

Advanced Prototype

Dango Team

23.06.2020

Agenda:

1. Requirements
2. System Architecture and Design
3. UI Design
4. Bugs
5. Working Prototype Design

Protagonists

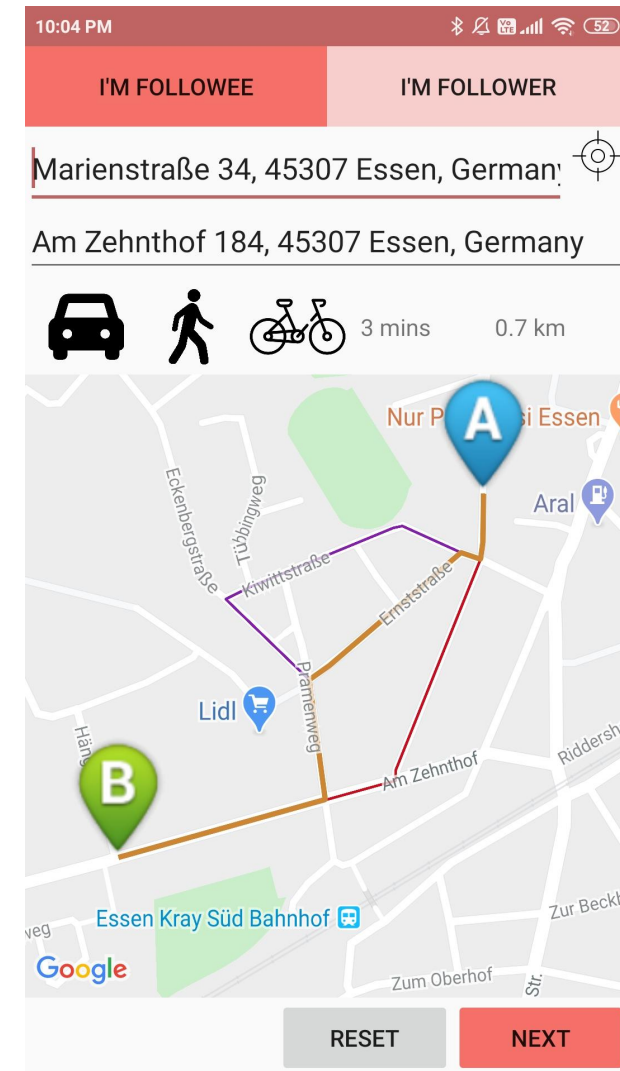
Followee (Traveler): the person who is *traveling*.



