TED University

Department of Computer Engineering

CMPE 491 Senior Project I

Plan My Day

Analysis Report

Project Group Members

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1 Introduction

Plan My Day is being developed to help people on managing their daily plans. People cannot manage their time efficiently due to some reasons like not having enough knowledge about the city they are living in or locations of the places where they want to be.

We are going to develop a mobile application which is PMD (Plan My Day) as a solution of these problems mentioned above. Users tell their plans to the application by writing either speaking and the most efficient path for them is decided by our software.

2 Proposed System

2.1 Overview

We want to create a mobile app which makes people's life easier to plan. The app will listen and read user's plans out loud like a friend or assistant. The app uses phone's GPS to find locations and it prepares best efficient path for user to follow up. App expects users to enter their plan's detailed information such as location and time. With these information, app can organize the day for them as best it can, so user can schedule his/her day efficiently.

It may not very useful for people who know the best paths for their plans. However, it can be very handy for people who don't know the city or paths. Users can tell their plans with voice or write as a text. We expect users to use sentences such as "I want to go a shopping mall then I want to eat hamburger and I need to withdraw some money", this is for converting the sentence into small plans and find best locations for them. There will be also voice notifications to warn user about their plans. This app can be very useful to minimize the time used for the plans and maximize the free time.

2.2 Functional Requirements

- End users must create an account and named their disabilities.
- End users must have an android device to be able to use the app.
- End users must be able to create a plan or delete an existing one.
- End users must be able to check their location during the walk.
- End users must be walking when they are using the app (no vehicle).
- End users must activate her/his devices' GPS.

2.3 Non-functional Requirements

- End users will have notifications when they are inactive for 3 days.
- End users must enter their credentials to login.
- Application must give audio warning to the ends users when it is operating.

2.4 Constraints (Pseudo Requirements)

- The system will operate only in android environment.
- Android Phones or Tablets requires minimum SDK of API 15: Android 4.0.3 (IceCreamSandwich) to run the app.
- End users must be able to speak or write in English.
- The implementation language must be Java.

2.5   System Models

2.5.1 Scenarios

As an end user;

1) User will activate her/his device's GPS

2) User will open the app and login

3) User will start to tell her/his plan to the app by writing or orally

4) User will use our user manual to observe how s/he needs to use conjunctions

5) User will name the specific places that s/he wants to go

6) After the plan is told, s/he will confirm and wait

7) Application will use Google maps and device's GPS to create the efficient way for the user

8) After the path is created it will be shown to the user

9) User may choose to be navigated or follow the path manually

10) Users can save their plans to the app to re-use them later

As an end user;

1) User opens our app to plan his/her day according to distances.

2) User allows GPS permission to our App.

3) User click on + icon to add plans to his/her list.

4) Based on user's preference app will open a text box or microphone button.

5) User writes his/her plan to the text box or tell his/her plan to the microphone by pressing microphone button.

6) User will use app's manual to learn how to use conjunctions.

7) User's plan consists places that he/she needs to go according to his/her plan.

8) After the plan is told, app will show a preview of the places and the plan.

9) User checks if it is true or correct missing parts.

10) After confirming, app navigate to the homepage that shows user's route.

11) User chooses to be navigated, so that app uses Google Maps to navigate the user to closest place according to plan.

12) User add new places or plans with + icon.

13) If he/she decides to cancel plan, they can remove with thrash icon located on the right side of the plan.

