



# KoBoToolBox

Field Guide

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# KoboToolbox

- KoboToolbox is a platform for field data collection in challenging environments. Our software is [free and open source](#) and **works both online and offline**. Most of our users are people working in humanitarian crises, aid professionals and researchers working in developing regions. Our team of developers, designers, support staff and researchers work tirelessly from countries around the world to keep the tool accessible to everyone.
- **What can KoboToolbox do?**
- KoboToolbox allows you to easily develop digital data collection forms that work on both mobile devices and web browsers.
- Creating forms is quick and simple, thanks to our easy-to-use [online form builder](#). You can also use the [XLSForm](#) specification and upload your files directly to the platform, which will provide you with the flexibility to build more complex and customizable forms. You can read more about getting started [here](#).
- Completed forms can then be shared online or downloaded onto mobile devices, ready to use for data collection. The [KoboCollect Android app](#) allows for [offline data collection](#), storing recorded data in the device until an internet connection is available and the data can be sent to the server. This ensures that even in network-constrained environments, data, from text to video to GPS coordinates, can be collected without internet connection.
- In addition to the KoboCollect app, KoboToolbox also allows for **online and offline data collection** through the web browser using any device or operating system, powered by [Enketo web forms](#), and can work on any mobile phone, tablet or computer. Simply share the URL of your form and you'll be able to start collecting data.
- KoboToolbox allows you to manage your data by aggregating the data collected from different devices, accessible through the KoboToolbox interface. This data can then be downloaded into multiple formats for use in applications such as Excel, SPSS or GIS software.

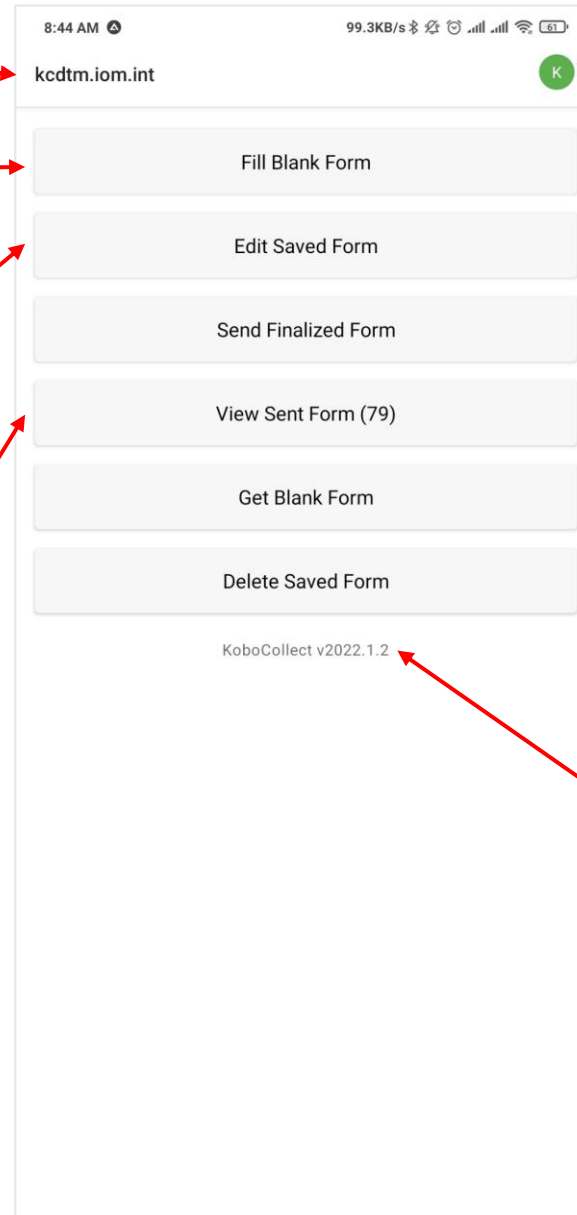
# Default Screen

**Server:** server address

Option to fill a blank form, user has to select from the list of downloaded forms

Editing saved forms after data collection, we can edit forms if we notice something isn't right during the review process

User can view the sent forms, it also counts how many forms were sent, this could include sent forms from previous servers or versions of the same form.



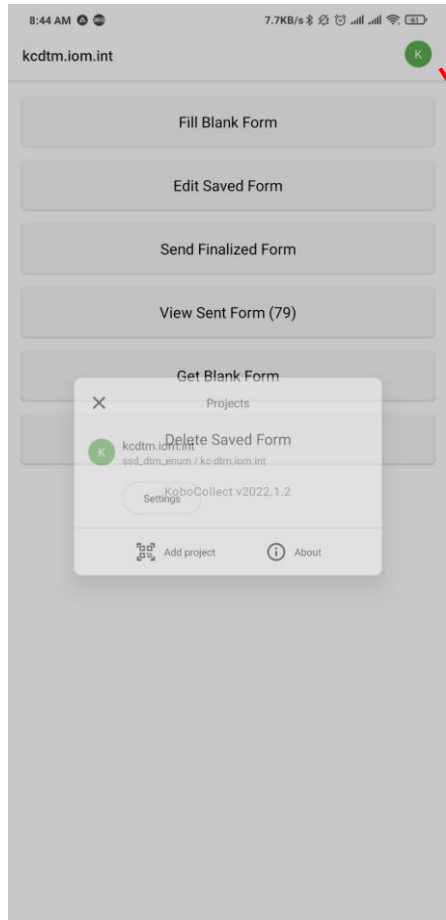
Settings Tap

Sending to the server the finalized form (s)

Downloading blank form from, requires internet and lists all available forms. User can download form required for the activity.

