

Soil Survey Application

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Objective:-

To collect soil, farm, and farmer related information in order to analyze and improve the existing soil database.

Motivation:-

There is a mismatch between the MRSAC data and actual field data. This leads to incorrect results for runoff, groundwater recharge and other related attributes in the water budget calculation.

The android application is in Marathi to ease the personnel responsible for data collection.

Attributes of Interest:-

The android application collects the soil information as per below categories:-

1. Location Information

- a. District Name
- b. Taluka Name
- c. Village Name
- d. Latitude
- e. Longitude
- f. TimeStamp

2. Farmer Information

- a. Farmer Name
- b. Farmer Contact Number

3. Farm Information

- a. Gat Number
- b. Crop Name
- c. Land Use
- d. Soil Type
- e. Soil Depth (In Foot)

Design and Features of Application:-

1. Login (लॉगिन)

- 1.1. Currently, the application has a single login credential set. The credentials can be added later as per the requirement.

2. Click based Lat Long and Timestamp (वेळ / स्थान)

- 2.1. The timestamp and Lat-Long information can be added on a **single click** of the button. The lat-long information then dynamically changes as the user moves.

3. Inputs saved locally in CSV (जतन करा)

- 3.1. The inputs fed by the user can be stored (and are supposed to be) stored locally if the internet connection is weak or not available.

4. Update CSV to the server on a stable internet connection (सबमिट करा)

- 4.1. The application checks if the internet connection is available and then updates the inputs saved locally to the Postgres database on the server.

Storage at Server Side:-

Below attributes get updated to the database server once the submit option is clicked.

Database Table:- soil_info

district_name character varying(100),
taluka_name character varying(100),
village_name character varying(100),
farmer_name character varying(100),
contact_no character varying(100),
gat_no character varying(100),
crop_name character varying(100),
landuse character varying(100),
soil_type character varying(100),
soil_depth numeric,
latitude numeric,
longitude numeric,
time_info character varying(100),
year character varying(100),
yield numeric,
watering numeric,
watering_type character varying(100)

Snapshot of database entry:-

district_name character varying(100)	taluka_name character varying(100)	village_name character varying(100)	farmer_name character varying(100)	contact_no character varying(100)	gat_no characte
अमरावती	अकोला	अगासखेड	Swapnil	7709405270	54

Soil Application Design Snapshots:-

माती सर्वेक्षण

बापरकर्ता नाव

पासवर्ड

लॉगिन

माती सर्वेक्षण

स्थान माहिती

जिल्हा निवडा जिल्हा निवडा

तालुका निवडा तालुका निवडा

गाव निवडा गाव निवडा

वेळ/स्थान

अक्षांश 19.1344539

रेखांश 72.9059252

टाइमस्टॅम्प 08-05-2019---06:39:07

शेतकरी माहिती

शेतकरी नाव XYZ

संपर्क क्रमांक 9900000000

शेती माहिती

पीक मुख्य पीक निवडा

जमिन वापर जमिन वापर निवडा

मृदा प्रकार माती निवडा

गट नंबर 45

माती खोली (फूट) 2.5

माहिती जतन करा

जतन करा

सबमिट करा

	A	B	C	D
1	District	Taluka	Village	Farmer_name
2	अमरावती	तेल्हारा	आलमपूर	Swapnil
3	अमरावती	तेल्हारा	आलमपूर	Swapnil
4				
5				