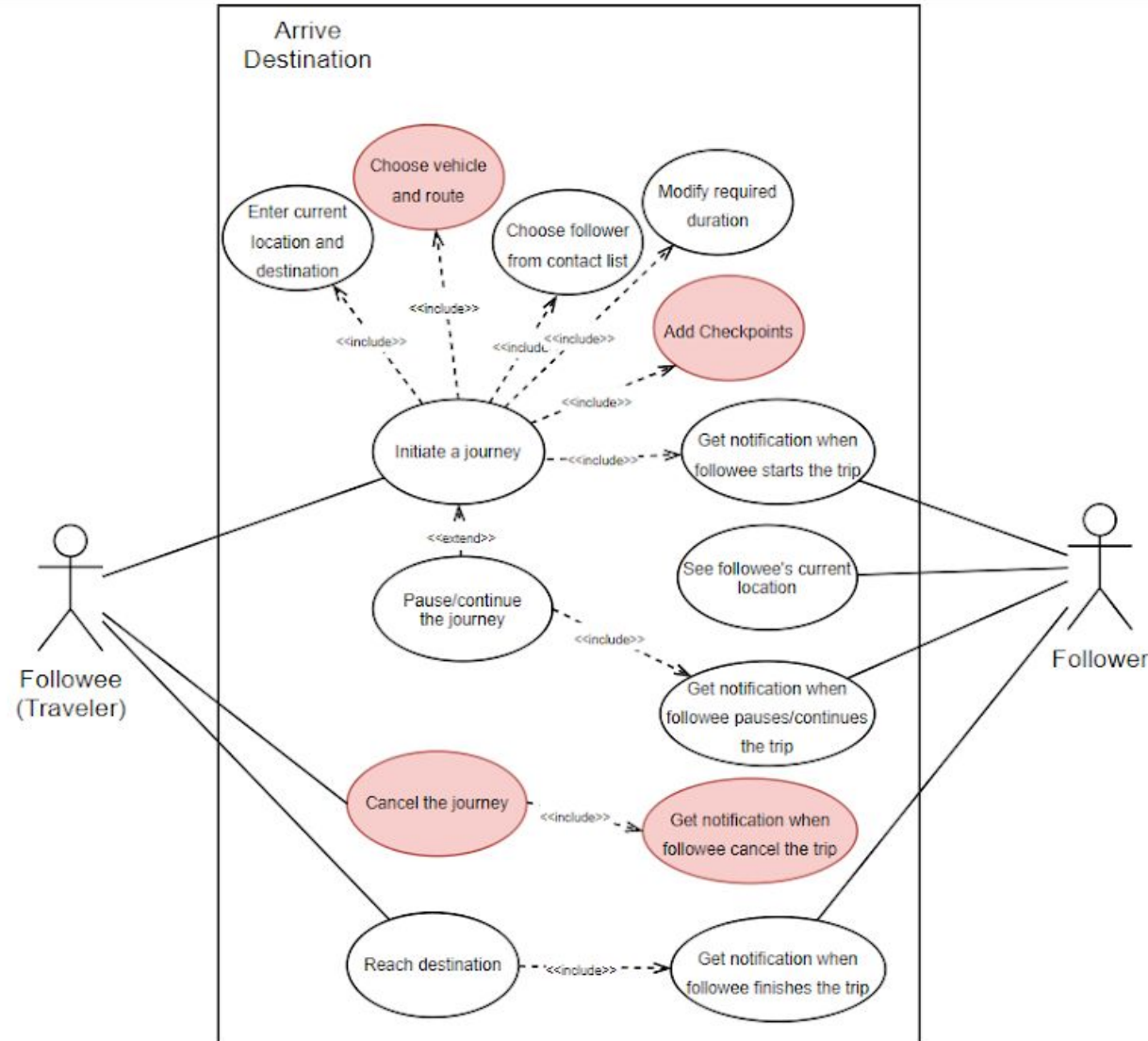
Follower: the person who is tracking the followee.

1. Changes in Requirements

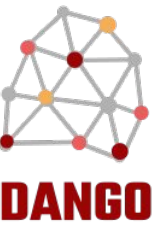
1. Traveler is able to cancel the trip at anytime, notification will be pushed to follower's phone.
2. Traveler is able to choose which vehicle he/she is using: bike, walk, car.
3. Traveler is able to choose route from multiple routes shown in the map.
4. Traveler is given the option to manually enter checkpoints, when the traveler arrives checkpoint, a notification will be sent automatically to the follower.
5. Traveler is able to select multiple followers from their contact list. Follower can follow multiple travellers.