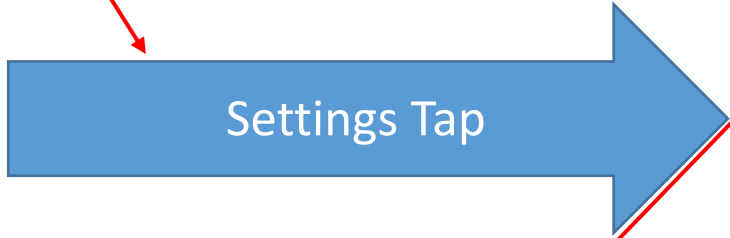
Version details, currently the phone has App version 2022.1.2

# Settings



**Maps:** This is the offline maps quick start with below features:-

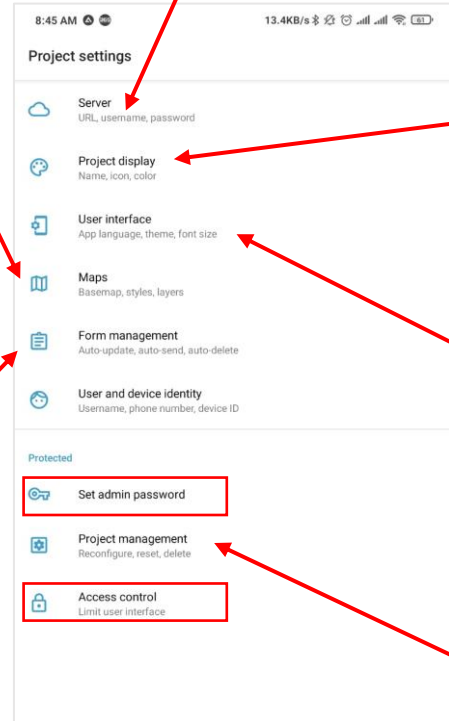
- Create MBTiles
- Select your offline layer in the reference layer settings
- Open a GeoPoint, GeoTrace, or GeoShape question



**Form management:** Option to manage your forms

- Form update
- Form submission
- Form filling
- Form import

**Server:** setting up the server-type server url, Account details: (username, and password) to connect to the Kobo server



**Set admin password and Access control remain restricted for all users, you are advised not to change anything here.**

**Project Display:** Project name is just a heading for the project, e.g. DTM South Sudan, Project Icon is an alphabet that represents the Project, e.g. D for DTM, and the project color is a color theme for the project, e.g. IOM Blue

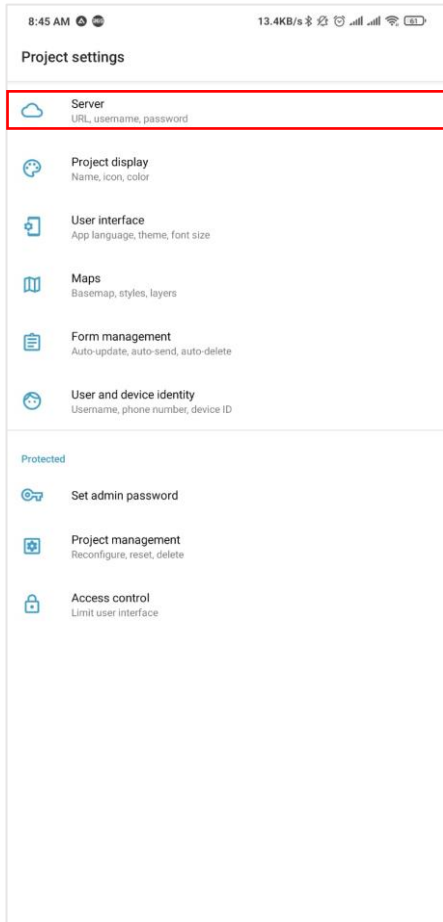
**User Interface:** setting up the server-type server url, Account details: (username, and password) to connect to the Kobo server

**Project management:**

- Reconfigure the App settings via QR code or share your settings with other phones.
- Reset settings of the Kobo server (url and account details) to default "Humanitarian-response" details.
- Delete server settings from this App.

# Server

**Server:** setting up the server-type server url, Account details: (username, and password) to connect to the Kobo server



