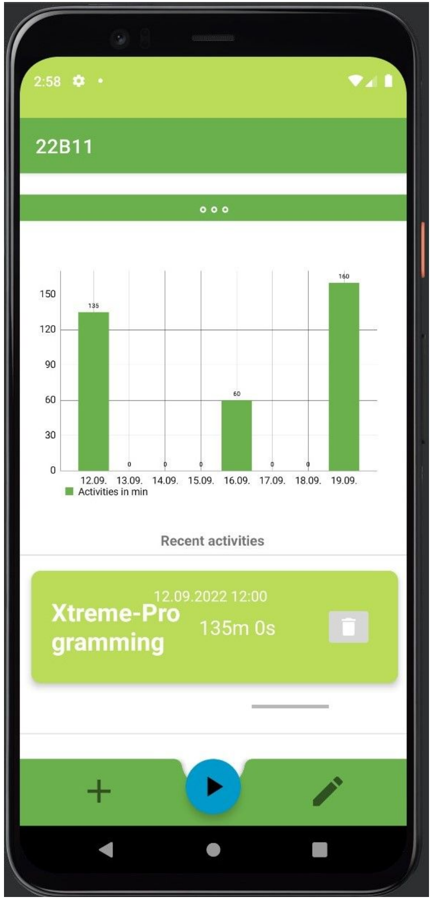
Fitness App

Daniel, Marvin, Philipp, David, Suleiman

Landing Page

Quick Navigation to:

- Record Activity
- Add Activity
- Edit Activity
- Recent Activities
- Options
- Statistics



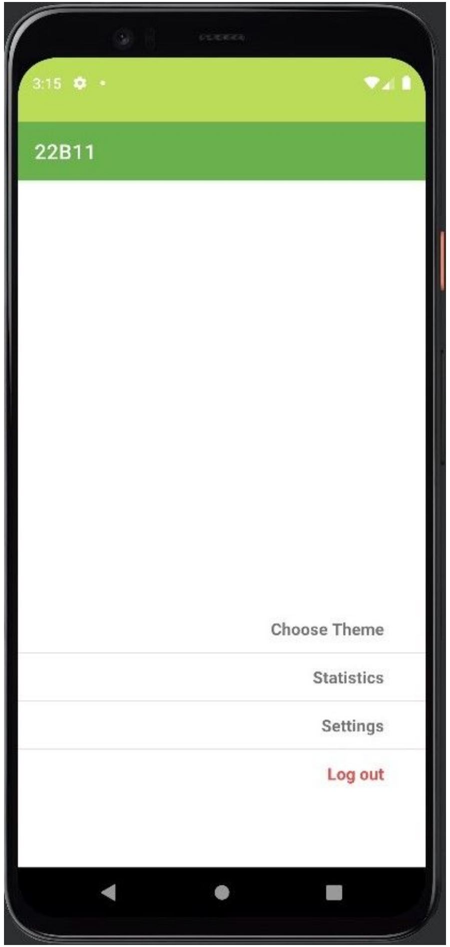
Recent activities

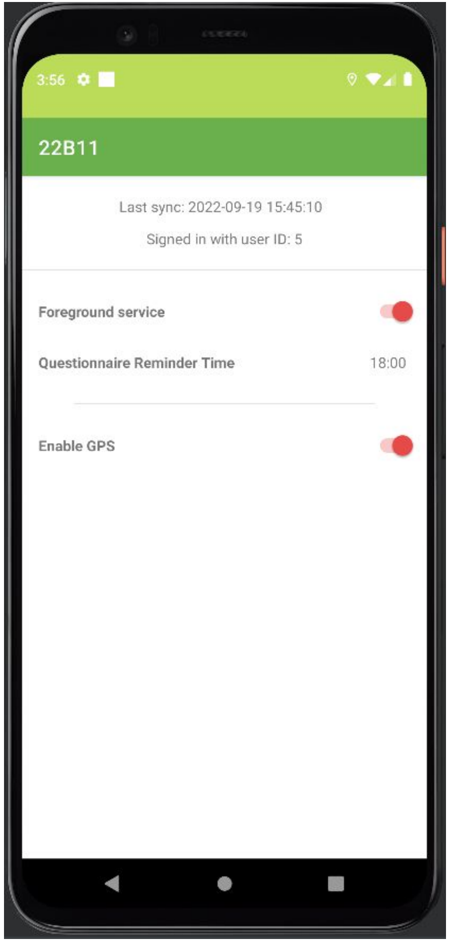
12.09.2022 12:00
Xtreme-Programming
135m 0s

Settings Menu

Navigation to:

- Theme Selection
- Statistics
- Settings
- Log Out





Last sync: 2022-09-19 15:45:10

Signed in with user ID: 5

Foreground service

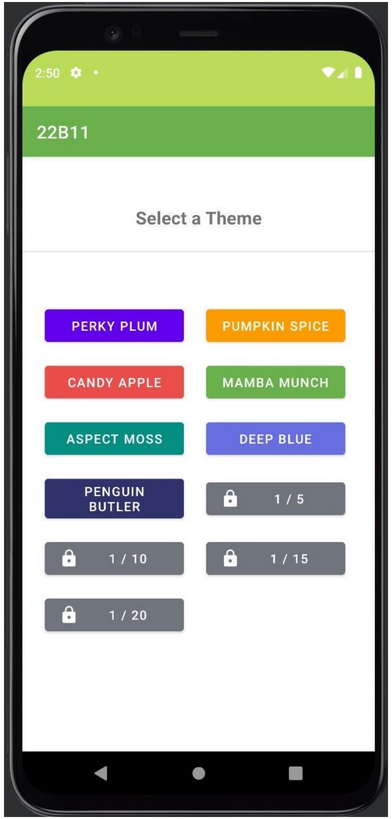
Questionnaire Reminder Time 18:00

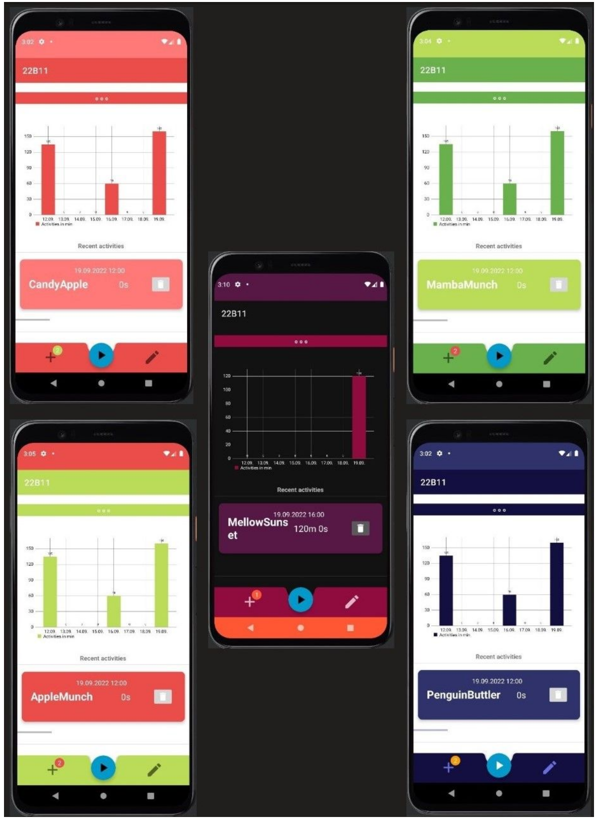
Enable GPS

Themes & Unique idea

- Different presets of Themes
- Complete Daily Questionnaires to unlock more.

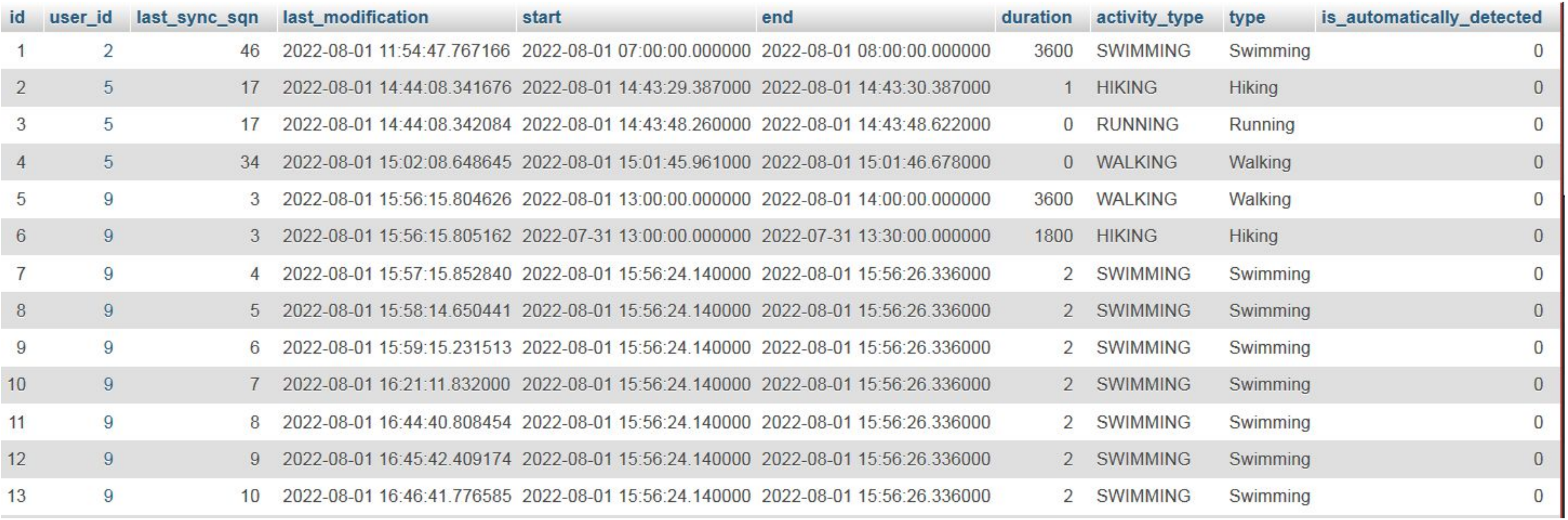
  (Only one per day can be accounted)