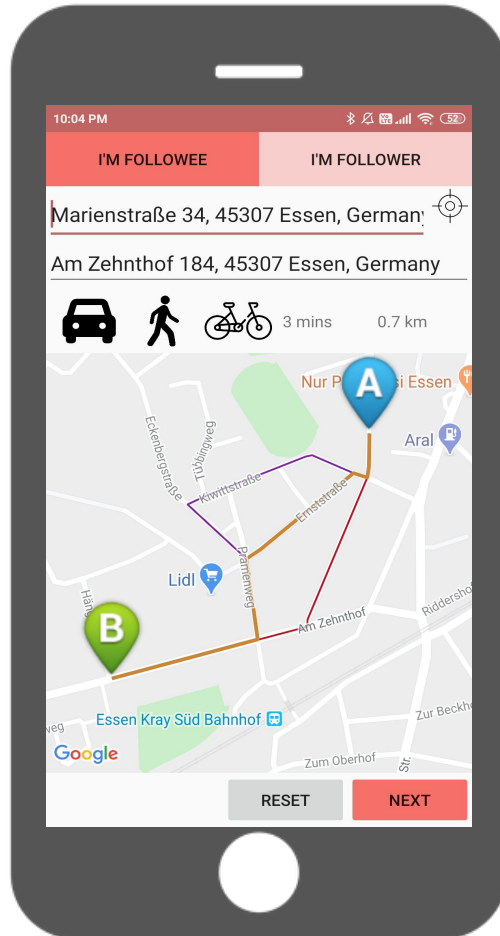
Changes in Use-Case Diagram



2. System Architecture



Presentation Tier



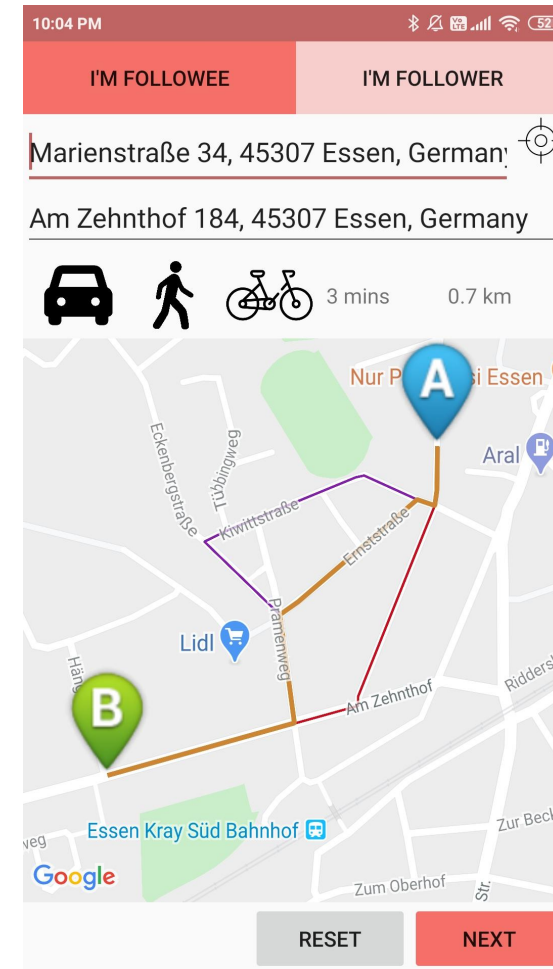
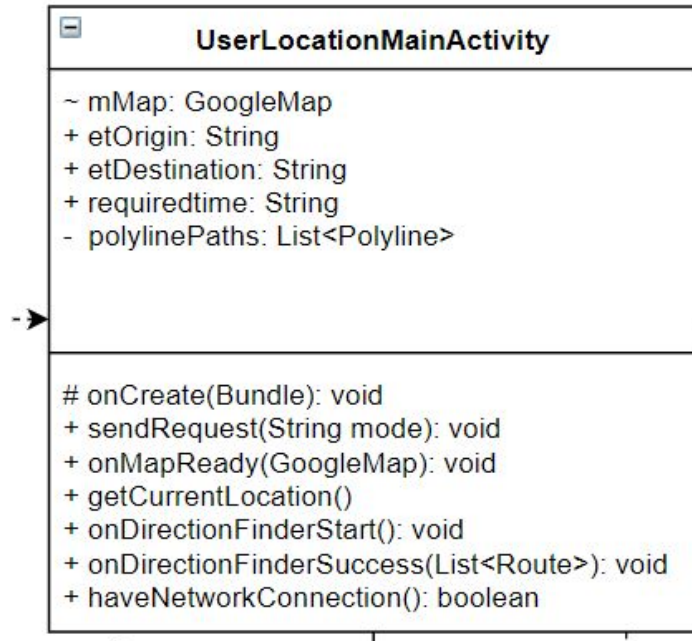
Logic Tier



