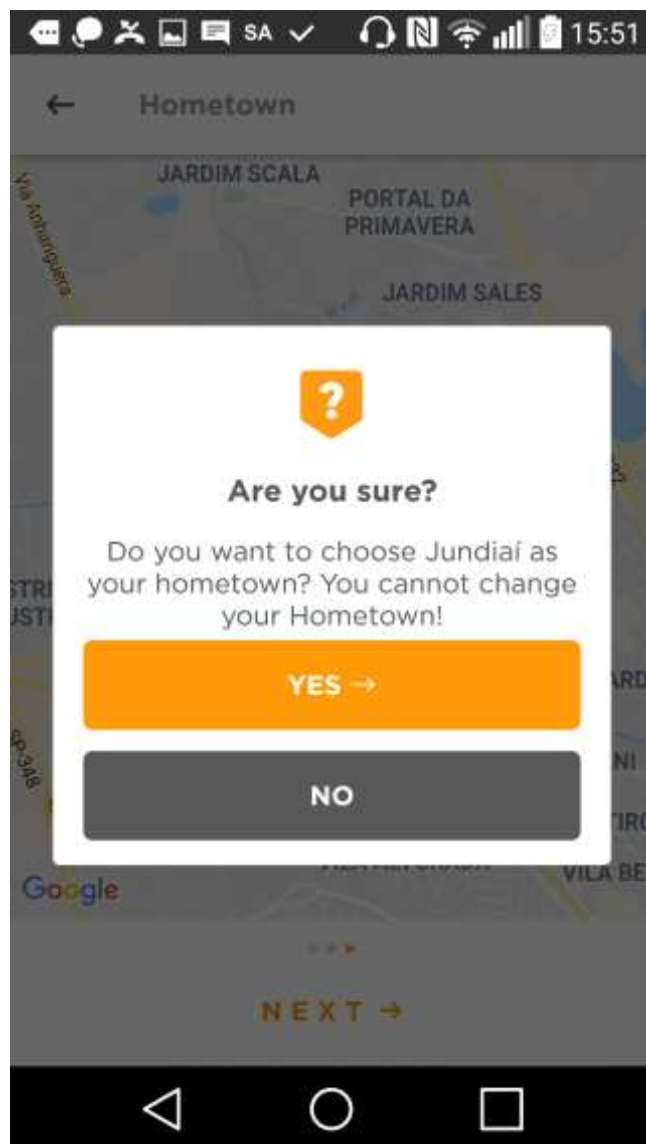
← Hometown

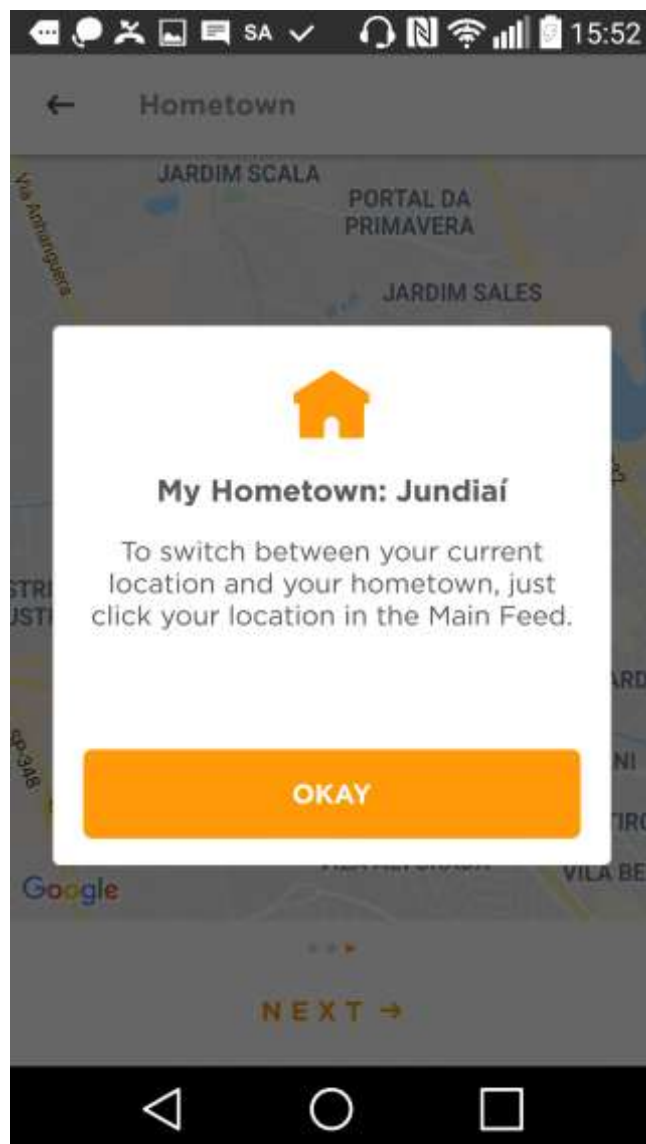
Show Hometown posts ☒

You can choose if you want to see
Jodels from Users who are using
Hometown.