Database

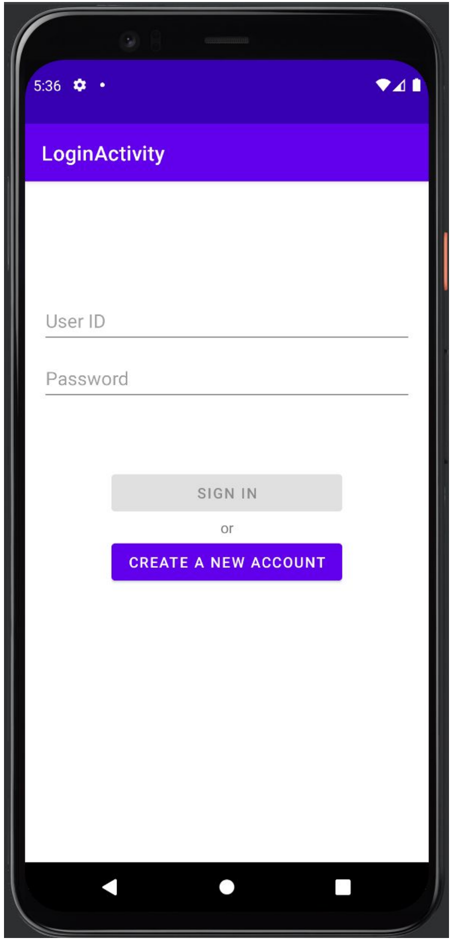
- Data is saved persistently in SQL database
  - ACID properties

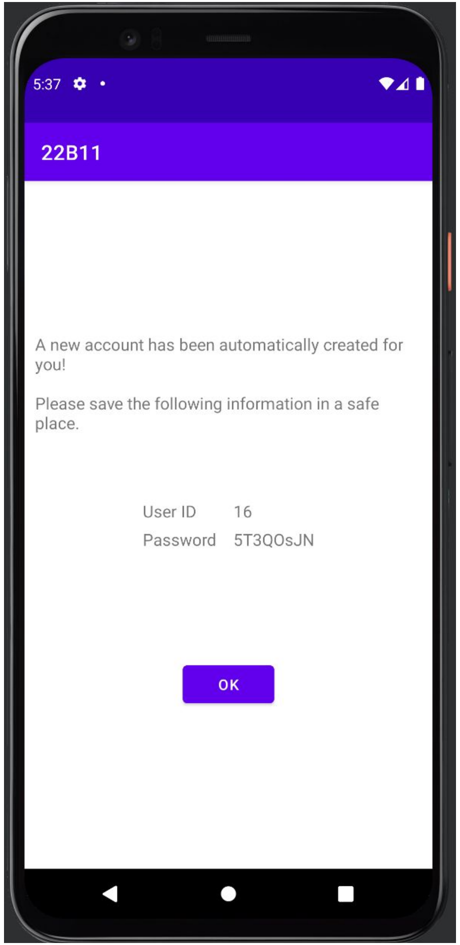


id	user_id	last_sync_sqn	last_modification	start	end	duration	activity_type	type	is_automatically_detected
1	2	46	2022-08-01 11:54:47.767166	2022-08-01 07:00:00.000000	2022-08-01 08:00:00.000000	3600	SWIMMING	Swimming	0
2	5	17	2022-08-01 14:44:08.341676	2022-08-01 14:43:29.387000	2022-08-01 14:43:30.387000	1	HIKING	Hiking	0
3	5	17	2022-08-01 14:44:08.342084	2022-08-01 14:43:48.260000	2022-08-01 14:43:48.622000	0	RUNNING	Running	0
4	5	34	2022-08-01 15:02:08.648645	2022-08-01 15:01:45.961000	2022-08-01 15:01:46.678000	0	WALKING	Walking	0
5	9	3	2022-08-01 15:56:15.804626	2022-08-01 13:00:00.000000	2022-08-01 14:00:00.000000	3600	WALKING	Walking	0
6	9	3	2022-08-01 15:56:15.805162	2022-07-31 13:00:00.000000	2022-07-31 13:30:00.000000	1800	HIKING	Hiking	0
7	9	4	2022-08-01 15:57:15.852840	2022-08-01 15:56:24.140000	2022-08-01 15:56:26.336000	2	SWIMMING	Swimming	0
8	9	5	2022-08-01 15:58:14.650441	2022-08-01 15:56:24.140000	2022-08-01 15:56:26.336000	2	SWIMMING	Swimming	0
9	9	6	2022-08-01 15:59:15.231513	2022-08-01 15:56:24.140000	2022-08-01 15:56:26.336000	2	SWIMMING	Swimming	0
10	9	7	2022-08-01 16:21:11.832000	2022-08-01 15:56:24.140000	2022-08-01 15:56:26.336000	2	SWIMMING	Swimming	0
11	9	8	2022-08-01 16:44:40.808454	2022-08-01 15:56:24.140000	2022-08-01 15:56:26.336000	2	SWIMMING	Swimming	0
12	9	9	2022-08-01 16:45:42.409174	2022-08-01 15:56:24.140000	2022-08-01 15:56:26.336000	2	SWIMMING	Swimming	0
13	9	10	2022-08-01 16:46:41.776585	2022-08-01 15:56:24.140000	2022-08-01 15:56:26.336000	2	SWIMMING	Swimming	0