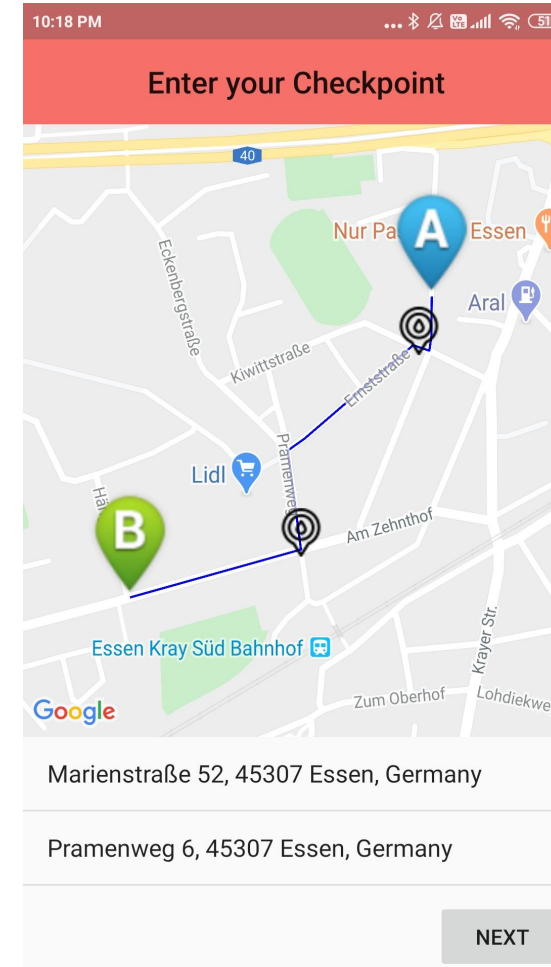
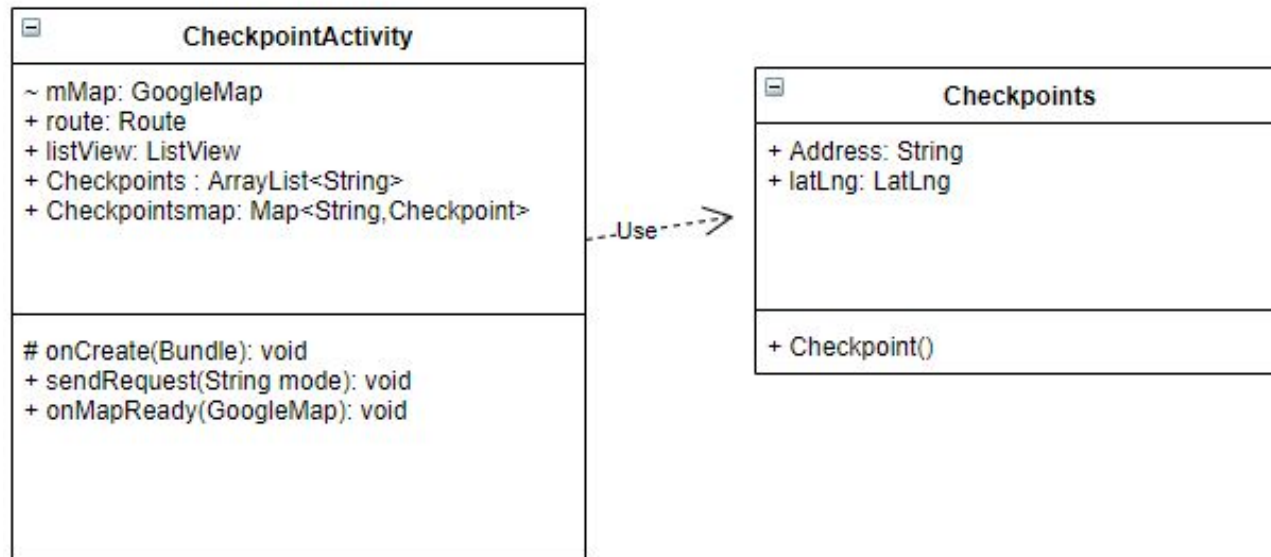
Data Tier