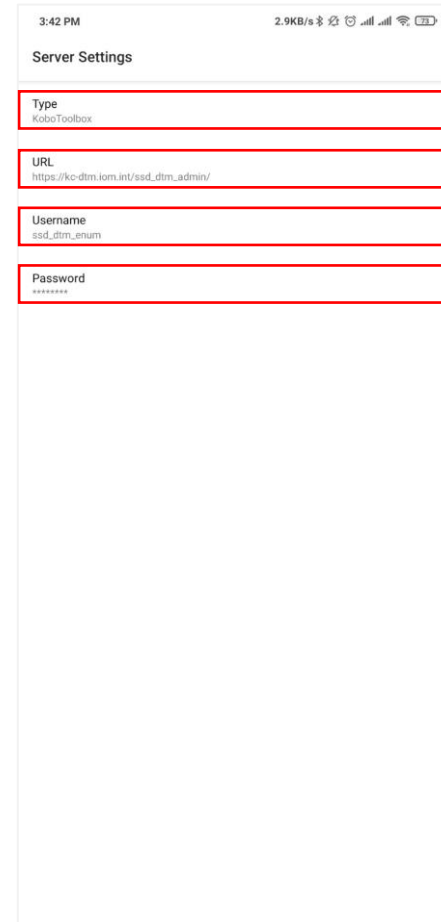
8:45 AM 13.4KB/s

Project settings

- Server  
URL, username, password
- Project display  
Name, icon, color
- User interface  
App language, theme, font size
- Maps  
Basemap, styles, layers
- Form management  
Auto-update, auto-send, auto-delete
- User and device identity  
Username, phone number, device ID

Protected

- Set admin password
- Project management  
Reconfigure, reset, delete
- Access control  
Limit user interface



3:42 PM 2.9KB/s

Server Settings

- Type  
KoboToolbox
- URL  
[https://kc-dtm.iom.int/ssd\\_dtm\\_admin/](https://kc-dtm.iom.int/ssd_dtm_admin/)
- Username  
ssd\_dtm\_enum
- Password  
\*\*\*\*\*

**Type:** The type of server you'd like to connect to. It's clear that we intend to connect to our Kobo server, note that it's just message for the user to know what server type they are dealing with despite you can put any text in this field.

**URL:** Uniform Resource Locator  
This is the direct link/address to the server of interest. DTM server is <https://kc.kobo.iom.int>

**Username:** Basically all secured servers will require authentication to allow only the trusted users to access the services. Username here is **XXXXXX**

**Password:** Password to authenticate the registered user to the server.

# Form management

8:47 AM 1.5KB/s

Form management

**Form update**

Blank form update mode  
Manual

Automatic update frequency  
Every fifteen minutes

Automatic download  
Automatically download updated versions of forms

Hide old form versions  
Only the newest version will appear in Fill Blank Form

**Form submission**

Auto send  
Off

Delete after send  
Deletes finalized forms and media after sending to server

**Form filling**

Default to finalized  
Mark form as finalized by default

Constraint processing  
Validate upon forward swipe

High res video  
Enable high-resolution video recordings

Image size  
Original size from camera (default)

Show guidance for questions  
No

Use external app for audio recording

**Form import**

- **Form update**

- **Blank form update mode:** How blank forms are updated in case of changes in the server, default is to manually remove and download the latest version of the forms, you also have the choice to allow only **“previously downloaded forms only”** or **“Exactly match server”**
- **Automatic update frequency:** Users can set a schedule to check for an update and download, only application if **“Blank form update mode”** is not set to Manual.
- **Automatic download:** Once this option is checked, the Kobo App will automatically download the latest versions of forms based on the above settings.
- **Hide old form versions:** This option allows Kobo to hide old versions of a form to avoid confusion, especially when Kobo is set to download updated versions automatically.

- **Form submission**

- **Auto send:** Automatically send all finalized forms when the phone is connected to the internet
- **Delete after send:** Automatically delete forms once sent (sent forms)

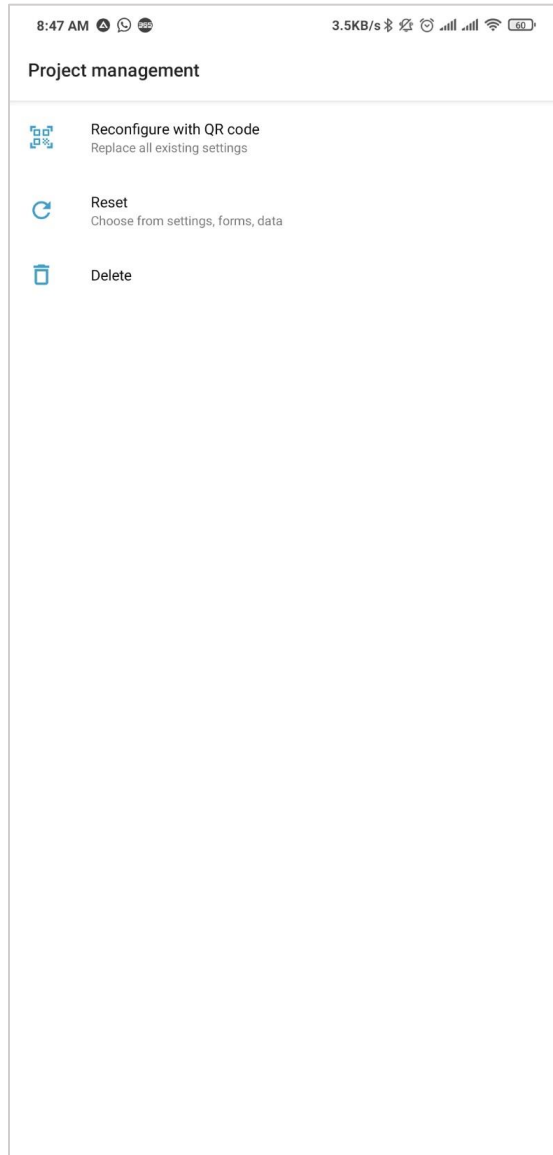
- **Form filling**

- **Default to finalized: makes filled forms to finalized which can be sent if auto send is on, not advisable in situations where forms need thorough review prior to submission.**
- **Constraint processing: Advance option to process constraints mainly for validation purposes**
- **High res video:** Videos taken will have high resolution, and requires enough storage capacity
- **Image size:** Allows you to select the size of an image to capture, usually high-quality image requires enough storage space
- **Show guidance for questions:** Clicking
- **Use an external app for audio recording:** Advance option to allow other external apps use for audio recording

- **Form import**

- **Finalize forms on import:** Finalizing forms imported from other devices thus restricting them from being altered and **auto-sends** when the feature is turned on. This should be disabled all the time unless advised by the admin based on the type of data collection.