Login and Account System

- User creates account
  - Private: no personal information required
  - Easy: password automatically generated
- Data synchronized with cloud automatically
- Account can be reused on another device
  - All data is restored





A new account has been automatically created for you!

Please save the following information in a safe place.

User ID 16

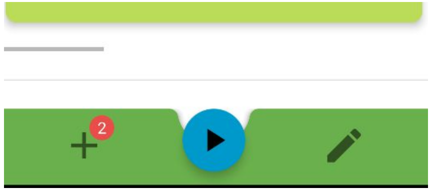
Password 5T3QOsJN

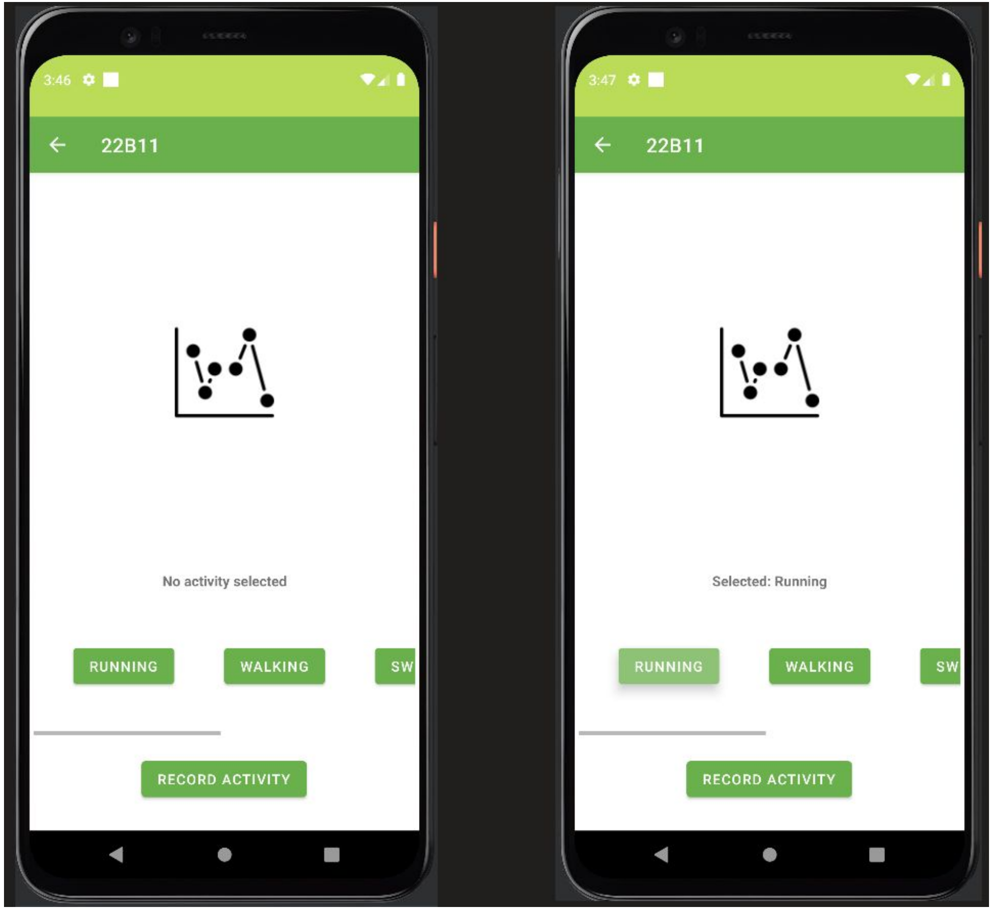
Activities

- User selects an activity

