

ToDoMap

An map-based app with to do list to manage your life easily.

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1. Introduction

Have you ever experienced that when you have a lot of tasks to do but you don't know which one to start and how to plan your daily journey? Have you ever experienced that when you want to search the location of your next work place but you have to switch different apps and copy paste many times? Here is why our **ToDoMap** comes out. This application aims to help users manage their work and life easily by visualizing todo tasks on a map.

This app is the course project of the **Mobile Cartography** course within the framework of **Cartography M.Sc.** Programme.

2. Target Groups

ToDoMap is an app for all user groups. We provide seven types of task (all , work , study , life , travel , other and done) which can fulfill most of demands of users.

Not only a todo management app **ToDoMap** is, but also a life record app it could be.

- If you are studying or working, you can use our app to manage your daily study, work, life, and other stuff.
- If you are doing a travel plan, you can use our app to mark the places you want to go beforehand or record the places you have been to afterwards.
- If you are a life record lover, you can use our app to record your daily life and post it at anyplace you want!

Give full play to your imagination to use **ToDoMap**, combine your daily life with maps, and make your life better!

3. Main Features

3.1 Task List

- Add a new task
- Update your task
- Mark your task as done
- Delete your task



We provide three ways to add new tasks. Here is the first way: Click the ADD button at the bottom right of the Task page, and enter relevant attributes.