# Project management



## • Reconfigure with QR code

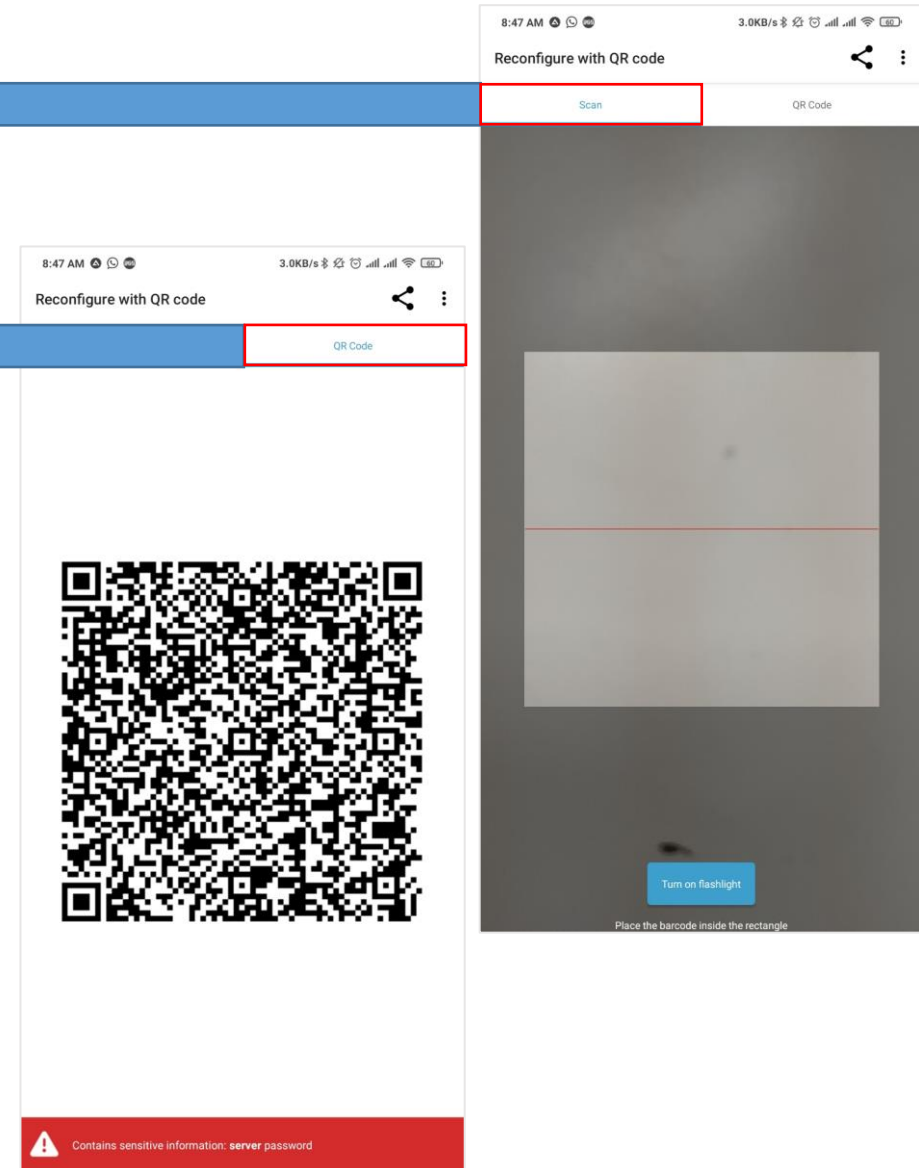
- **Scan:** Using your camera to **scan** QR code from another device to replace your current settings, usually we scan from a device having the settings we need to use for our project
- **QR Code:** This option allows the device to display its own QR Code (*containing all settings required to connect to our server and download forms and upload data*) for another device to scan

## • Reset

- **Select what to reset:** All selected data (Settings information) will be deleted permanently, there is no undo.
  - All settings (internal settings, saved settings)
  - Saved forms (instances folder, instances database)
  - Blank forms (forms folder, forms database, itemsets database)
  - Form load cache (cache folder)
  - Map layers (layers folder)

## • Delete

- All blank forms, submissions and settings will be permanently deleted.