  Default activity: predefined list

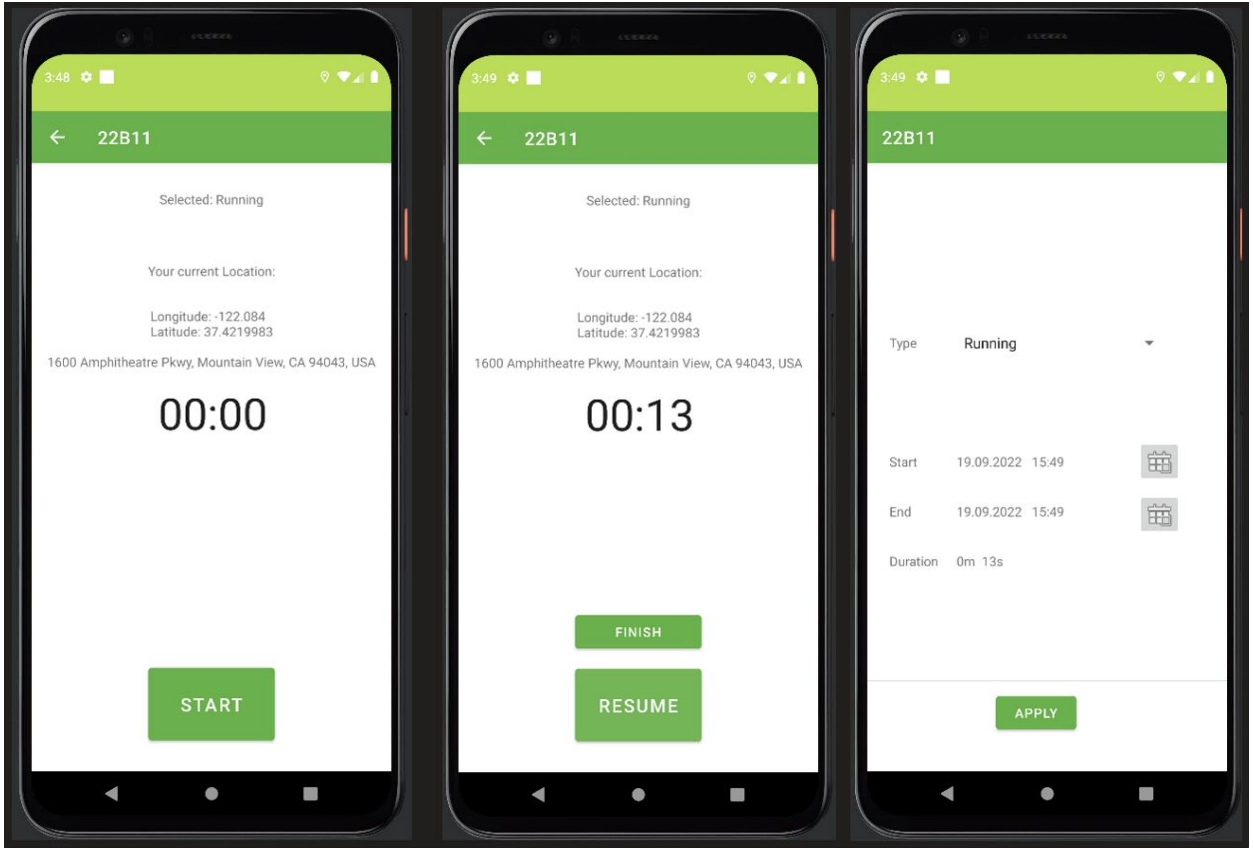
  Custom activity: select "other"
- Go to recording page by clicking "record activity"





Activities

- Recording is started by clicking ”Start” and pause by “Pause”
- On clicking “apply” the recorded activity is now saved and can be edited



3:48

22B11

Selected: Running

Your current Location:

Longitude: -122.084
Latitude: 37.4219983

1600 Amphitheatre Pkwy, Mountain View, CA 94043, USA

00:00

3:49

22B11

Selected: Running

Your current Location:

Longitude: -122.084
Latitude: 37.4219983

1600 Amphitheatre Pkwy, Mountain View, CA 94043, USA

00:13

3:49

22B11

Type Running

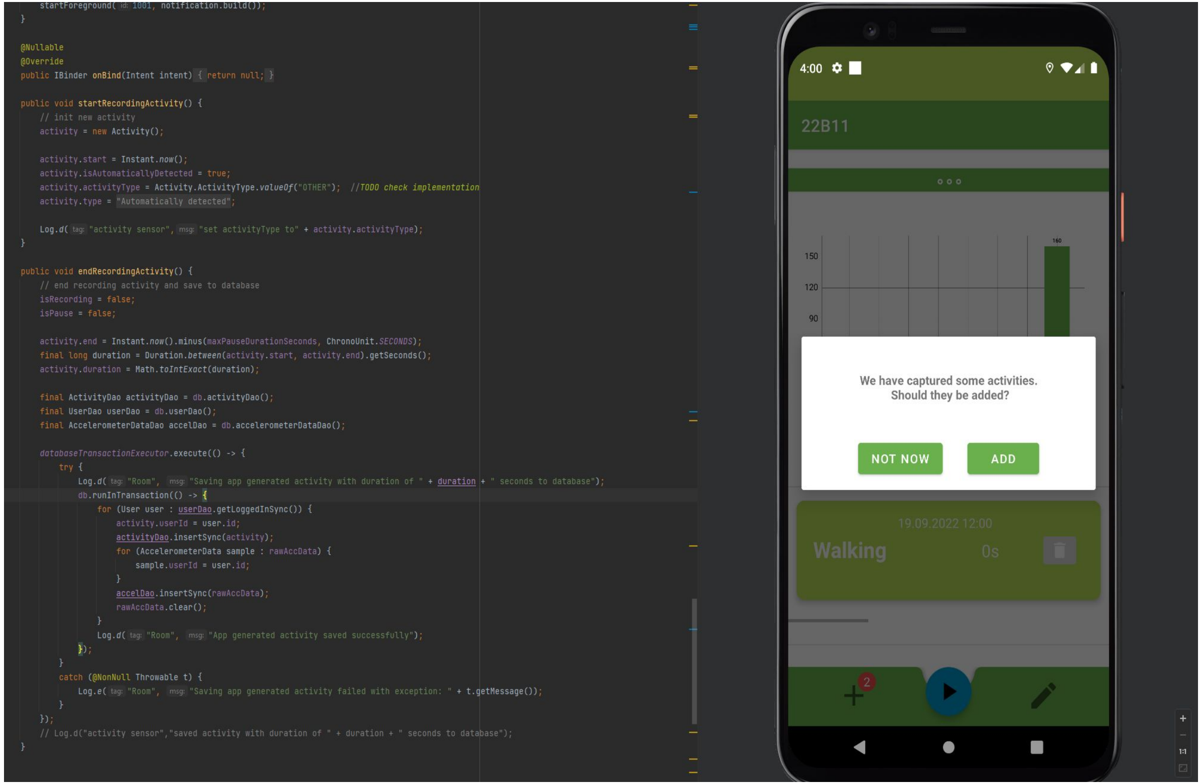
Start 19.09.2022 15:49

End 19.09.2022 15:49

Duration 0m 13s

Activity Detection

- Auto-generated Activities
- Threshold to start recording
- 24/7 available
- detect breaks
- Detected activities are shown at the plus sign as A red circle with a number