2.5.2 Use Case Model

Use Case Name: Plan My Day

Participating Actors: User

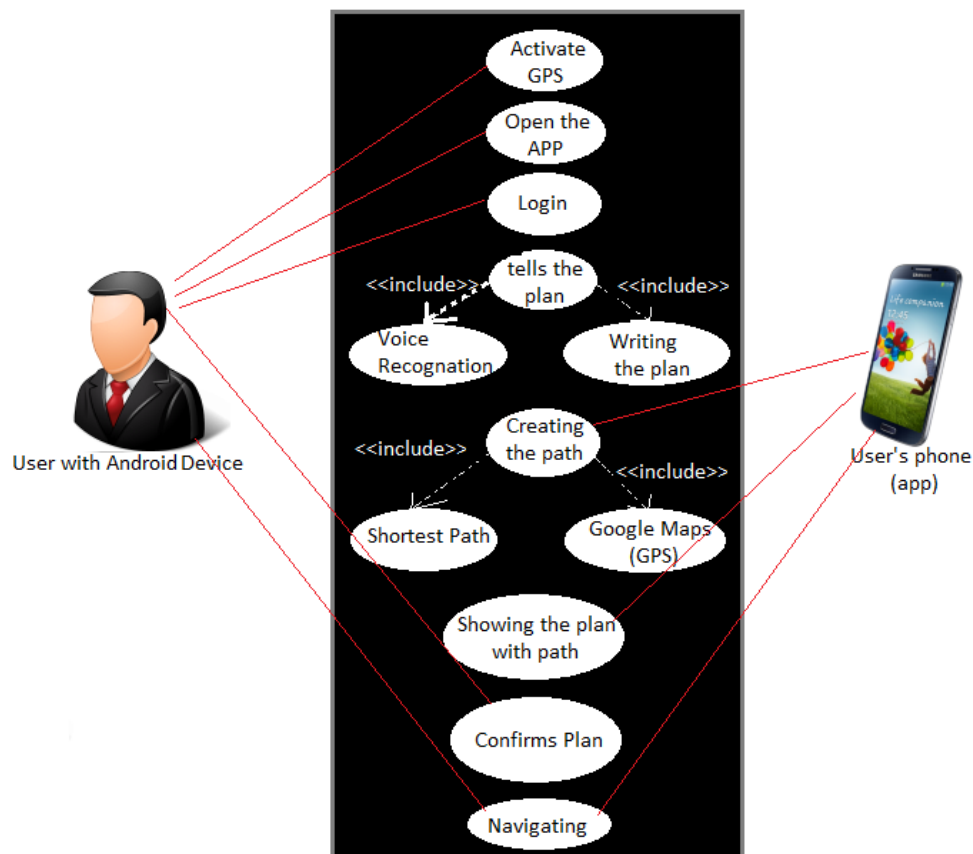**Entry Condition:** User opens the app to make a plan

Flow of Events:

User gives the detailed information about the plan

Software does what it's supposed do (calculations, sending the information to the relevant subsystems, using GPS with google map) and finally software decodes the input and creates the path for user to follow
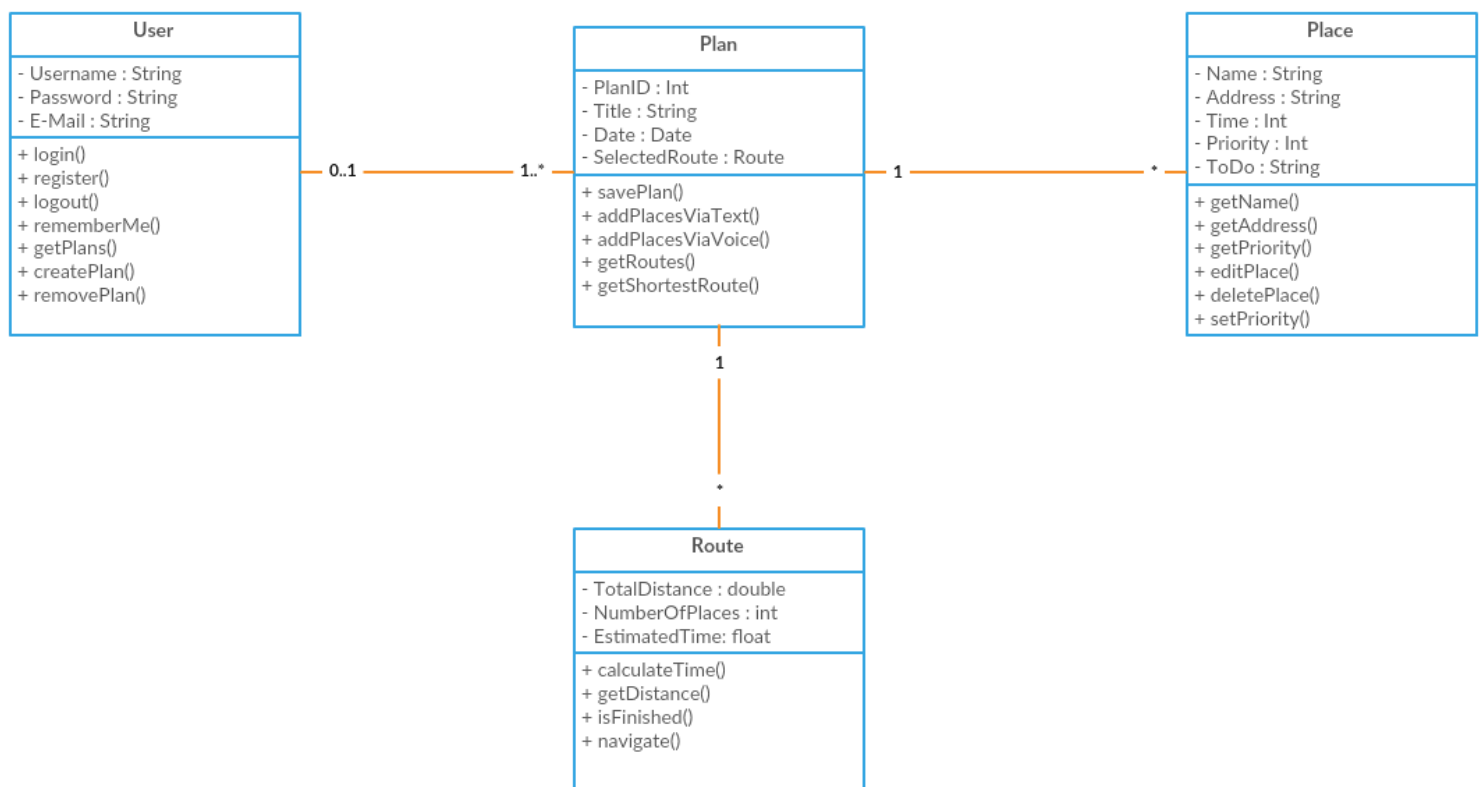
Exit Condition: User confirmed the plan.