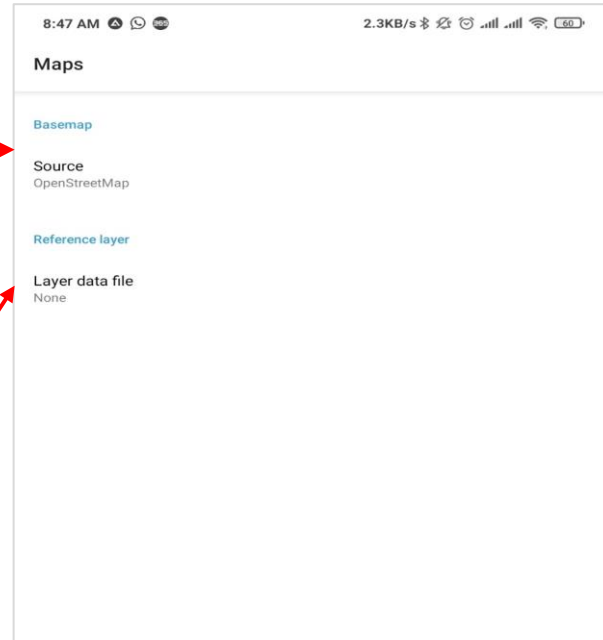




# Maps

**Source:** setting up the server-type server url, Account details: (username, and password) to connect to the Kobo server

**Reference layer:** setting up the server-type server url, Account details: (username, and password) to connect to the Kobo server



## Using Offline Maps:

Collect's location question types, select from map question, and filled form map can be configured to display different map data. The Maps Settings let you select a basemap to show, as well as a reference layer to show on top of the basemap. Those settings are shared between all mapping components in a single project.

The data for all the available basemaps comes from services on the Internet, so the basemap will only be visible to users who are online. To choose a basemap, select a Source and then a Style if multiple styles are available.

For the reference layer, however, you can select a file on the device, and it will be visible offline. Offline layers are useful to present custom geospatial data layered over standard basemaps or as basemaps for low-connectivity environments. Use them to display high-resolution imagery, annotated maps, heatmaps, and more. ODK Collect can display any map layer saved as a set of tiles in the MBTiles format.

## Offline maps quick start:

Get or create your MBTiles file with TileMill or other software.

Transfer tiles to devices. The MBTiles file must be placed on your device in the layers subdirectory of your Collect directory, and the filename must end in .mbtiles.

Select your offline layer in the reference layer settings.

Open a geopoint, geotrace, or geoshape question.

While viewing the map, you can also select the offline layer using the button that looks like a stack of layers.

*MBTiles files typically contain metadata that specifies the range of zoom levels in which they are visible. If you are viewing at an appropriate zoom level, your offline layer should be displayed. If you don't see it, you might need to zoom in or out until the zoom level is in the range specified by the MBTiles file.*

*If the tileset has transparency (PNG or PBF tiles only), the selected basemap will show through. If it does not have transparency or you are offline, only your offline layer will be displayed.*

## Transferring offline tilesets to devices:

**MBTiles files must be manually transferred to Android devices to be available to Collect. Place the MBTiles files in the layers subdirectory of your Collect directory, and ensure their filenames end in .mbtiles.**

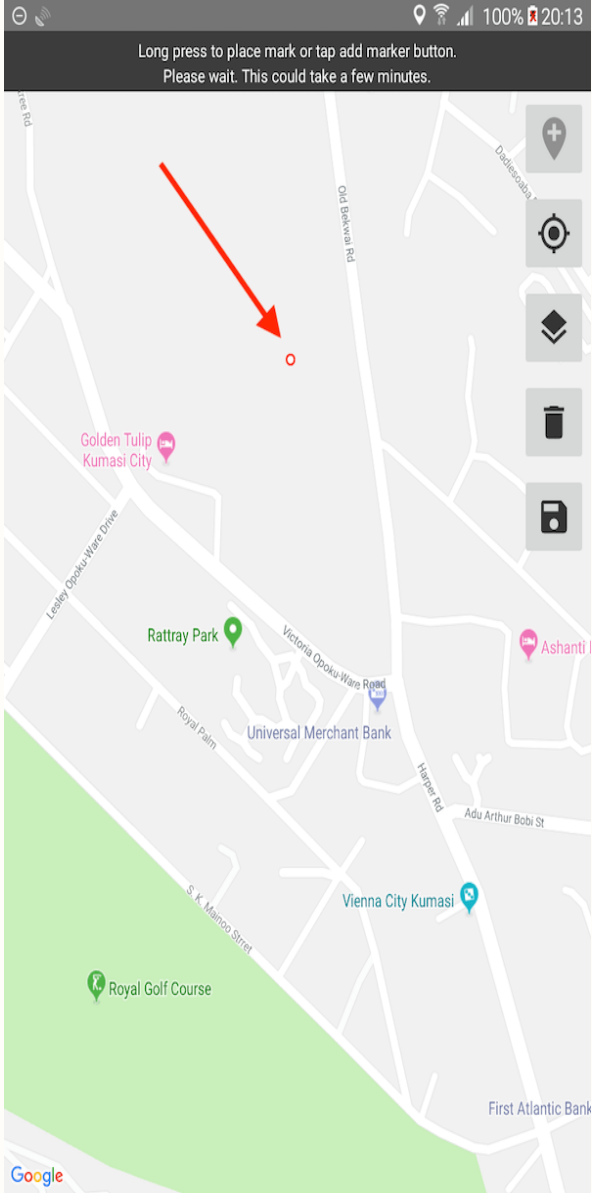
To transfer files, you can upload them to an online service such as Google Drive, connect your device to a computer and transfer them via USB, or use adb.