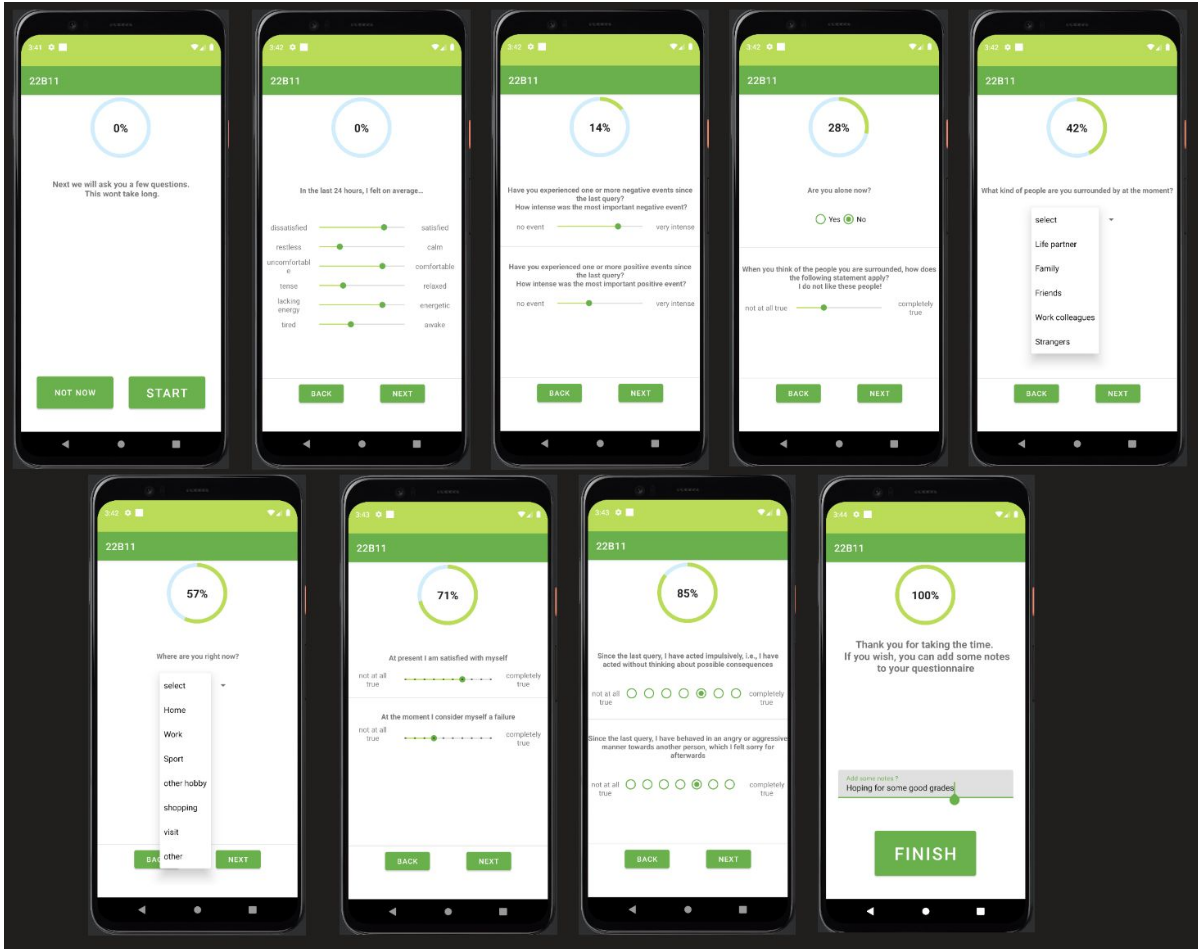


```java
        startForeground( id: 1001, notification.build());
    }

    @Nullable
    @Override
    public IBinder onBind(Intent intent) { return null; }

    public void startRecordingActivity() {
        // init new activity
        activity = new Activity();

        activity.start = Instant.now();
        activity.isAutomaticallyDetected = true;
        activity.activityType = Activity.ActivityType.valueOf("OTHER");  //TODO check implementation
        activity.type = "Automatically detected";

        Log.d( tag: "activity sensor", msg: "set activityType to" + activity.activityType);
    }

    public void endRecordingActivity() {
        // end recording activity and save to database
        isRecording = false;
        isPause = false;

        activity.end = Instant.now().minus(maxPauseDurationSeconds, ChronoUnit.SECONDS);
        final long duration = Duration.between(activity.start, activity.end).getSeconds();
        activity.duration = Math.toIntExact(duration);

        final ActivityDao activityDao = db.activityDao();
        final UserDao userDao = db.userDao();
        final AccelerometerDataDao accelDao = db.accelerometerDataDao();

        databaseTransactionExecutor.execute(() -> {
            try {
                Log.d( tag: "Room",  msg: "Saving app generated activity with duration of " + duration + " seconds to database");
                db.runInTransaction(() -> {
                    for (User user : userDao.getLoggedInSync()) {
                        activity.userId = user.id;
                        activityDao.insertSync(activity);
                        for (AccelerometerData sample : rawAccData) {
                            sample.userId = user.id;
                        }
                        accelDao.insertSync(rawAccData);
                        rawAccData.clear();
                    }
                    Log.d( tag: "Room",  msg: "App generated activity saved successfully");
                });
            }
            catch (@NonNull Throwable t) {
                Log.e( tag: "Room",  msg: "Saving app generated activity failed with exception: " + t.getMessage());
            }
        });
        // Log.d("activity sensor","saved activity with duration of " + duration + " seconds to database");
    }
```

We have captured some activities.
Should they be added?

Questionnaires

- The questionnaire is made up of 9 sites with several questions consisting of slider and drop down menus.
- At the top it shows the percentage of answered questions.
- In the end the questionnaire will be evaluated through a formula.



Next we will ask you a few questions.
This wont take long.

In the last 24 hours, I felt on average...

Have you experienced one or more negative events since the last query?
How intense was the most important negative event?

Have you experienced one or more positive events since the last query?
How intense was the most important positive event?

Are you alone now?

When you think of the people you are surrounded, how does the following statement apply?
I do not like these people!

What kind of people are you surrounded by at the moment?

Where are you right now?

At present I am satisfied with myself

At the moment I consider myself a failure

Since the last query, I have acted impulsively, i.e., I have acted without thinking about possible consequences