2. Enter Relevant Attributes.

Add Todo ←

Life ▾ 1. Shopping

JAN 26 2023 ▾ 11:00 ▾

Karstadt Dresden

Grocery Shopping

ADD TODO

1. Click the ADD button.



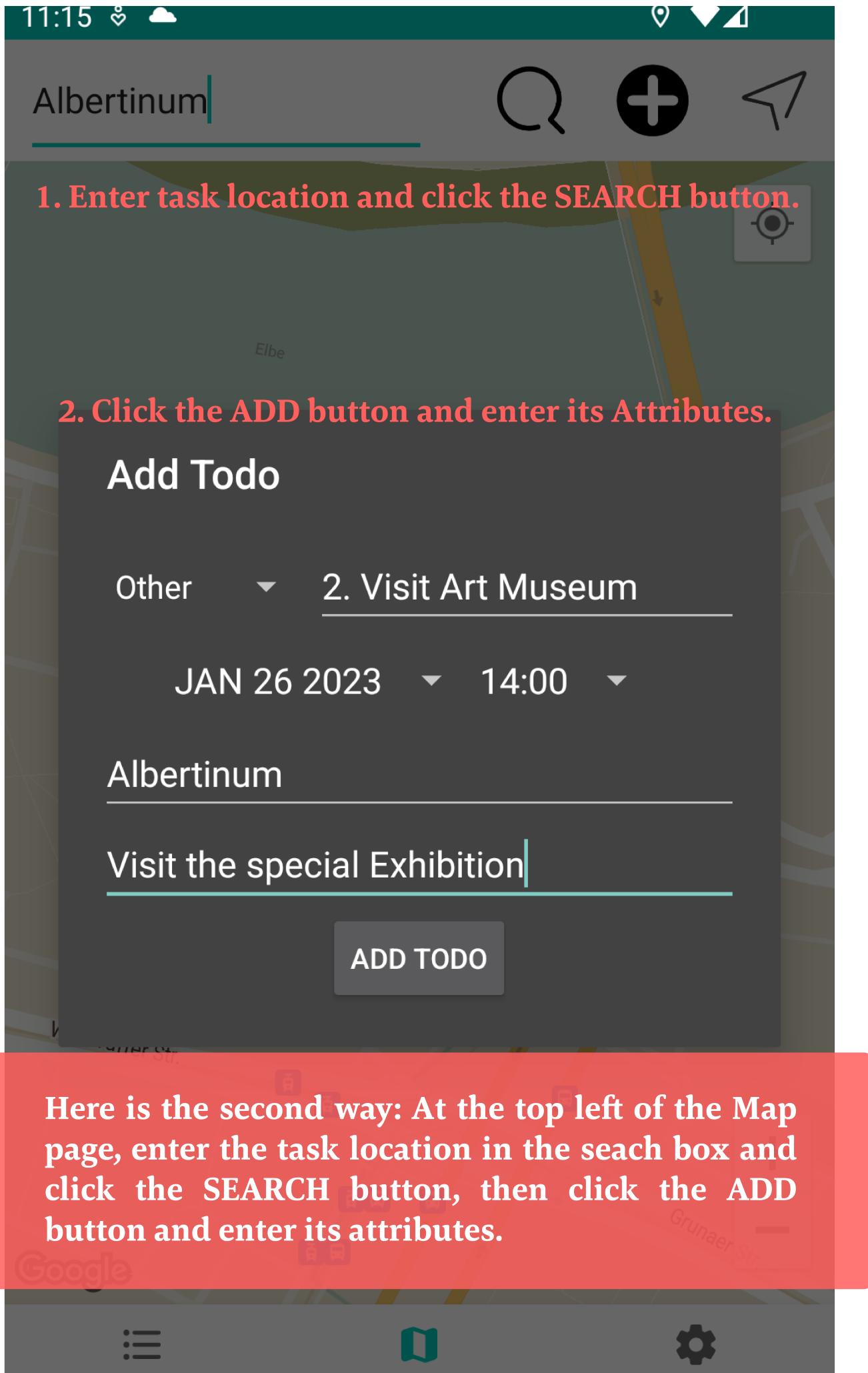
Task

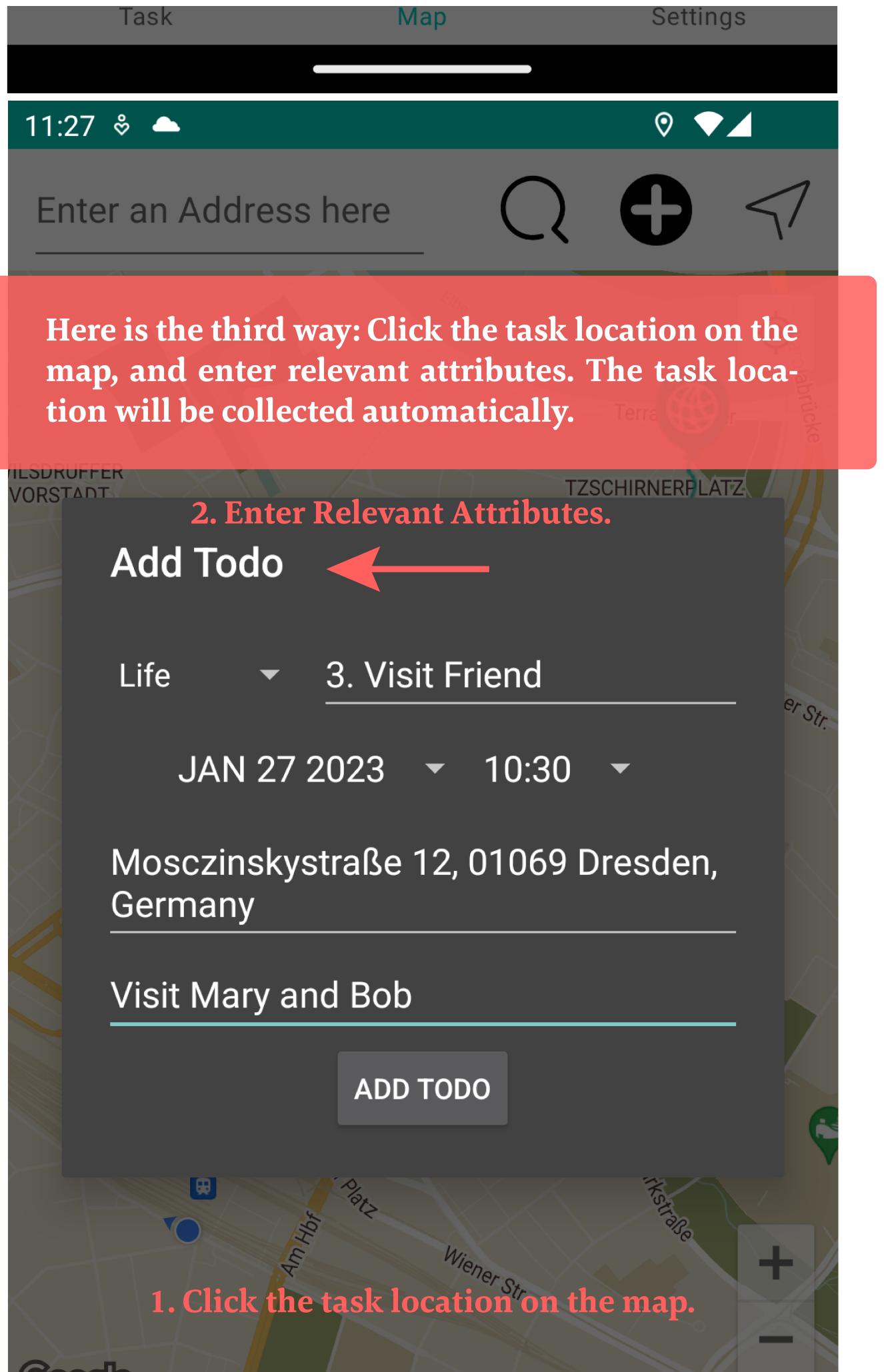


Map



Settings





Google

Task Map Settings

11:32 ♡ ⛅

1. Shopping Swipe right to mark as done.

 Grocery Shopping JAN 26 2023, 11:00 → Karstadt Dresden

2. Visit Art Museum

 Visit the special Exhibition JAN 26 2023, 14:00 Albertinum

3. Visit Friend Swipe left to delete.

 Visit Mary and Bob JAN 27 2023, 10:30 Mosczinskystraße 12, 01069 Dresden, Germany ←