Once an MBTiles file has been transferred to the layers subdirectory of your Collect directory, it will be available for selection as a reference layer. A reference layer provides useful reference information for a data collector. A reference layer with no transparency acts like a basemap.

## There are two ways to set the reference layer:

- from Maps Settings
  - by tapping on the button that looks in a stack of layers in a geopoint, geotrace, or geoshape question
- Both options set the reference layer for all geopoint, geotrace, and geoshape questions. The choices in the Collect layer selection menu will show the name of the tileset (from the Metadata table in the MBTiles file), as well as the path to the file.

# GeoPoint



## Geopoint with map display

The default Geopoint widget does not display a map to the user. When the appearance attribute is maps, the widget displays a map to help the user get oriented and confirm that the selected point is correct and sufficiently accurate. When the device's geolocation is available, it is displayed on the map by a blue cross. A blue shaded circle around the cross represents the accuracy radius of the geolocation. The "add marker" button at the top right of the screen can be tapped to add a point at the location indicated by the middle of the blue cross. The selected point is represented by a small circle with a red outline.

When the map view is opened again with a selected point, the map is centered on that point. To change the selection, first tap the "trash" icon and then select a new point.

## Geopoint with user-selected location

*Type -> geopoint and appearance -> placement-map*

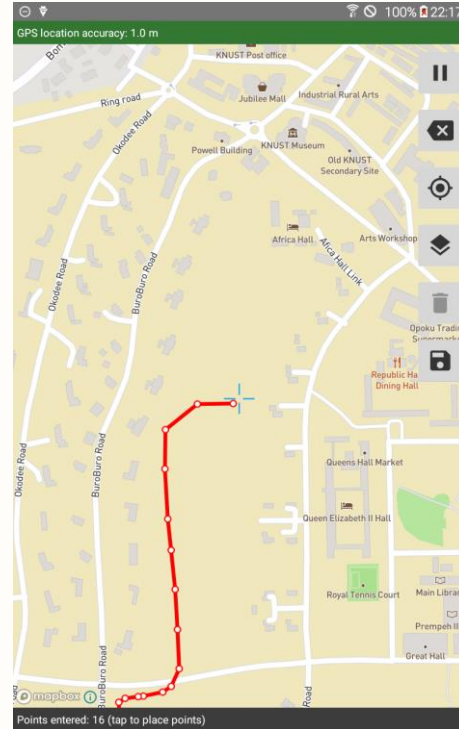
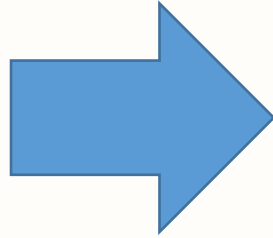
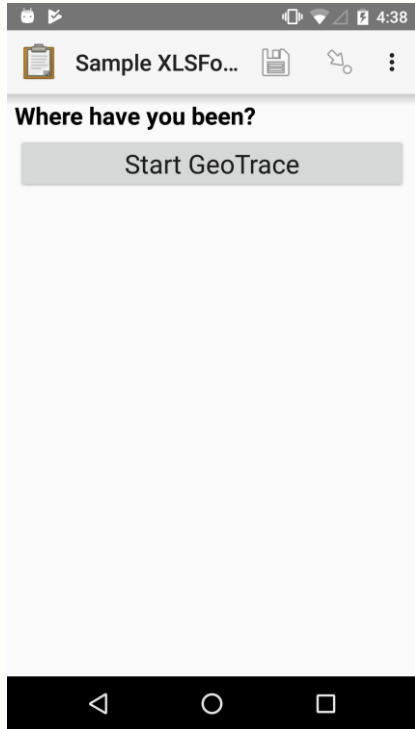
The default Geopoint widget does not allow the user to place the point anywhere other than the device's current geolocation.

A geopoint with the appearance attribute placement-map allows the user to select any point from a map. The user can either long press to place the point anywhere, or, if the device knows its geolocation, tap on the "add point" button at the top right of the screen. The selected point is represented by a small circle with a red outline (see arrow in screenshot).

The save button saves the selected point and returns to the question screen. If the point was selected by long pressing, the accuracy radius and altitude will both be 0. If the device's geolocation was selected, the accuracy radius will be greater than 0.

When the map view is opened again with an existing point, the map is centered on the selected point. To change the selection, first tap the "trash" icon and then select a new point.

# GeoTrace



A series of points. Identical to geoshape except that the first and last point may be different and at least 2 points are required.

Points can be entered either by tapping the screen to place each point, or by taking readings of the device's geolocation over time. On a map, each coordinate is represented by small circles with red outlines. These are connected by red lines.

To collect a geotrace, first select the location-recording mode by tapping the "add point" button in the upper right side of the screen. The selected mode will be displayed in the gray bar at the bottom of the screen. While point collection is ongoing, the "add marker" button changes to a "pause" button. The "back arrow" button can be used to remove the last-entered point either when actively collecting points or when paused. Any point can be manually moved at any time by tapping on it and dragging it. The mode can only be changed if an existing line is first cleared by tapping the "trash" button. Recording must be paused to clear the existing line.