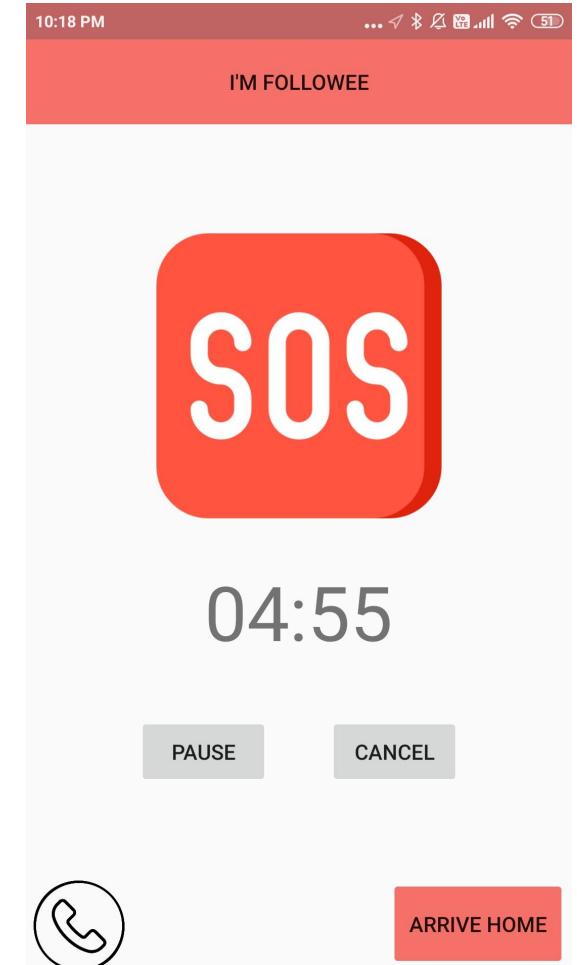
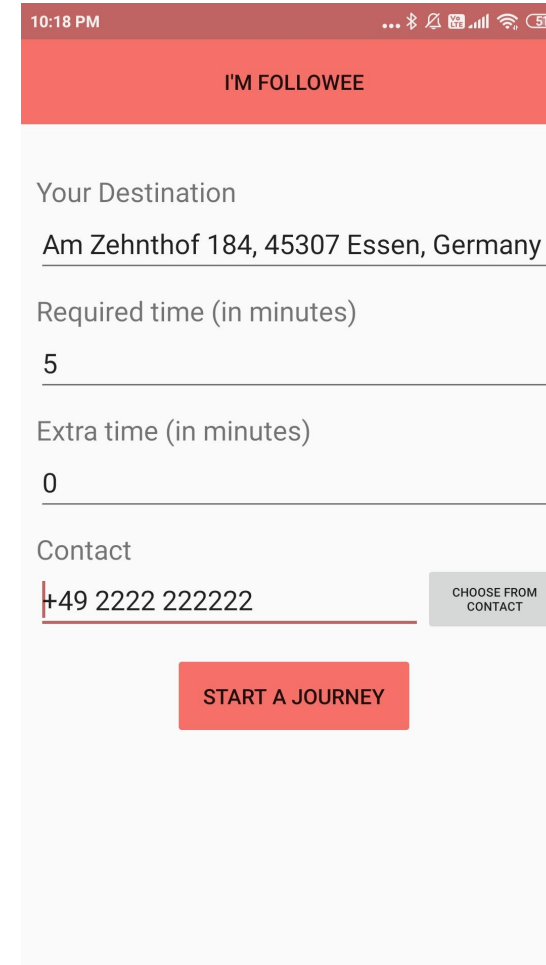
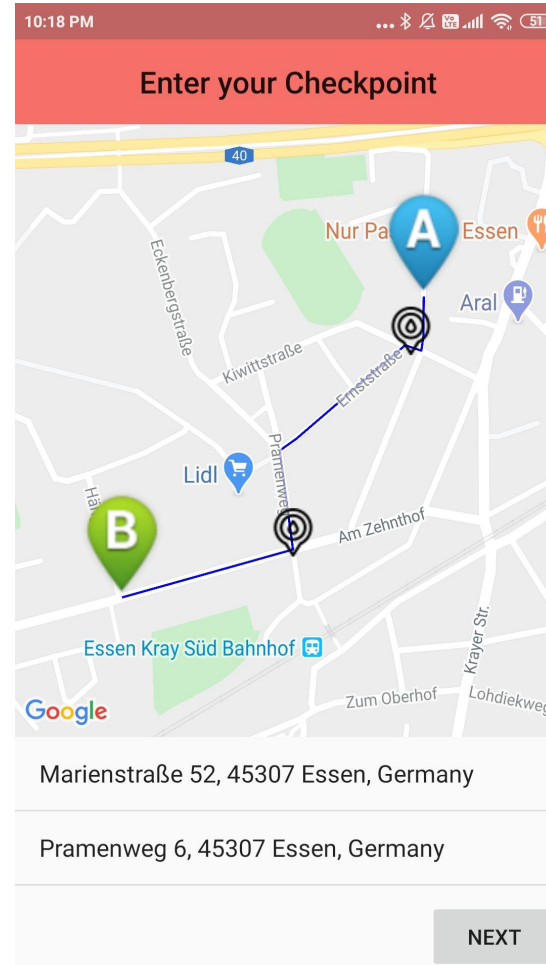
