Mine App

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MINE

Username

Password

Log In

Context and background

❖ Family members in a nuclear family are constantly in contact even when they are in different corners of the world.

❖ The communication involves a constant cycle of informing, discussing and checking back.

❖ It is often difficult to extract action items from a casual chat and important notes often get missed among the constant stream of unimportant messages.

❖ Many still use the efficient 'notes on the fridge' that catches people's attention by focusing on a single task.

The proposed APP identifies and supports two of the most common reasons for contacting a family member.
1. Where are you?
2. Remember to do this!

Goal
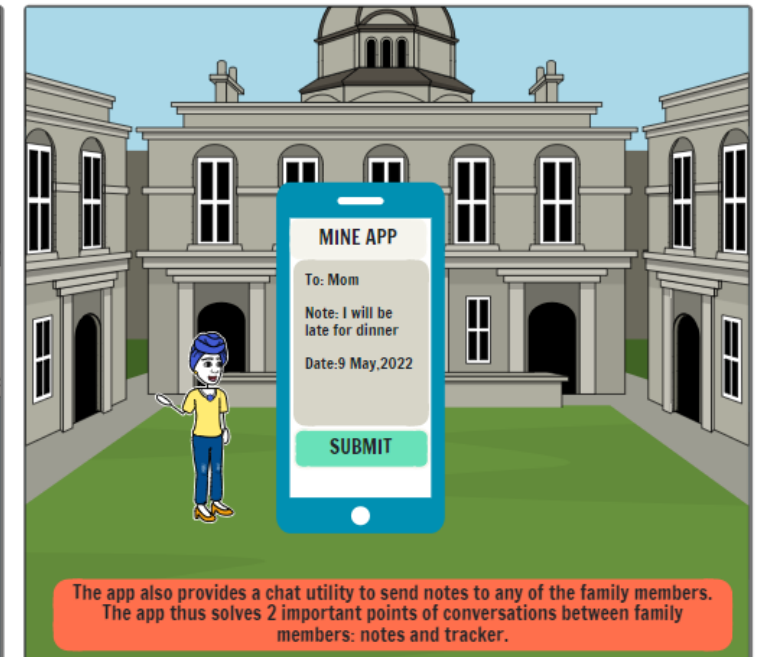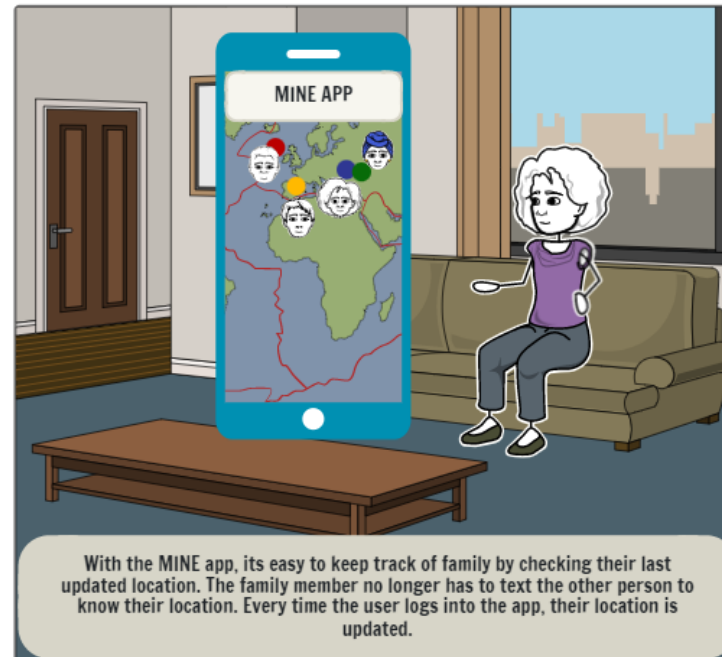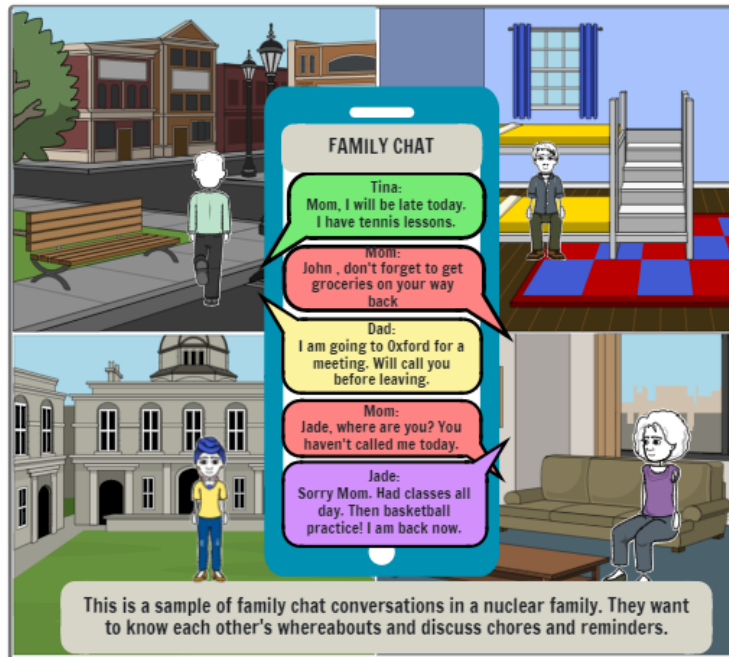
Create your own at Storyboard That