***Once the trace has been saved, the coordinates of its points will be displayed on the question screen. The trace can be opened for manual editing by tapping to add more points, moving existing points or deleting the last-added point. After a trace has been saved once, it cannot be added to in manual or automatic location recording modes.***

**The three location recording modes are:**

- Placement by tapping
- The user taps the device to place points.
- Manual location recording

The user chooses when to tap the "record a point" button at the top of the screen to capture the device geolocation at that moment.

Automatic location recording

The user is prompted to select a recording interval and accuracy requirement. If the accuracy requirement is set to None, points are always collected at the recording interval. If the accuracy requirement is set to any other value, a point will only be captured if it meets the requirement. For example, given a recording interval of 20s and an accuracy requirement of 10m, the app places a point at the device location every 20s if the location is accurate to 10m or better.

# GeoShape

## Geoshape:

### Type

- geoshape

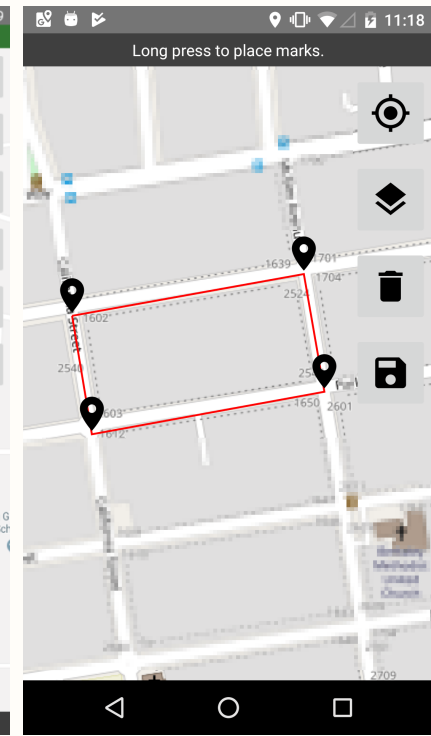
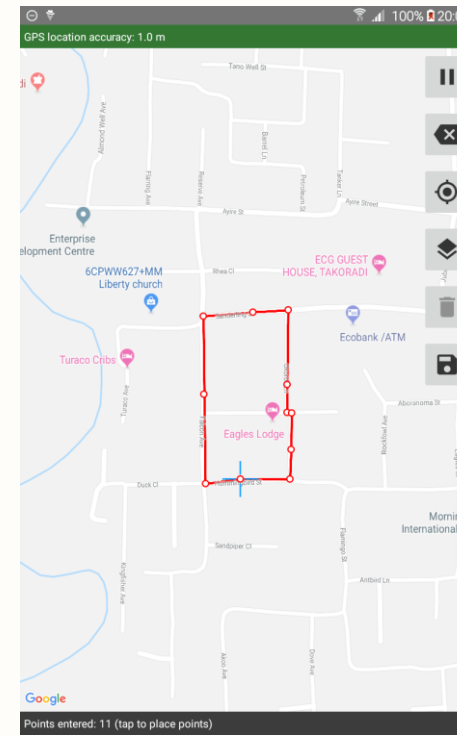
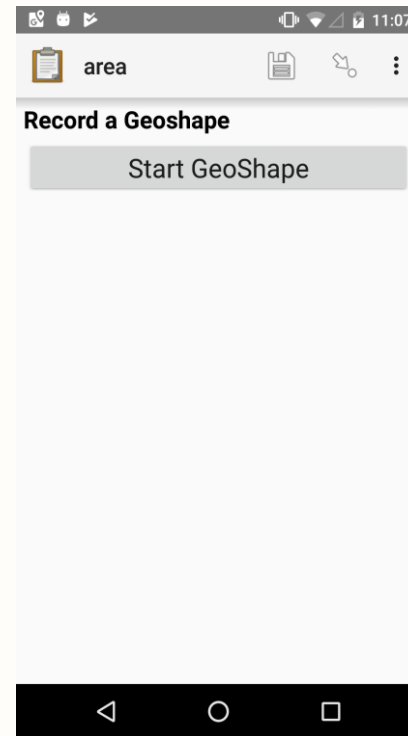
### appearance

- None

A series of points that form a closed polygon. Identical to geotrace except that the first and last point are always the same and at least 3 points are required.

Points can be entered either by tapping the screen to place each point, or by taking readings of the device's geolocation over time. On a map, each coordinate is represented by small circles with red outlines. These are connected by red lines.

To collect a geoshape, first select the location-recording mode by tapping the "add point" button in the upper right side of the screen. The selected mode will be displayed in the gray bar at the bottom of the screen. While point collection is ongoing, the "add marker" button changes to a "pause" button. The "back arrow" button can be used to remove the last-entered point either when actively collecting points or when paused. Any point can be manually moved at any time by tapping on it and dragging it. The mode can only be changed if an existing line is first cleared by tapping the "trash" button. Recording must be paused to clear the existing line.



## The three location recording modes are:

### Placement by tapping

The user taps the device to place points.