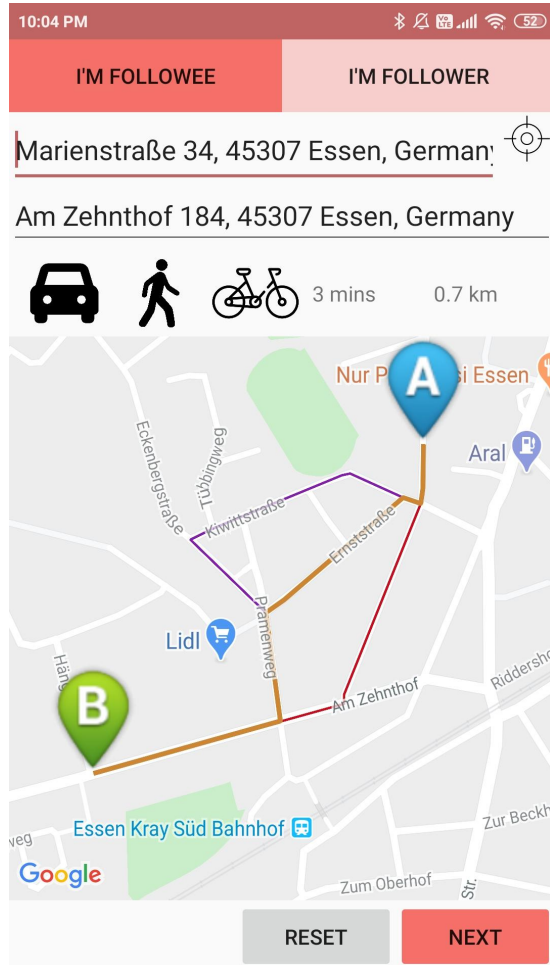
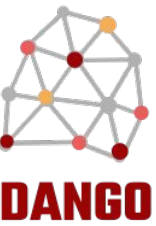
Changes in Class diagram(1)