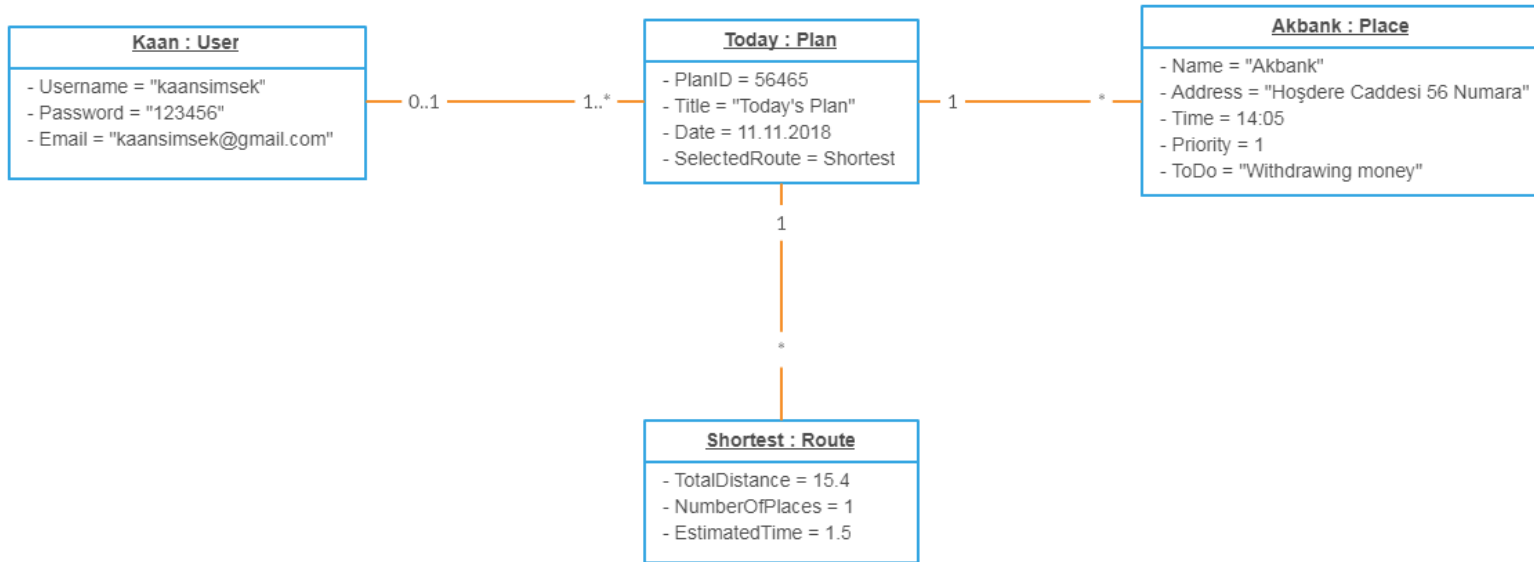**Exceptions:** Canceled plan, failed to finding locations, system broke down, wrong inputs.