4. Lecture Time

 Mobile Cartography Lecture JAN 25 2023, 09:50 TU Dresden

5. Work Time Click the task to modify.

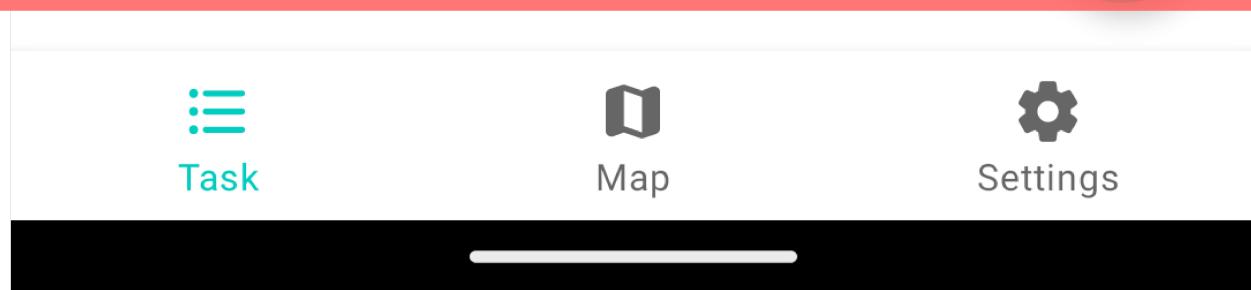
 Work Time JAN 27 2023, 09:30 Fraunhofer Institute Dresden

6. Travel to Berlin

 Take ICE870 to Berlin Hbf JAN 22 2023, 06:54 Dresden Hauptbahnhof

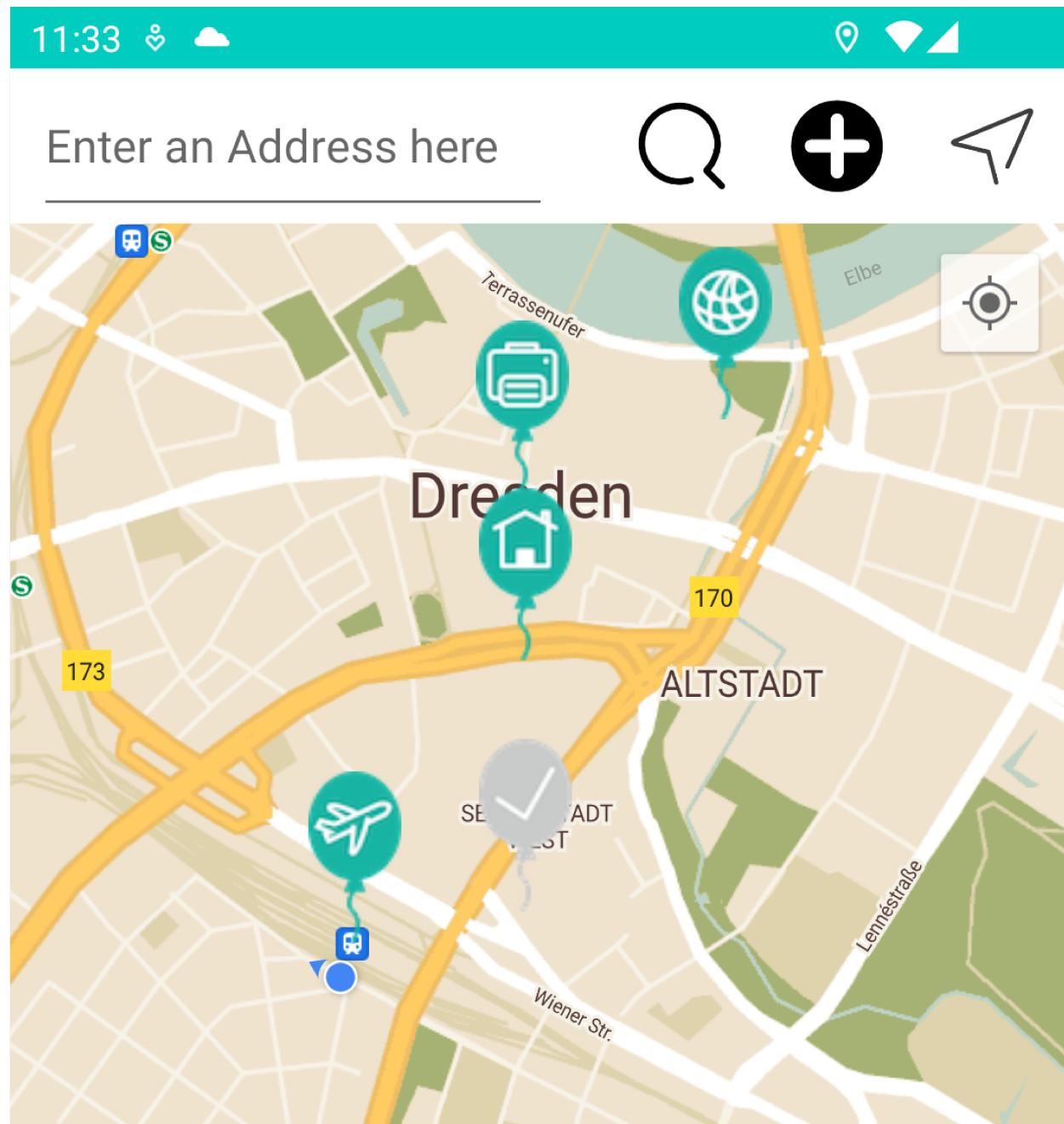
In the Task page, you can see all the added tasks