Your Current City is:
Jundiai

SET HOMETOWN

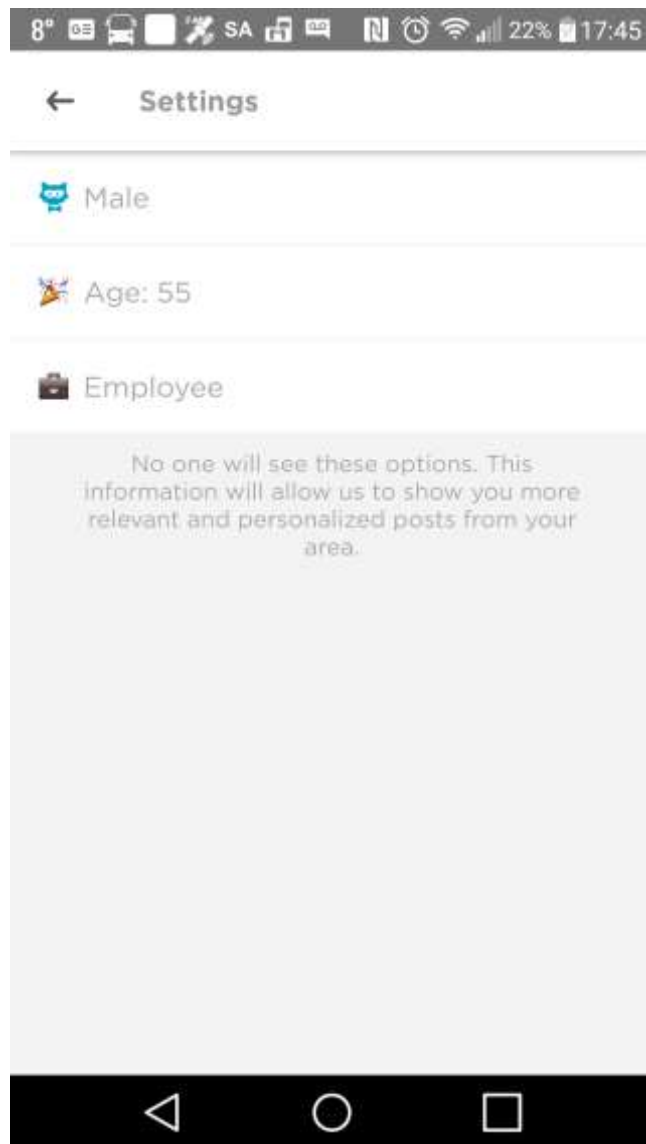




Functional User	Sub-process Description	Data Group	Data Mvmt Type	CFP
User	From ME Screen, User selects More. From More Screen, User selects Hometown. In order to set the Hometown, the user needs to be physically present in that location to save it once and for all. The user can reset the Hometown only once per month .	Control Command	E	1
	App retrieves User current Hometown.	User Hometown	R	1
Location Service	App gets User current Location.	Location	E	1
User	The app displays current location as the new Hometown. User confirms.	City	X	1
	App updates the user Hometown.	User Hometown	W	1
User	The app displays error message.	Error message	X	1

Total: 6 CFP

Display My Profile



Functional User	Sub-process Description	Data Group	Data Mvmt Type	CFP
User	From More Screen, the user selects My Account.	Control Command	E	1
	App retrieves User Profile.	User Profile	R	1
User	The app displays User Profile.	User Profile	X	1
User	The app displays error message.	Error message	X	1

Total: 4 CFP

Suggestion for MVP

As a suggestion, the following features can be left out from MVP:

- Dynamic radius, use a fixed radius of 100 km;
- Share a Jodel;
- Pin a Jodel;
- Give thanks;
- Video posts;

- Notifications;
- Channels;
- Hashtags;
- Hometown;
- Boosted posts;
- Sponsored ads.

According to functional process section, the MVP size would then be 65 CFP.

Standards and Technologies

GitHub

The project must be done in two private GitHub repositories: one for the application server and other for the mobile application.

Test Coverage

The project must use a test coverage tool.

The minimum acceptable code coverage for unit testing is 90%.

Database

The project should use MongoDB and Mongoose as the preferred database and ODM.

Application Server

The application server must be implemented using a GraphQL API running on Nodejs.

Push notifications will be implemented using GraphQL subscriptions.

Deployment

The application server will be deployed to DigitalOcean cloud server.

The development team will install MongoDB and NodeJS in the server.

The development team must supply a deployment script to setup the environment and install the application server. The deployment script will run in DigitalOcean cloud server.

The deployment script must:

- Download the project from GitHub;
- Install dependencies;
- Create a service to execute the application server;
- Setup the database.

The development team should provide in `readme.md` the commands to:

- Start the service;
- Pause the service;
- Restart the service;
- Keep track of the service log.

Mobile Application

The mobile application must be implemented using Ionic Framework with a single code base runnable in both Android and IOS devices.

The user interface should be built using React preferably.

Distribution

The mobile application must be distributed through:

- Google Play Store to Android devices;
- Apple App Store to IOS devices.