Activate
GPS

Open the
APP

Login

tells the
plan

<<include>>

<<include>>

Voice
Recognation

Writing
the plan

Creating
the path

<<include>>

<<include>>

Shortest Path

Google Maps
(GPS)

Showing the plan
with path

Confirms Plan

Navigating

User with Android Device

User's phone
(app)

2.5.3 Object and class Model

Class Diagram

User

- Username : String
- Password : String
- E-Mail : String

+ login()
+ register()
+ logout()
+ rememberMe()
+ getPlans()
+ createPlan()
+ removePlan()

Plan

- PlanID : Int
- Title : String
- Date : Date
- SelectedRoute : Route

+ savePlan()
+ addPlacesViaText()
+ addPlacesViaVoice()
+ getRoutes()
+ getShortestRoute()

Place

- Name : String
- Address : String
- Time : Int
- Priority : Int
- ToDo : String

+ getName()
+ getAddress()
+ getPriority()
+ editPlace()
+ deletePlace()
+ setPriority()

0..1   1..*   1   *

1

1   *

Route

- TotalDistance : double
- NumberOfPlaces : int
- EstimatedTime: float

+ calculateTime()
+ getDistance()
+ isFinished()
+ navigate()

Object Diagram

Kaan : User
- Username = "kaansimsek"
- Password = "123456"
- Email = "kaansimsek@gmail.com"

0..1 — 1..*

Today : Plan
- PlanID = 56465
- Title = "Today's Plan"
- Date = 11.11.2018
- SelectedRoute = Shortest

1 — *

Akbank : Place
- Name = "Akbank"
- Address = "Hoşdere Caddesi 56 Numara"
- Time = 14:05
- Priority = 1
- ToDo = "Withdrawing money"

1

*

Shortest : Route
- TotalDistance = 15.4
- NumberOfPlaces = 1
- EstimatedTime = 1.5