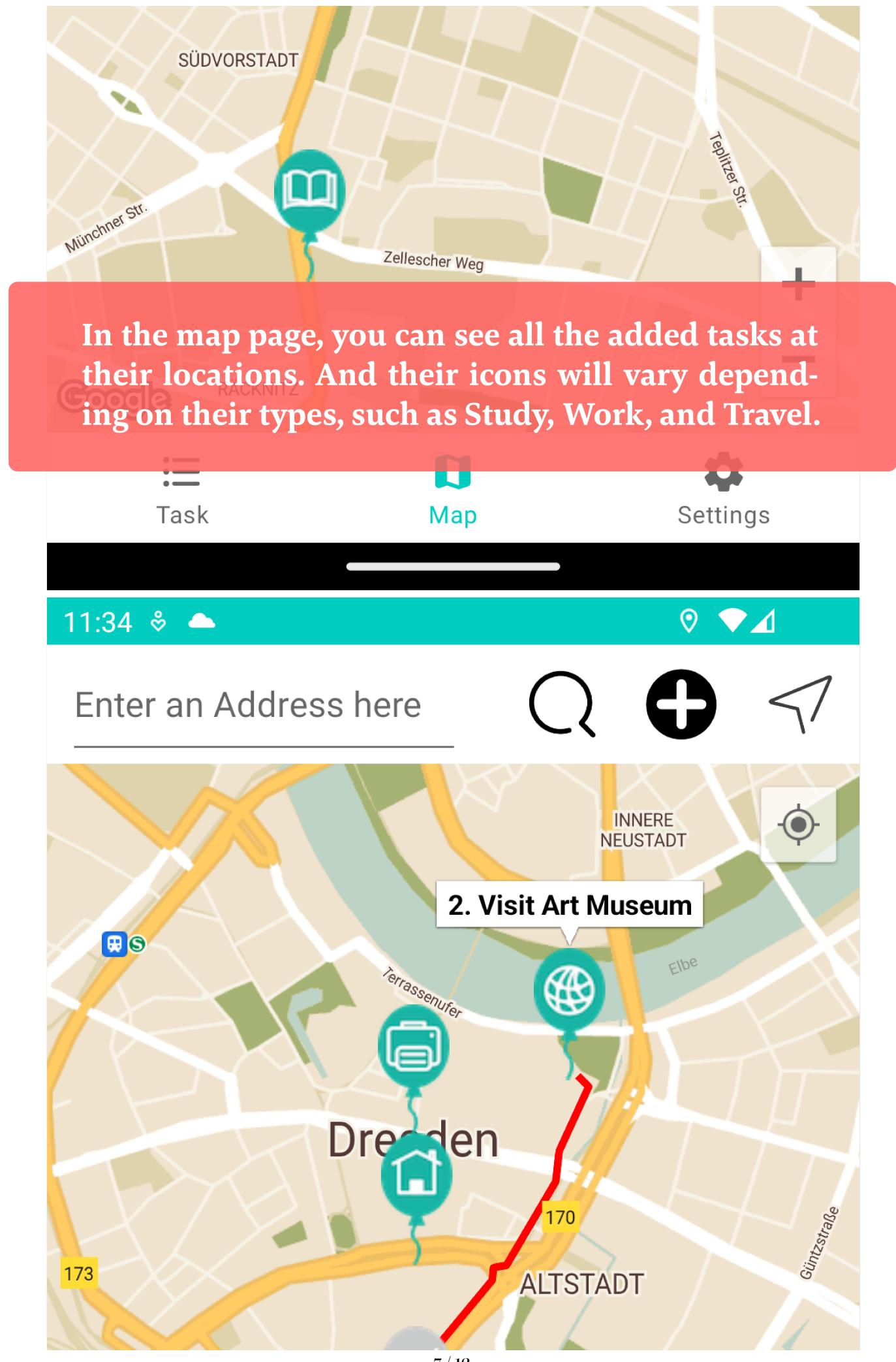
with their attributes. By clicking on any task, you can easily change its attribute.