### Manual location recording

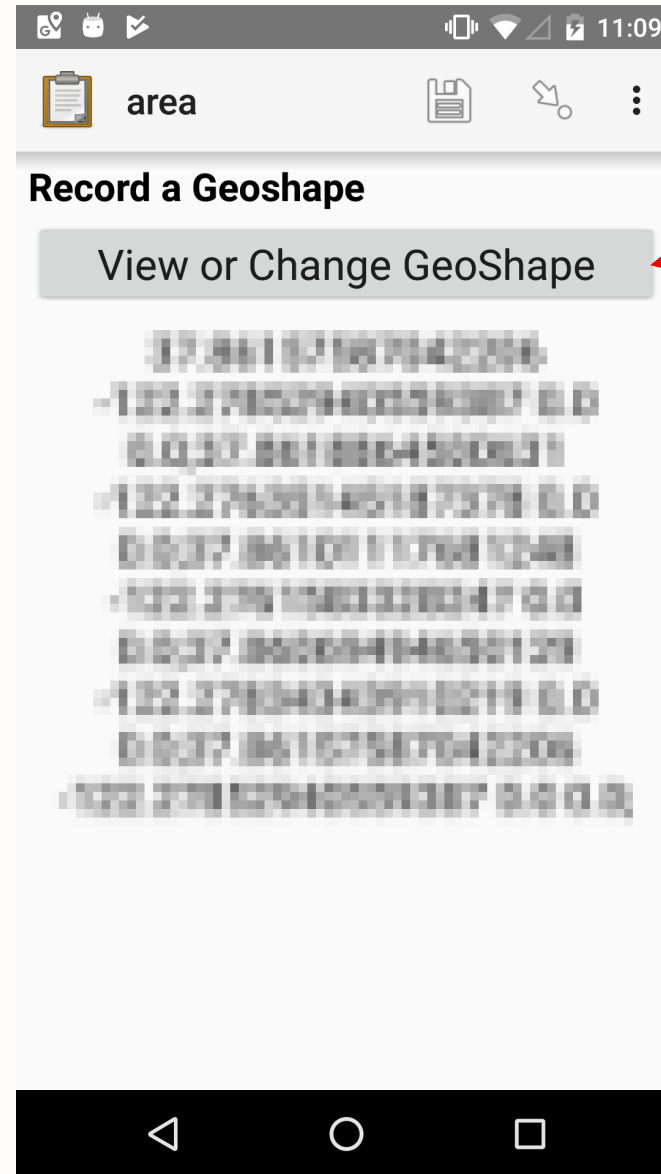
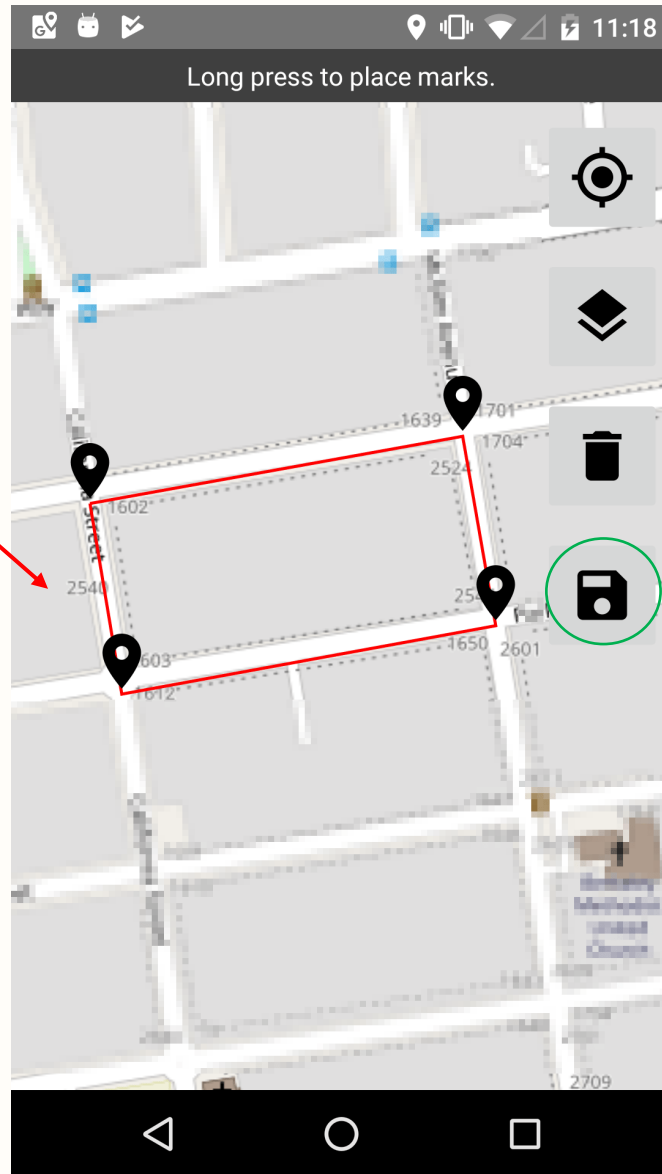
The user chooses when to tap the "record a point" button at the top of the screen to capture the device geolocation at that moment.

### Automatic location recording

The user is prompted to select a recording interval and accuracy requirement. If the accuracy requirement is set to None, points are always collected at the recording interval. If the accuracy requirement is set to any other value, a point will only be captured if it meets the requirement. For example, given a recording interval of 20s and an accuracy requirement of 10m, the app places a point at the device location every 20s if the location is accurate to 10m or better.

# Recording a GeoShape

GeoShape details get recorded once user clicks the **green** highlighted save button



User can proceed if satisfied with the GeoShape collected, otherwise you have the option to view or recapture/change the GeoShape