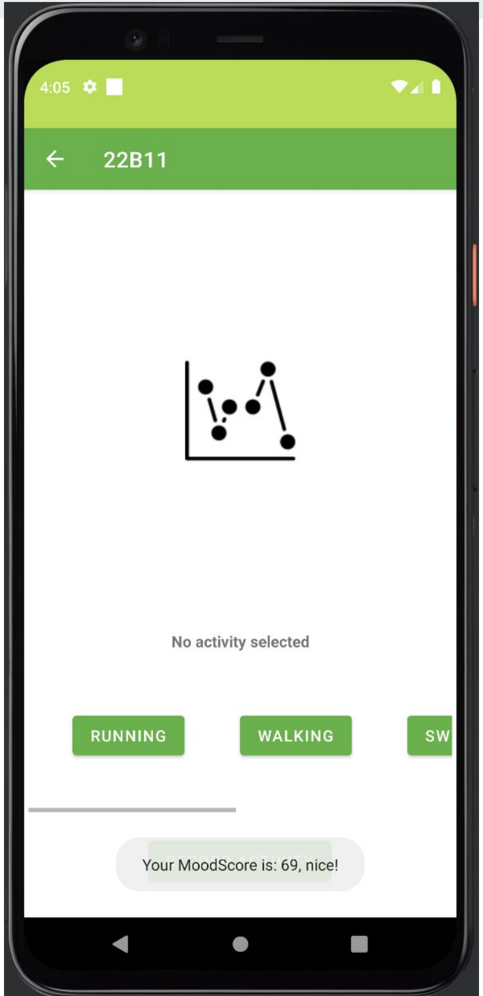
Since the last query, I have behaved in an angry or aggressive manner towards another person, which I felt sorry for afterwards

Thank you for taking the time.
If you wish, you can add some notes to your questionnaire

Hoping for some good grades

Questionnaires

- After completing the questionnaire the moodscore will be shown to the user
- The formula that was used to calculate the moodscore can be changed by the researcher.

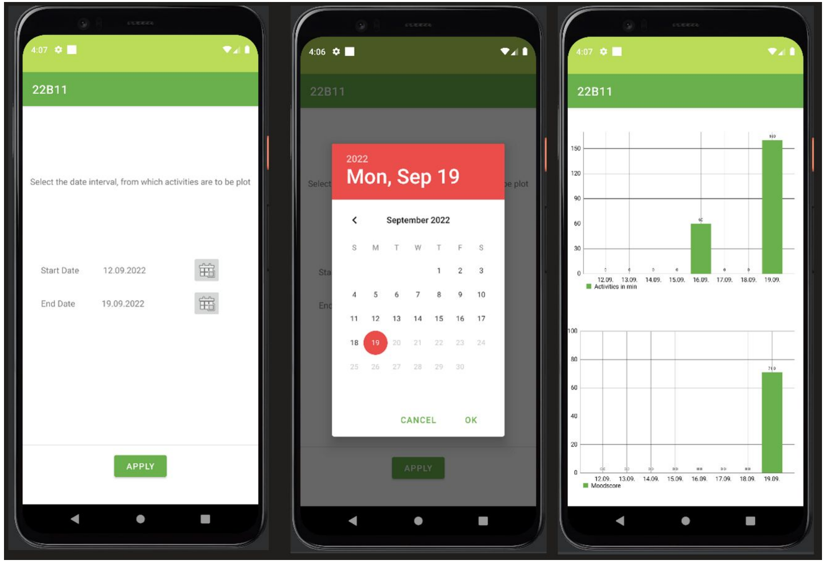


No activity selected

Your MoodScore is: 69, nice!

Statistical Representation

- User selects an interval to plot moodscore and activities
- First diagram shows activities in minutes
- Second diagram shows average moodscore of the day



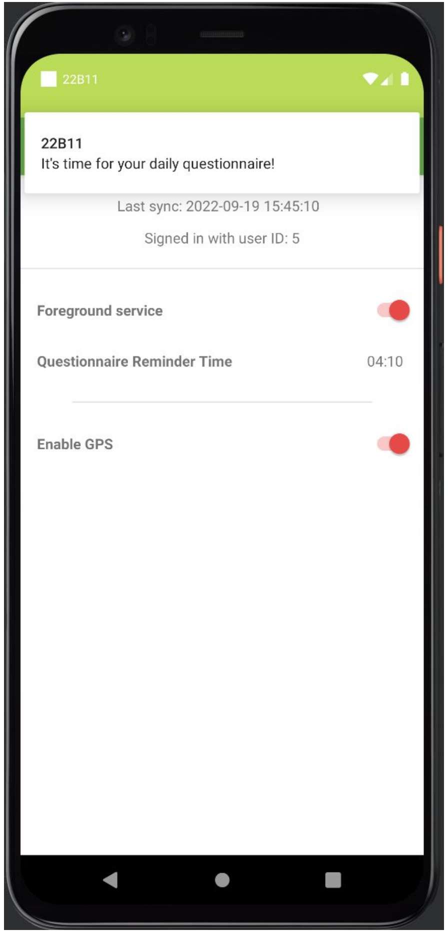
Select the date interval, from which activities are to be plot

Start Date 12.09.2022

End Date 19.09.2022

Statistical Representation

- User receives a reminding notification to take Questionnaire
- Default reminder time is 6pm and can be changed in settings



22B11
It's time for your daily questionnaire!

Last sync: 2022-09-19 15:45:10

Signed in with user ID: 5

Foreground service

Questionnaire Reminder Time 04:10

Enable GPS

Thank you!

Any questions?