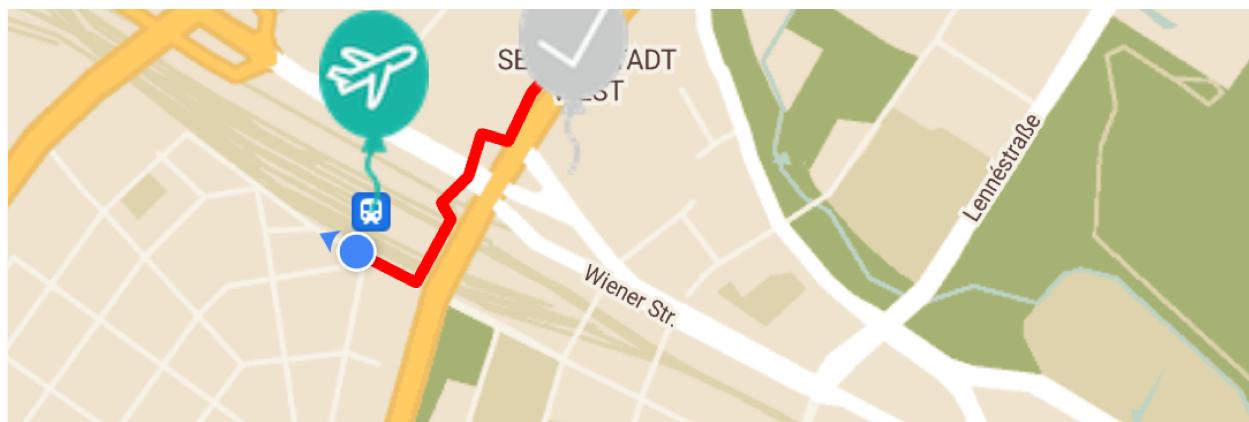


3.2 Task Map

- Display all of tasks on the map
- Create a new task from map (by clicking or searching)
- Navigate to your next task

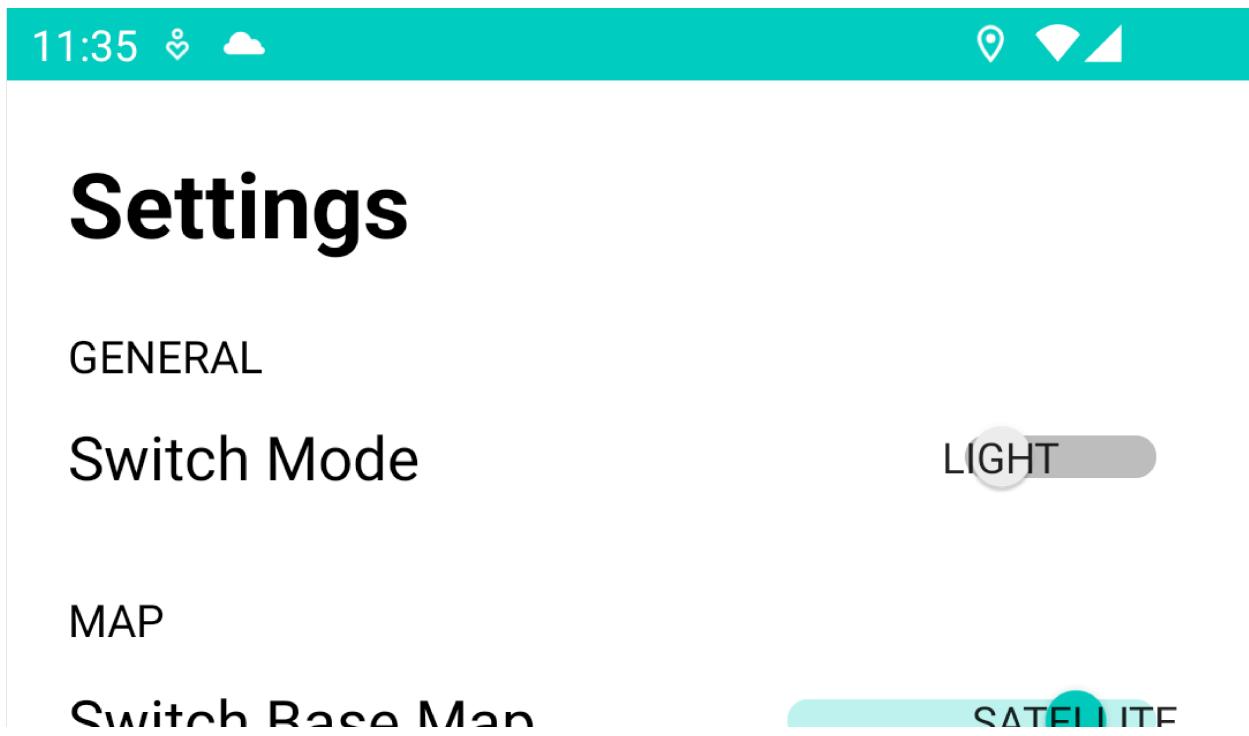






3.3 Custom Style

- Change app mode (Day or Night)
- Change basemap style
- Change navigation mode



SWITCH BASE MAP**SATELLITE**

Switch Navigation Mode

DRIVE**ABOUT****Help****About Us**

In Settings, you can switch 1) the mode of the whole app, light or dark, 2) the base map, normal or satellite, and 3) the navigation mode, walk or drive.



