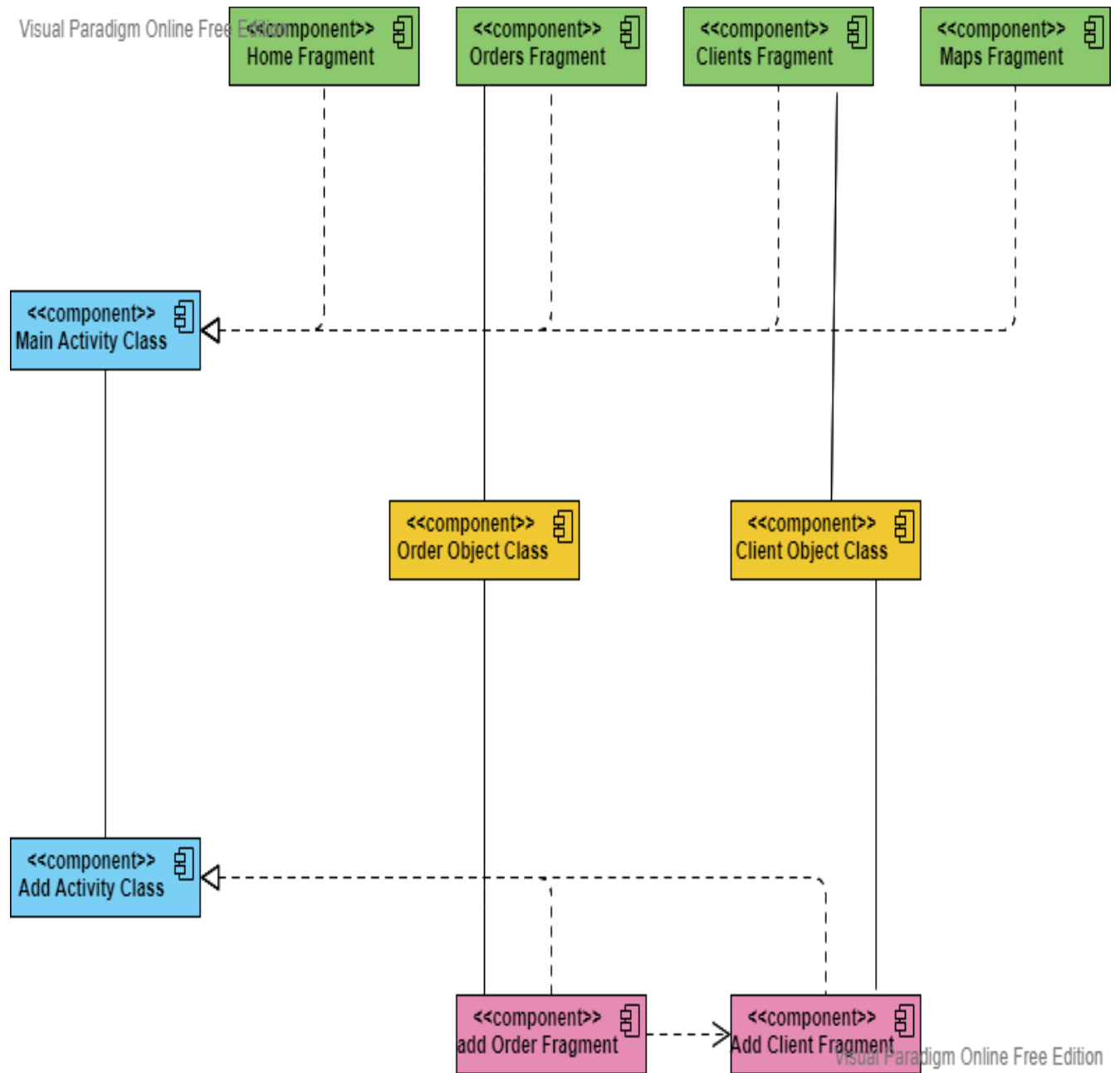
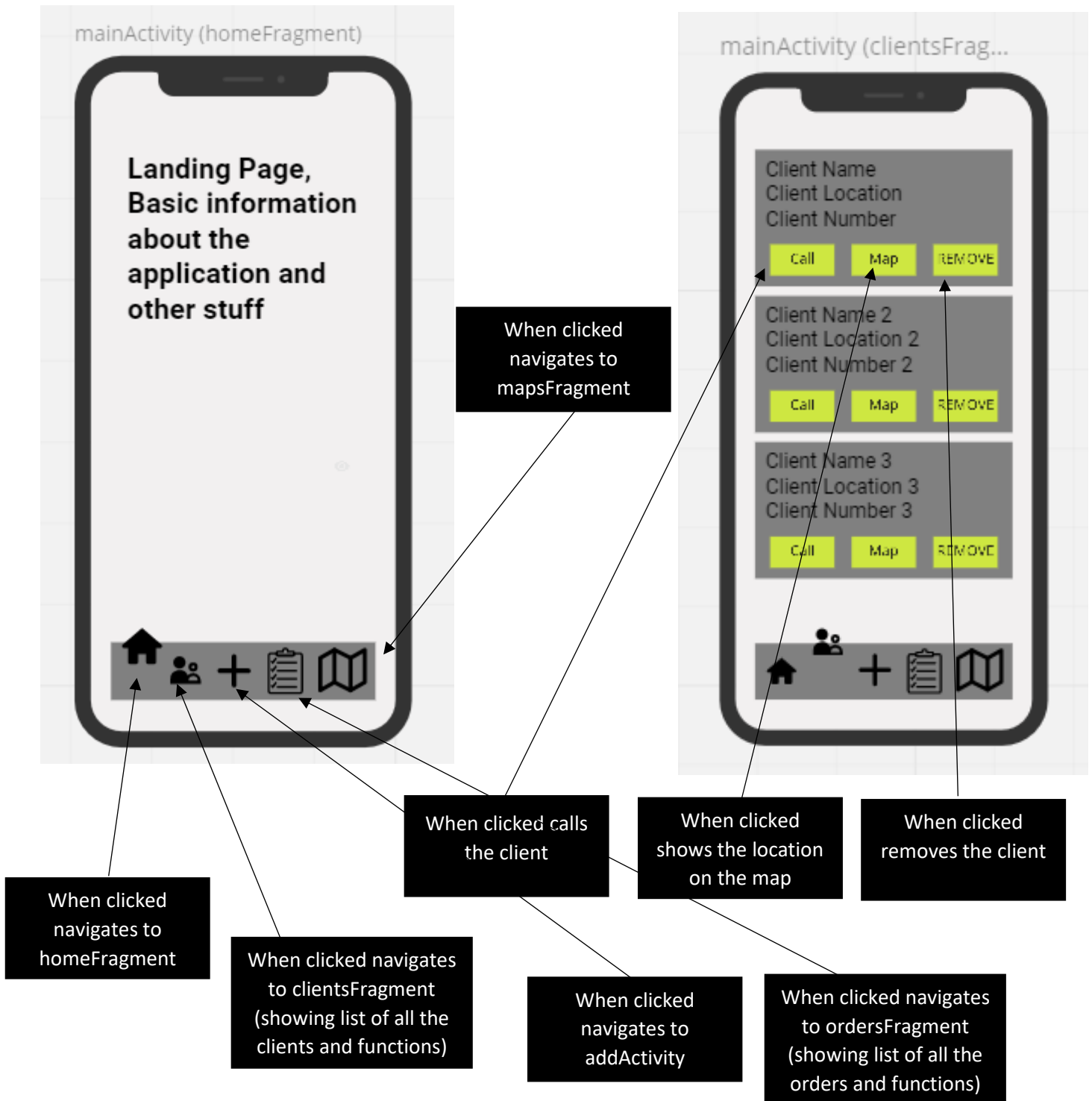