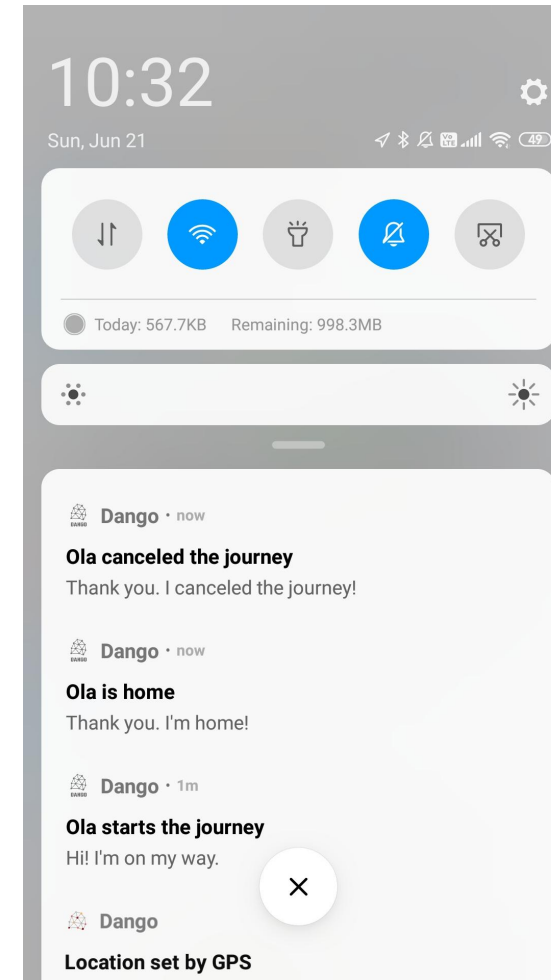
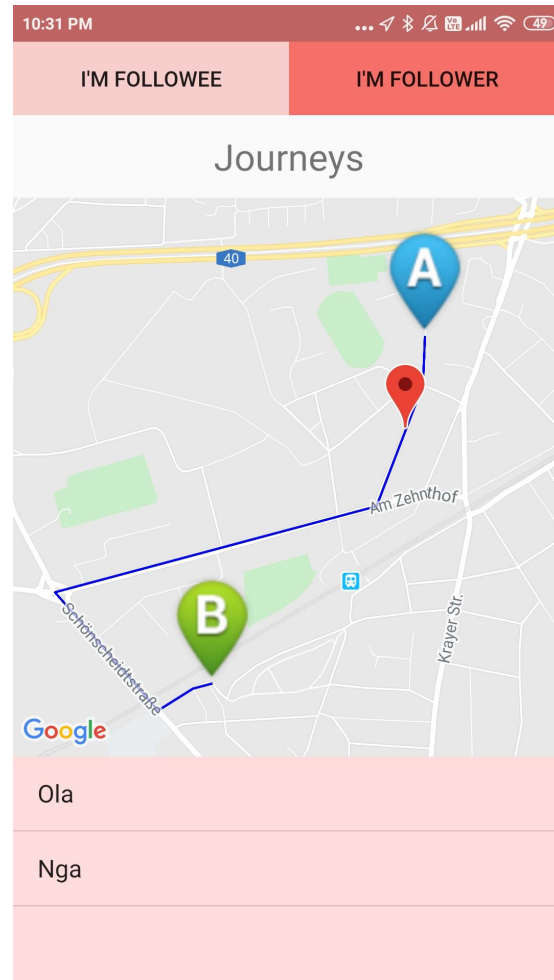
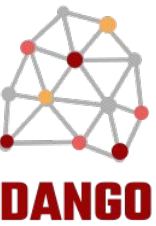
Changes in Class diagram(2)



