

Open Source Apiary Management Application

Notes:

This is a guideline for the questions and information needed in the as-yet-to-be-named Apiary Management Application.

Please remember that:

- 1) We need a mobile app for the reporting which will be done in the field that will work offline and sync with the server database when a network connection is detected and
- 2) This app will be used in Tanzania to begin with, but will be used in other countries in the future. This means that all text in the user interface for both mobile app and website must be internationalized (enclosed in translation functions or otherwise NOT hardcoded) so that a text or xml file will provide localization strings for each language in future.

If you need more information on how to handle Android Internationalization/Localizatin, please see <http://developer.android.com/guide/topics/resources/localization.html>

The App and Dashboard Components:

Dashboard/ home page

- a. Create a new apiary;
- b. Create a new hive;
- c. Create a new inspection;
- d. Harvest;
- e. Inspection reports.

A. Create a New Apiary

- a. Apiary name:
- b. GPS location (show on global/ Africa/ Tanzania map):
- c. Year of commencing apiary:
- d. Harvesting months:
- e. Environment:
 - i. Is water supply within 3km radius of apiary; YES/NO
 - ii. Is vegetation within 3km radius of apiary miombo woodlands; YES/NO
 - iii. Is vegetation within 3km radius of apiary closed forests; YES/NO
 - iv. Is vegetation within 3km radius of apiary grassland; YES/NO
 - v. Is vegetation within 3km radius of apiary forest plantation; YES/NO
 - vi. Is vegetation within 3km radius of apiary sisal plantation; YES/NO
 - vii. Is vegetation within 3km radius of apiary orchard (citrus, etc.); YES/NO

- viii. Is vegetation within 3km radius of apiary mixed crops; YES/NO
- ix. Do farmers within a radius of 3km of the apiary use pesticides. YES/NO
- f. Accessibility of Apiary:
 - i. Is the apiary accessible by vehicles; YES/NO
 - ii. Is the apiary accessible by bicycle, motorcycle; YES/NO
 - iii. Is the apiary accessible by foot. YES/NO
 - iv. Type of Apiary o Natural-nest apiaries; YES/NO
 - v. Tree apiaries; YES/NO
 - vi. Breast height (or stand) apiaries; YES/NO
 - vii. Bee house apiaries; YES/NO
 - viii. Honey badger stand. YES/NO

B. Creating Hives

- a. Hive number:
- b. GPS location
 - i. Show on Global/ Africa/ Tanzania Map with:
 - 1. Coloured rings with radius of 1.5, 3.0 and 4.5 km radius to show main bee foraging areas of the honey bee colony
- c. Picture:
- d. Date of installation:
- e. Hive type (only 1 answer possible):
 - i. Traditional hive;
 - ii. Top bar hive;
 - iii. Top bar hive with queen excluder;
 - iv. Langstroth hive;
 - v. Other.
- f. Sun Exposure (only 1 answer possible):
 - i. Shady;
 - ii. Partial shade;
 - iii. Sunny.

C. Creating an inspection

- a. Hive number:
- b. Inspection date:
- c. Weather conditions (only 1 answer possible):
 - i. Sunny;
 - ii. Partly cloudy;
 - iii. Cloudy;
 - iv. Rain;
 - v. Windy
- d. State of hive (only 1 answer possible):
 - i. Not in use/ not installed;
 - ii. Not yet occupied;

- iii. Occupied;
 - iv. Absconded;
 - v. Dead, because of robbing;
 - vi. Dead, because of honey badger;
 - vii. Dead, because of mites;
 - viii. Dead, because of beetle;
 - ix. Dead, because of ants or other insects;
 - x. Dead, because of fire;
 - xi. Dead, because of flood;
 - xii. Dead, reason unknown.
- e. Strength of the colony – estimation of the inspector (only 1 answer possible):
- i. Strong;
 - ii. Moderate;
 - iii. Weak;
 - iv. Critical;
- f. Temper of the hive (only 1 answer possible):
- i. Calm;
 - ii. Nervous;
 - iii. Angry.
- g. Queen cells in brood combs (only 1 answer possible): YES/NO
- h. Condition of combs
- i. Honey Stores (only 1 answer possible):
 - 1. High;
 - 2. Average;
 - 3. Low.
 - ii. Pollen Stores (only 1 answer possible):
 - 1. High;
 - 2. Average;
 - 3. Low.
- i. Diseases and Pests
- i. Small Hive Beetle (only 1 answer possible):
 - 1. Light
 - 2. Moderate
 - 3. Heavy
 - ii. Varroa Mites (only 1 answer possible):
 - 1. Light
 - 2. Moderate
 - 3. Heavy
 - iii. Safari Ants : YES/NO
 - iv. Chalk Brood: YES/NO
- j. Hive condition (only 1 answer possible):
- i. Good
 - ii. Fair

- iii. Poor
- iv. Damaged
- k. Protective clothing & beekeeping tools condition (only 1 answer possible):
 - i. Good
 - ii. Fair
 - iii. Poor
 - iv. Damaged

D. Harvest

- a. Date:
- b. Quantity, number of RIPE combs harvested:
- c. Protective clothing available for beekeeper (only 1 answer possible): YES/NO
- d. Protective clothing available for all assistants (only 1 answer possible): YES/NO
- e. Smoker available (only 1 answer possible): YES/NO
- f. Number of clean, airtight buckets available for harvest.

E. Inspection reports:

- a. All inspections reports;
- b. Inspection reports per hive