2.5.4 Dynamic Models

2.5.4.1   Sequence Diagram
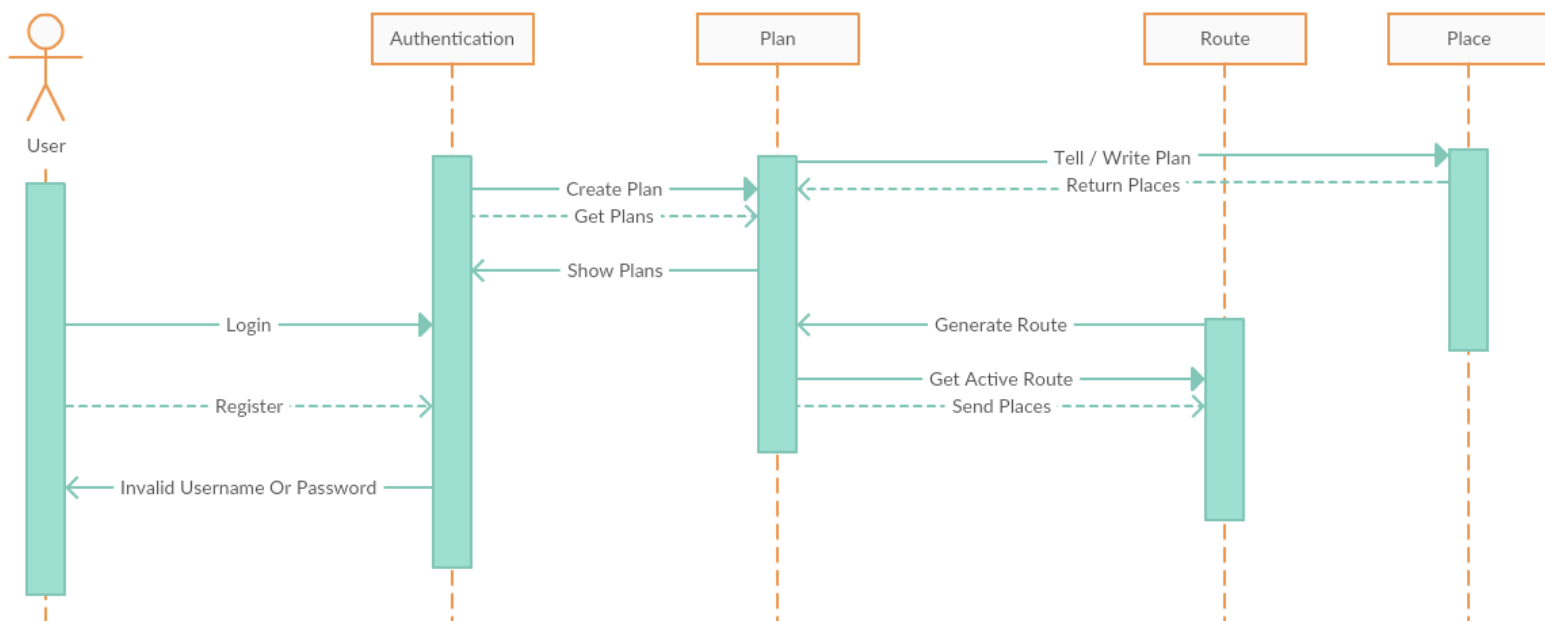
2.5.4.2 Activity Diagram
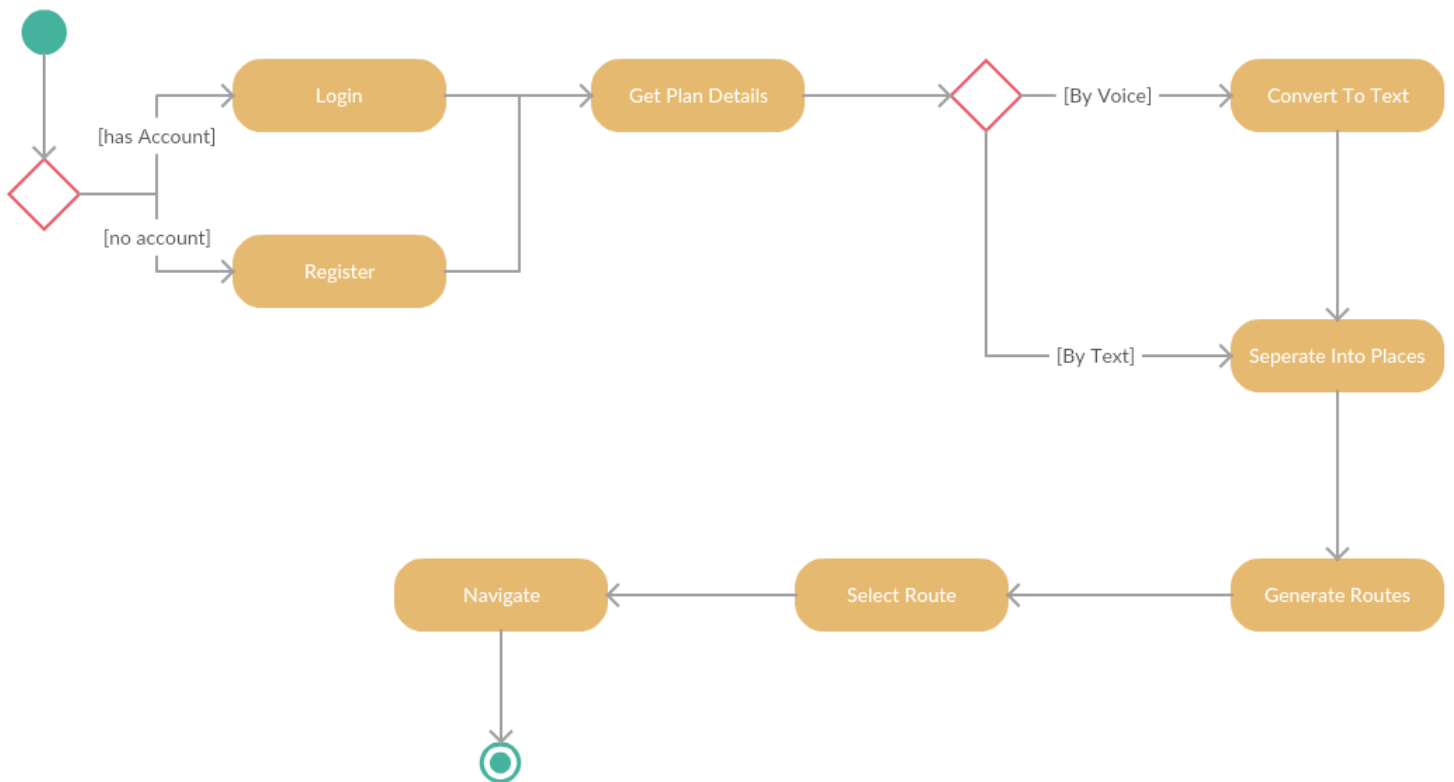
2.5.5 User Interface