Criterion B: Design

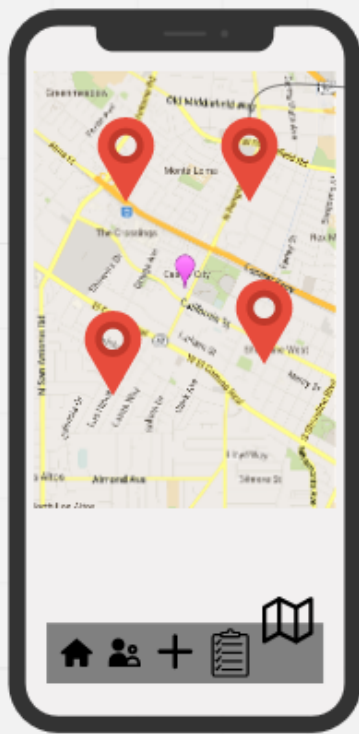
UML Diagram of the classes



Interface

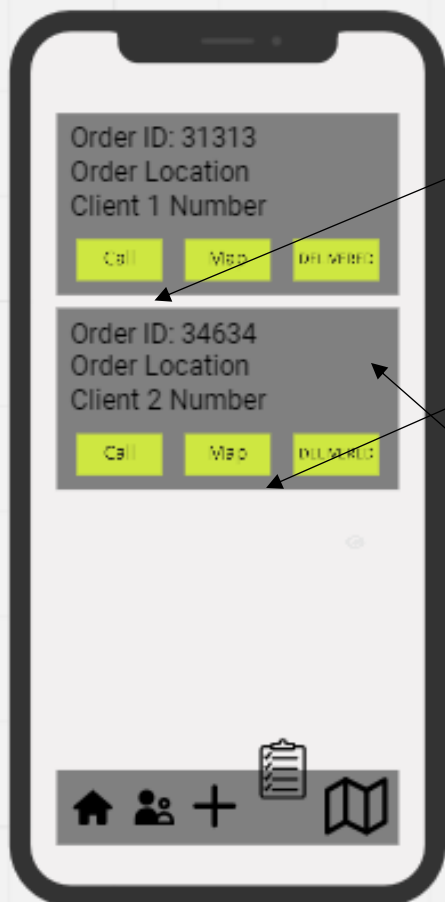


mainActivity (mapFragm...