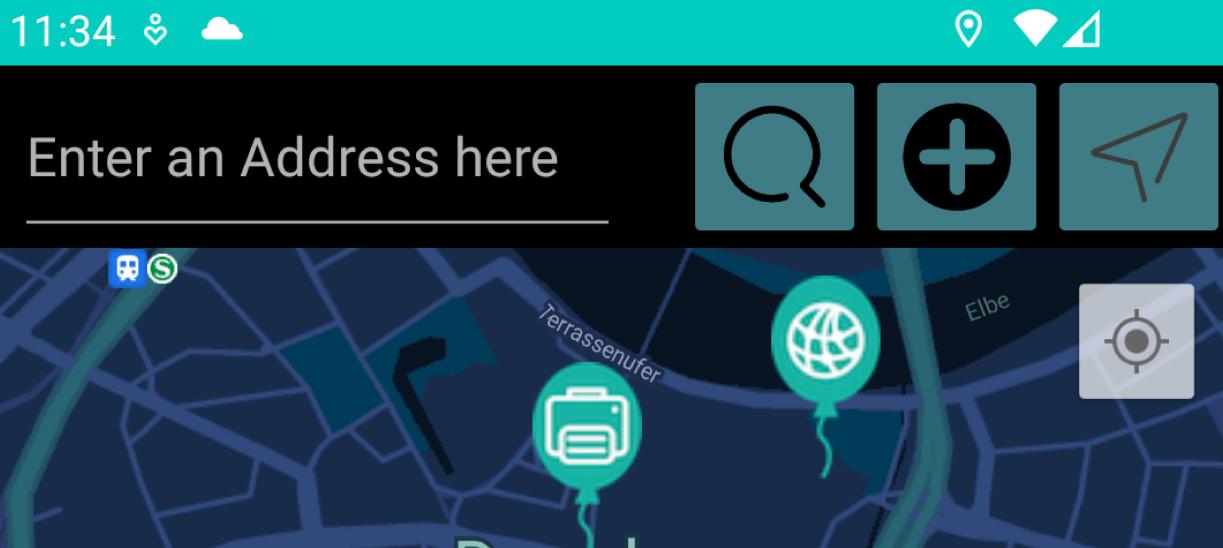
Task

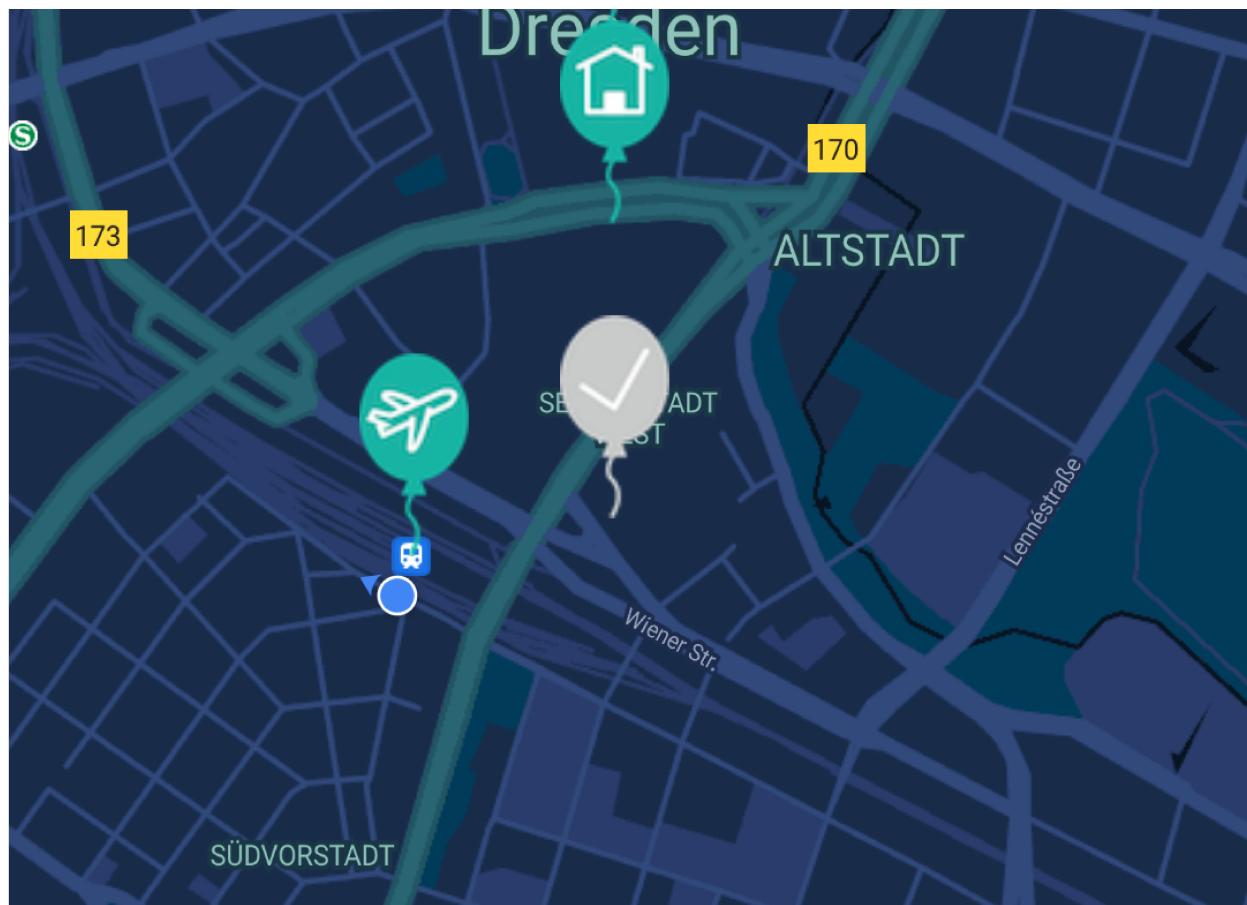


Map

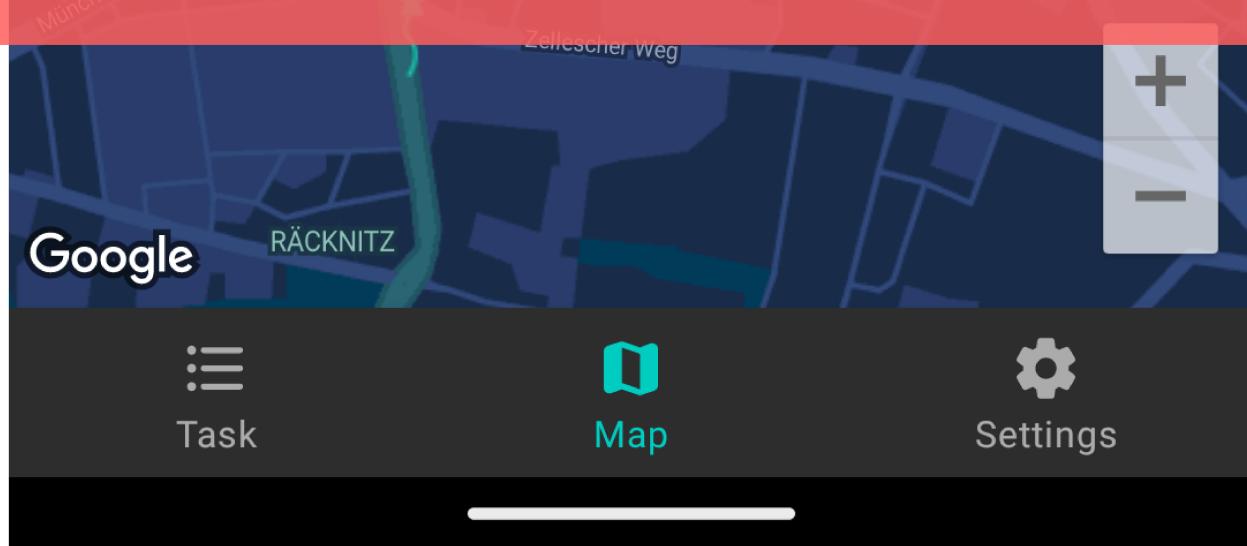


Settings





You can choose the theme you prefer, either light mode or dark mode. The map style will also change with the chosen theme.



3.4 Auxiliary

- App tutorial
- About us

4. Development

4.1 Task SQLite Database

Here is the structure and datatype of SQLite database, which will be created locally on the device when user firstly install **ToDoMap**.