Home Screen
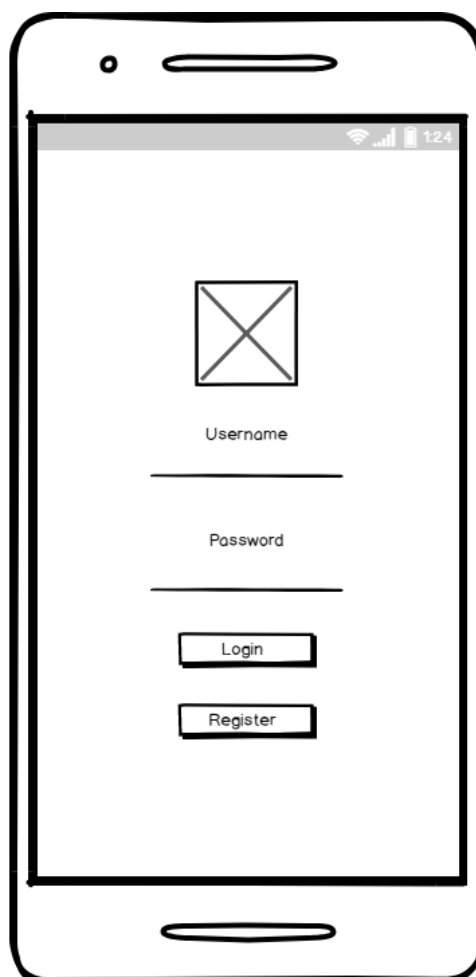
Plan List
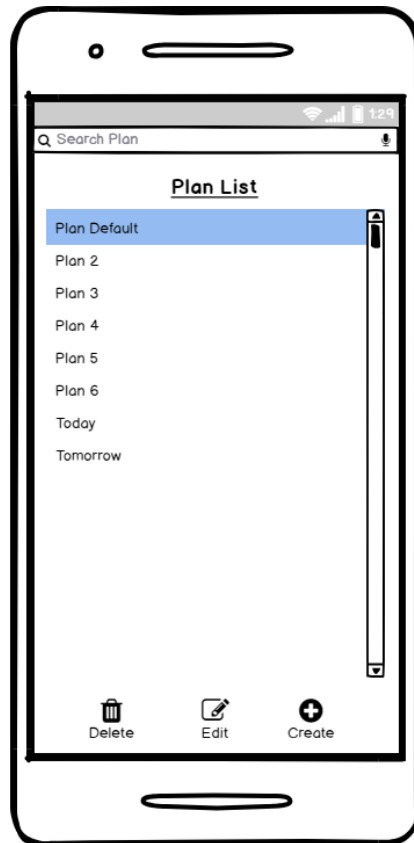
Add Plan by Text
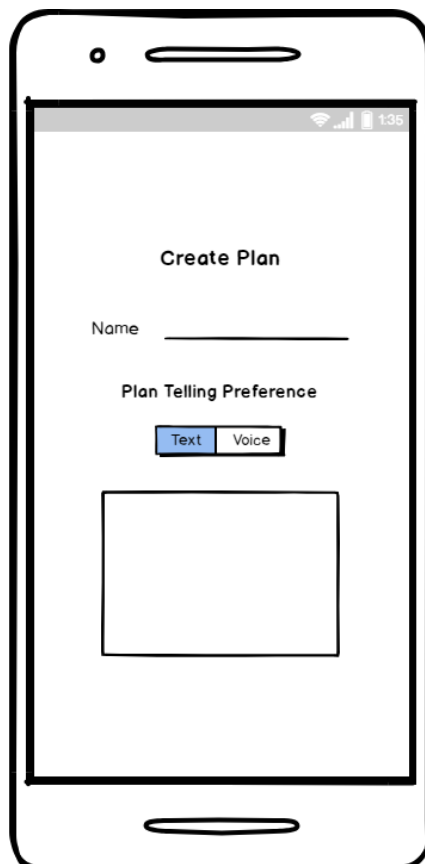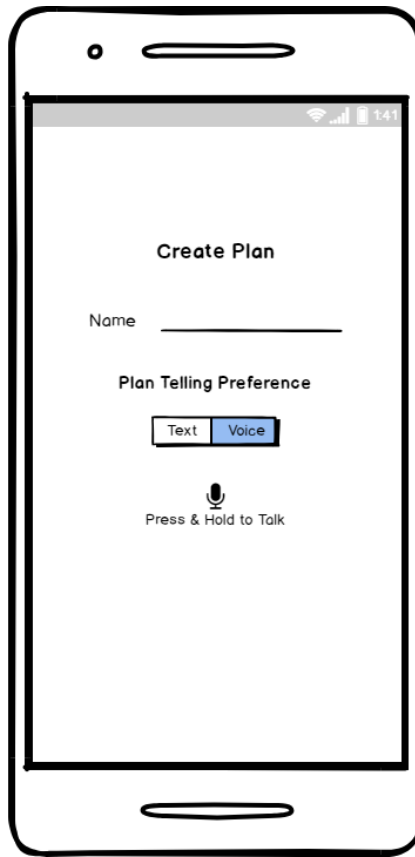
Add Plan by Voice