Markers on locations where orders should be delivered,
Each marker having information which will be displayed when clicked.

mainActivity (ordersFrag...



When clicked calls
the client of the
order

When clicked
shows the order
location on the
map

When clicked
removes the order

addActivity(addClientsFragment)

addActivity(addOrdersFragment)

Input Client Name

Input Client Location

Input Client Number

Submit

Back

Input order info here

choose client here
or add a new one

Submit

Back

Adds Client
or Order

Inputs for all the client
information, which is
gathered in client class.

Input for
order
informatio

Drop-down
list for
clients list

Add button for
navigation to
add client
fragment to
add new client

Goes back
to main
activity

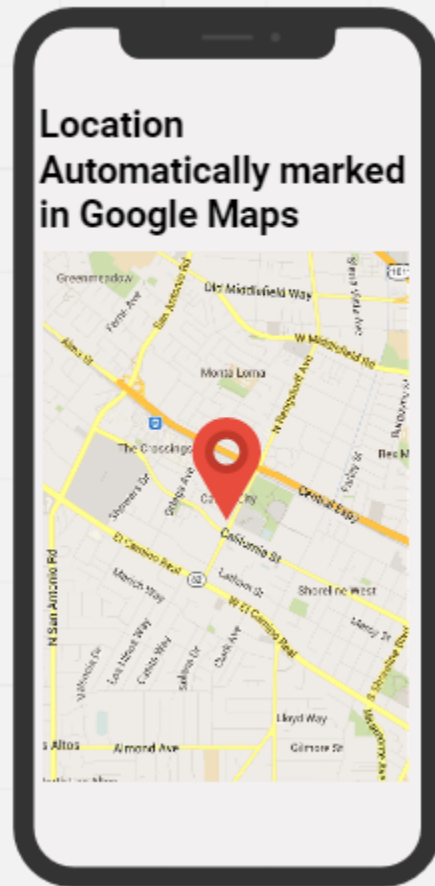
Goes to
add client
framgnet

Goes to
add order
framgnet

Phone Dial



Google Maps



Database Structure

Database Structure - Firebase Realtime Database

clients

unique id

name: Client Name

location: Client Location

number: Client Number

unique id

name: Client Name 2

location: Client Location 2

number: Client Number 2

unique id

name: Client Name 3

location: Client Location 3

number: Client Number 3

orders

unique id

info: order info

client

name: Client Name

location: Client Location

number: Client Number

unique id

info: order info

client

name: Client Name 2

location: Client Location 2

number: Client Number 2

Schedule for Development

Schedule For Development

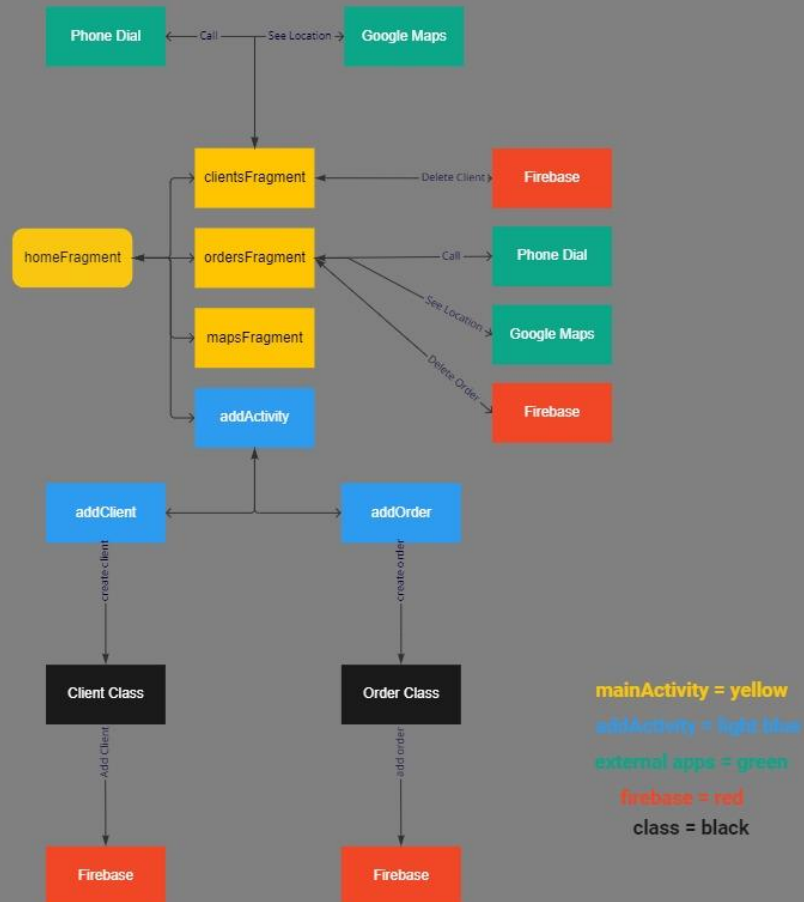
The schedule will include two parts:

- First part will include developing mainActivity fragments and two classes. Will take around a week.
- The second part will focus on developing addActivity fragments, implementing firebase and handling external apps. Will take around 9-10 days.

First Part	Second Part
<ul style="list-style-type: none">• Developing bottom navigation bar for mainActivity. by creating navigation menu layout and implementing that into bottom navigation bar• Handling onClick methods for each item in navigation menu layout• Developing Interface for homeFragment• Developing Clients Class• Developing Orders Class• Developing clients layout for clients RecyclerView• Adapting clients class into RecyclerView by inflating clients layout for every client into RecyclerView• Developing orders layout for orders RecyclerView• Adapting orders class into RecyclerView by inflating orders layout for every order into RecyclerView• Implementing google maps fragment into mainActivity	<ul style="list-style-type: none">• Developing top navigation bar for addActivity by creating navigation menu layout and implementing that into top navigation bar• Handling onClick methods for each item in navigation menu layout• Creating interface for addOrdersFragment• Implementing spinner by taking firebase data and populating spinner• Handling inputs for addOrdersFragment by taking inputs putting them into constructor and pushing the constructed orders object into Firebase• Handling button clicks. Add button will change the fragment from addOrdersFragment to addClientsFragment and backButton with change the activity from addActivity into mainActivity by using Intent• Creating interface for addClientsFragment• Handling inputs for addClientsFragment by taking inputs and putting them into constructor and pushing the constructed clients object into firebase• Handling Call button clicks by using intent to open up dial and put in the client number• Handling See on Map button clicks by using intent to open up google maps and put in the address of client• Handling Remove and Delivered buttons by taking the id's of clients/orders and removing that from the firebase database

Flow Chart of the application

Flow Chart



Test plan

Test Plan	
Test	Result
Test if application opens	click on the application and it opened succesfully. Started on the homeFragment
Check if navigation bars work	clicked on each navigation menu item. Each of them should prompt you to its desired fragment succesfully
Check if floating action button works correctly	click on floating action button. It should forward you to addActivity and the addOrders fragment should show up with top bar navigation
Check if back button works correctly	click on back button. It should transfer you to mainActivity and the homeFragment should show up with bottom navigation
Check if client is added correctly to database (clientsFragment and spinner)	navigate to addClientFragment. Input the clients name, address and number and click on submit button. The client should be added in firebase database and on clientsFragment. Navigate to addOrdersFragment and check if client is added to spinner. Then navigate back to clientsFragment and check if the client has been added.
Check if add button works correctly	naviage to addOrdersFragment. Click on add button. After click it should change fragments and transfer you to addClientsFragment
Check if order is added correctly	navigate to addOrdersFragment. Choose the client or add new one with add button. Fill order information and click on submit button. The order should be added to firebase database and to ordersFragment. Navigate back to ordersFragment and check if order has been added
Check if call button works correctly	navigate to clientsFragment. If clients exist click on call button. It should prompt you to phone dial with the clients phone number automatically typed. If the client doesn't exist add the client and repeat the same process. Then navigate to ordersFragment and repeat the same process for orders.
Check if see on map button works correctly	navigate to clientsFragment. If clients exist click on see on map button. It should prompt you to Google Maps with location already marked. If the client doesn't exist add the client and repeat the same process. Then naviage to ordersFragment and repeat the same process for orders.
Check if delivered/remove buttons work correctly	navigate to clientsFragment. If clients exist click on remove button. After click it should remove the client from the database and from the layout. If client doesn't exist then add the client and repeat the same process. Then naviage to ordersFragment and if orders exist click on delivered button. After click it should remove the order from the database and from the layout. If order doesn't exist then add the order and repeat the same process.
Check if mapFragment works correctly	navigate to mapFragment by clickin on its menu item. It should change fragments and upon change Google Maps should load. The map at first should focus on Tbilisi, but if orders exist then after zooming out you should see the red markers. If orders don't exist then add the orders and repeat the same process.