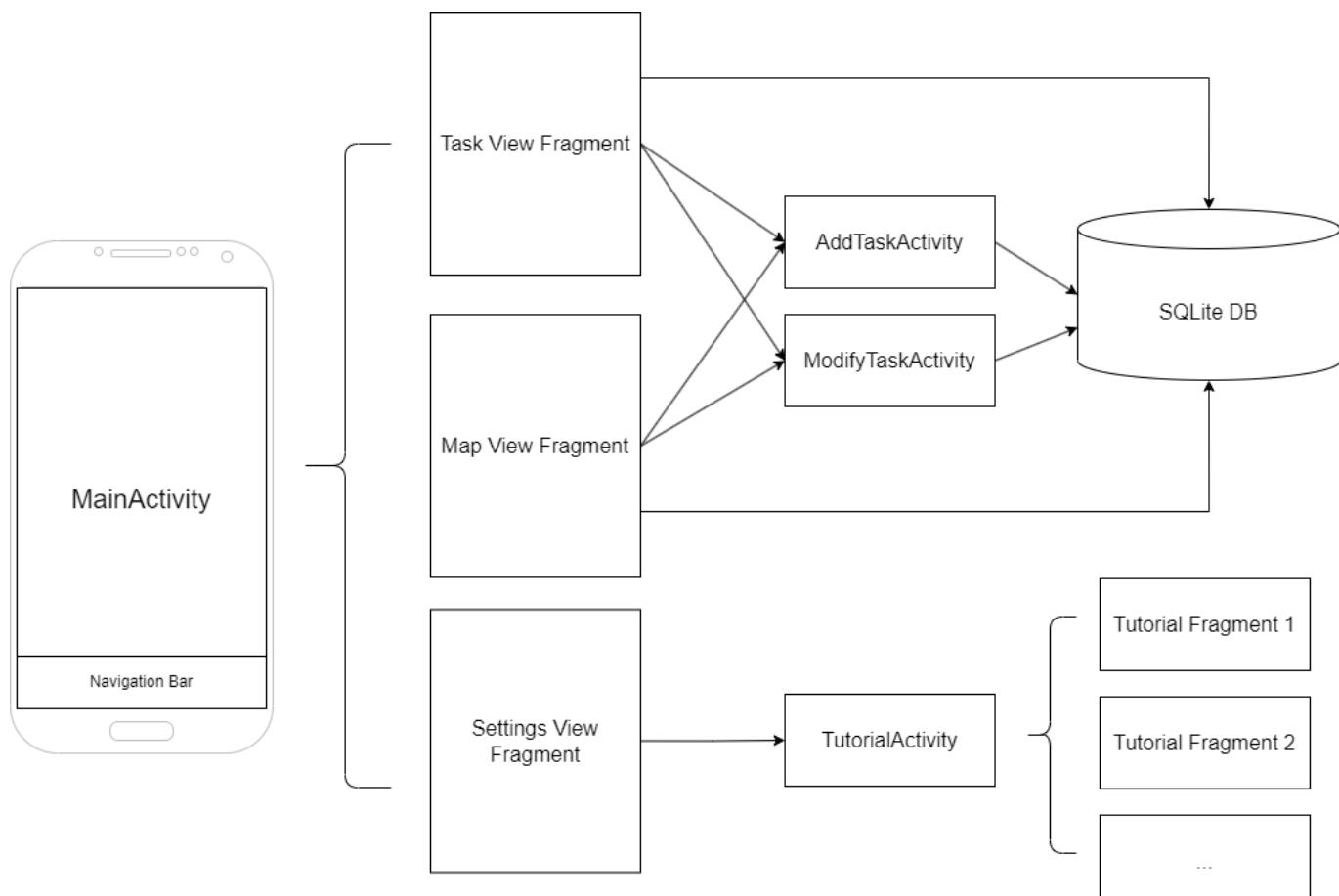
_id	title	type	time	address	latitude	longitude	description
INTEGER PRIMARY KEY AUTOINCREMENT	TEXT NOT NULL	TEXT	TEXT	TEXT	DOUBLE	DOUBLE	TEXT

After tasks created, the data in database looks like:

#	_id	title	type	time	address	latitude	longitude	description
1	1	other	⌚	JAN 22 2023, 09:37	slub	51.0286216	13.737017	
2	2	All Task	📋	JAN 22 2023, 10:22	Dresden	51.0504088	13.73726209999999	Home
3	3	Work	💻	JAN 25 2023, 08:30	BMW, Munich	48.1771981	11.5562963	workwork
4	4	Study Mobile Cartography	📖	JAN 31 2023, 07:30	TUDresden	51.0285861	13.7313505	presentation
5	5	Tennis	🎾	JAN 26 2023, 13:30	Sportpark Dresden	51.01963509999995	13.74160109999999	tennis course
6	6	Sea and beach	👉	JUL 25 2023, 10:25	Marloca, Spain	39.69326289999996	3.0175712	Summerrrr
7	7	Meet a friend	🎯	JAN 30 2023, 19:30	c/o Impact Hub Dresden, Trompete	51.04635959999995	13.73461809999999	Dinner
8	8	ToDoMap	✓	JAN 21 2023, 22:30	August-Bebel-Str. 17A Dresden	51.03246090000004	13.75214040000002	Finished!

4.2 Fragment-based Bottom Navigation

The main activity of **ToDoMap** consists of three fragments (task view, map view, settings view), and uses a bottom navigation bar to manage different views. The app framework was shown in the following figure.



4.3 Google Map Integration

ToDoMap implement the map view by [Google Maps SDK for Android](#), and implement the navigation by [OpenRouteService](#).

4.4 Custom Design

ToDoMap provides different custom design that user can select, like app styles (light or dark), basemap (normal or satellite), map style (light or dark).

4.5 Further Development

There are more features are expected to implement in the future.

- Sort/search tasks by time or address
- Custom task type and custom icon
- Task group view
- Better UI

5. Contribution

Assignment	Contributor
Database	Jiapan
App framework	Jiapan, Zihan
Add/Modify task	Jiapan, Zihan
Map view	Zihan
Task view	Jiapan
Settings view	Jiapan, Zihan
Icon design	Zihan
Map style	Zihan
App style	Jiapan