Create Plan

Name _____

Plan Telling Preference

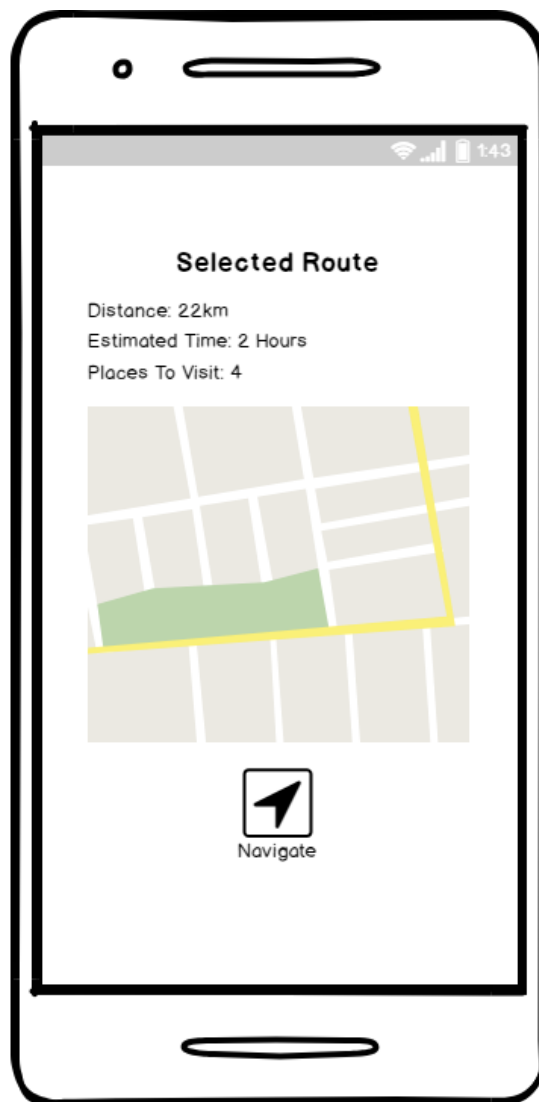Text | Voice

🎤
Press & Hold to Talk

Place List

Q Search Place 🎤

Places To Visit

Akbank
Garanti
TEDU
Place 4
Place 5
Place 6

Routes   Add   Edit   Delete

3 Glossary

Route: A way to getting from a starting point to destination.

Plan: A detailed proposal for doing something

Place: A particular position for a space

GPS: Global positioning system, accurate worldwide navigational system

Navigate: Plan and direct the route of a person from his/her current location

4 References

http://www.cs.fsu.edu/~myers/cop3331/notes/requirements.html

https://balsamiq.cloud