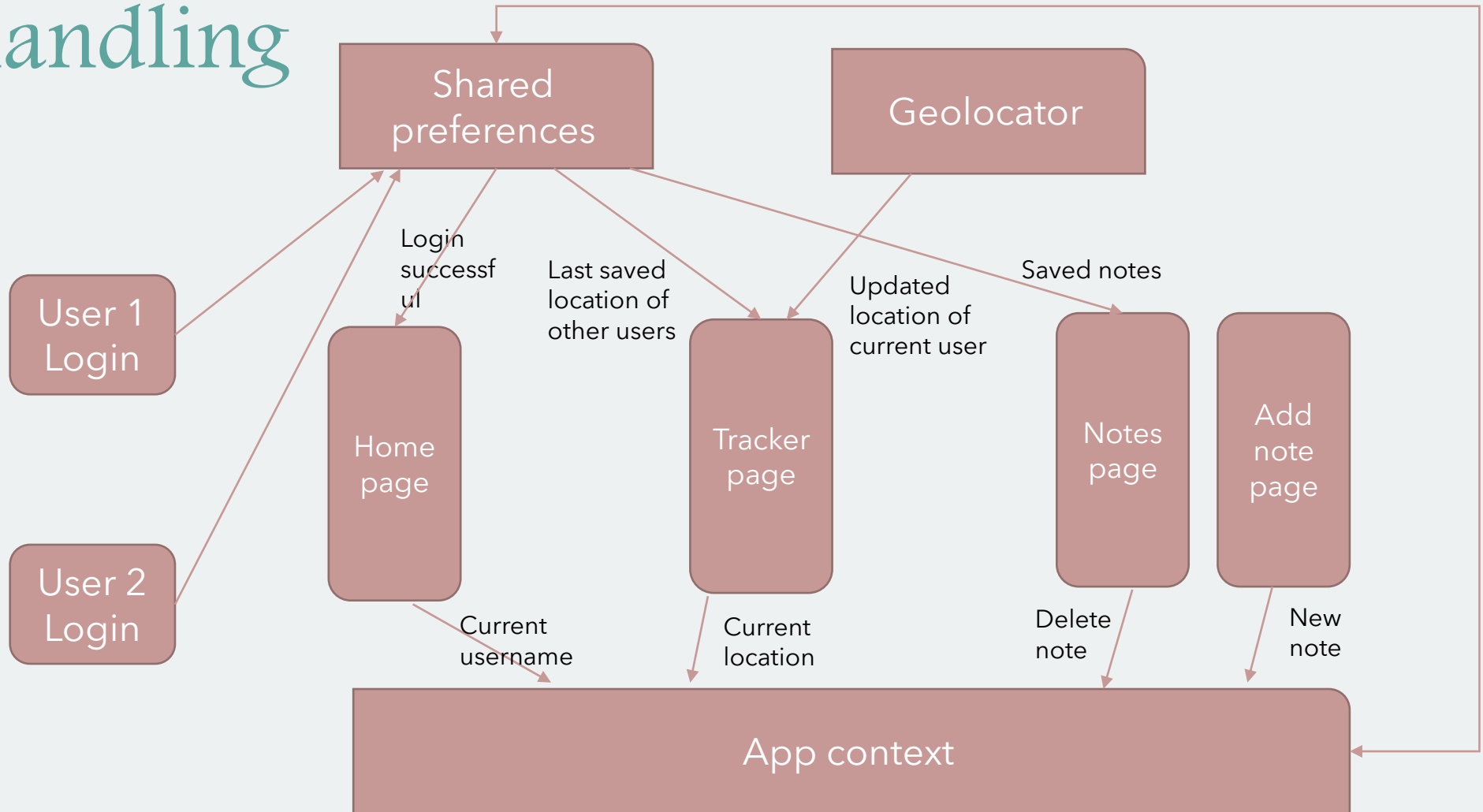Should consist of 2 sections: Trackers and To-do list
- ❖ The tracker section remembers and displays the last known location of all family member in a quick glance.
- ❖ The To-do list maintains a list to do items logged by family members consisting of the intended participant, date of logging and message.
- ❖ Once to-do list item is completed, the same can be deleted from the list with a single tap.