3. UI Design (Traveler)



3. UI Design (Follower)



4. Bugs

1. Retrieve data as object from Firebase
2. Running Location Service in Background
3. Internet Check



4.1 Retrieve data as object from Firebase

com.google.android.gms.maps.model.LatLng is missing a constructor with no arguments

Constructor

```
LatLng.java
38
39 @ public LatLng(Double latitude, Double longitude) {
40     this.latitude = latitude;
41     this.longitude = longitude;
42 }
43
44 public Double getLongitude() { return longitude; }
47
48 @ public LatLng() {}
49
50
51 @Override
52 public int describeContents() { return 0; }
55
56 @Override
57 public void writeToParcel(Parcel dest, int flags) {
58     if (latitude == null) {
59         dest.writeByte((byte) 0);
60     } else {
61         dest.writeByte((byte) 1);
62         dest.writeDouble(latitude);
63     }
64     if (longitude == null) {
65         dest.writeByte((byte) 0);
66     } else {
67         dest.writeByte((byte) 1);
68         dest.writeDouble(longitude);
69     }
70 }
71 }
```

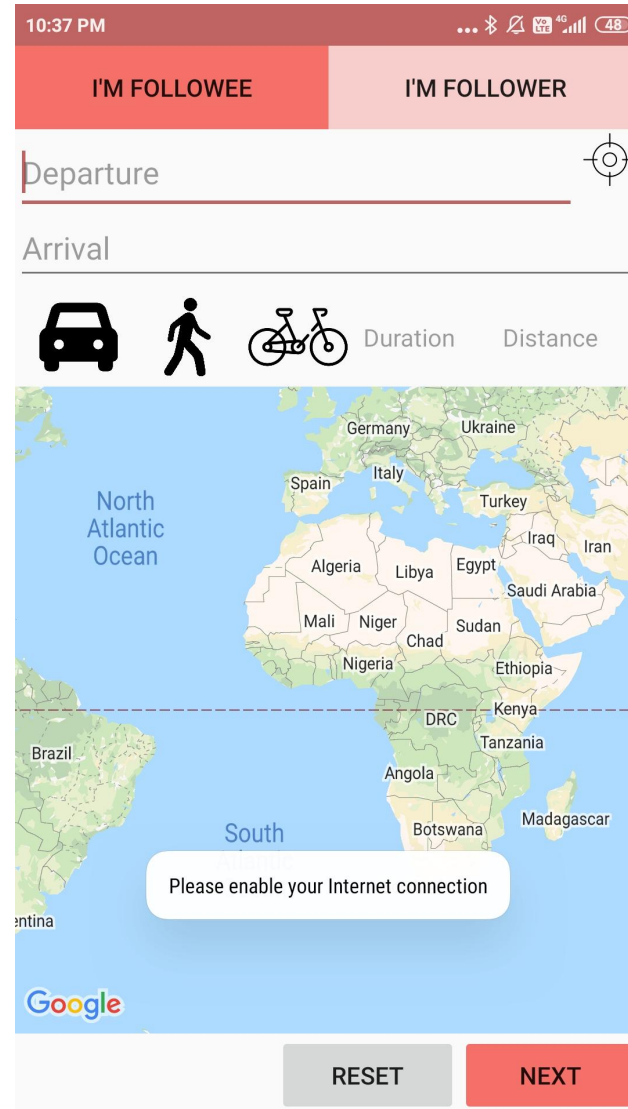
4.2 Running Location Service in Background

From Android P , Q ,
background permission has
limit. So we can't run update
location in background in
Android P , Q.

Solution: Need to create a
service



4.3 Internet Check



5. Working Prototype Design

10:04 PM

I'M FOLLOWEE I'M FOLLOWER

Marienstraße 34, 45307 Essen, Germany

Am Zehnthof 184, 45307 Essen, Germany

Car 3 mins 0.7 km

Map showing route from A to B.

RESET NEXT

10:18 PM

Enter your Checkpoint

Map showing route from A to B.

Marienstraße 52, 45307 Essen, Germany

Pramenweg 6, 45307 Essen, Germany

NEXT

10:18 PM

I'M FOLLOWEE

Your Destination

Am Zehnthof 184, 45307 Essen, Germany

Required time (in minutes)

5

Extra time (in minutes)

0

Contact

+49 2222 222222

CHOOSE FROM CONTACT

START A JOURNEY

10:18 PM

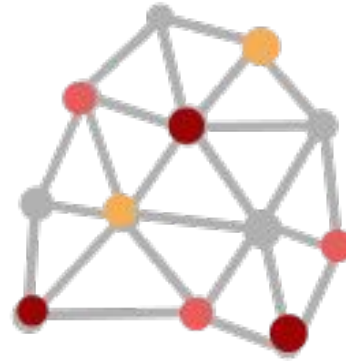
I'M FOLLOWEE

SOS

04:55

PAUSE CANCEL

ARRIVE HOME



DANGO

Thank you for listening!