Data handling

User 1
Login

User 2
Login

Shared
preferences

Geolocator

Login
successf
ul

Last saved
location of
other users

Updated
location of
current user

Saved notes

Home
page

Tracker
page

Notes
page

Add
note
page

Current
username

Current
location

Delete
note

New
note

App context

Technical integration

Context provider: state handling

```
SdkContext.init(IsolateOrigin.main);
runApp(ChangeNotifierProvider(
  create: (context) => AppState(notes: [],markers: [], persons: []),
├─ child: MyApp(),
)); // ChangeNotifierProvider
```

```
final personList = List<String>.from(Provider
    .of<AppState>(context, listen: false)
    .persons);
```

```
setState(() {
  Provider.of<AppState>(context, listen: false).setLoginState(isLoggedIn);
  Provider.of<AppState>(context, listen: false).setId(username.toString());
```

Page navigation

```
initialRoute: '/',
routes: {
── '/': (context) => const MyHomePage(),
── '/login': (context) => Login(),
── '/tracker': (context) => const PlaceTrackerApp(),
── '/note': (context) => ToDoListApp(),
}
```

```
  onPressed: (){
    Navigator.pushNamed(context,'/note');
```

```
onPressed: () {
  //Navigator.pop(context);
  Navigator.popUntil(context, ModalRoute.withName('/'));
},
```

Saving state in local storage

```
SharedPreferences? prefs;
List<String>? notes;
List<String>? people;

void sharedPreferenceInit () async{
  prefs = await SharedPreferences.getInstance();
  isLoggedIn = prefs!.getBool("isLoggedIn")!;
  username = prefs!.getString("username");
  notes = prefs!.getStringList("noteList");
  people = prefs!.getStringList("persons");
```

```
SharedPreferences prefs = await SharedPreferences.getInstance();
prefs.setString("username", usernamec.text);
prefs.setBool("isLoggedIn", true);
```

Drawing maps with markers

```
hereMapController.camera.lookAtPointWithDistance(
    geo, distanceToEarthInMeters);
MapImage? _photoMapImage;



if (_photoMapImage == null) {
  String assetPath = 'assets/' + 'icon' + index.toString() +'.png';
  print(assetPath);

  _photoMapImage = MapImage.withFilePathAndWidthAndHeight(
      assetPath, 150,150);

  final marker = MapMarker(
      geo,
      _photoMapImage
  );
  print("Adding marker");
  hereMapController.mapScene.addMapMarker(marker);
```

Challenges and Future improvements

❖ The login module remembers the login state through local storage. But the module is incomplete and allows login irrespective of the password or username. By integrating Firebase utility, the app can truly support multiple users.

❖ Due to shortage of time, the app does not support the 'Add family' functionality yet. In future, a separate workflow needs to be added to Add new family/Add new member to your family.

❖ Due to the process of testing from a single phone, the location of all family members is shown as the same location. To test separate locations, I used the login functionality to login as multiple users at different locations. After firebase is integrated, it will be possible to record locations for multiple users.

❖ To demonstrate the utility of tracker application, two dummy ids[John and Tina] are provided in code if the person list is empty. This is just for demo.

❖ Images cutouts have been used to show different profiles on trackers and note page. In future, user would be able to customize the marker with their own picture.

❖ It is important to think about the ethical implications of sharing someone's location even though they are a family member and android app asks for location permissions. In future, the app could be enhanced with more options to stop and start sharing based on user's choice to make the app more secure.

THANK YOU!!

GitHub link: https://github.com/AbhipsaKar/CASA0015-Mine-AndroidAPP