Test Doc – mHealth Demo App

How to Test Ford mHealth Demo Application

1 Application installation and Pre-Requisite

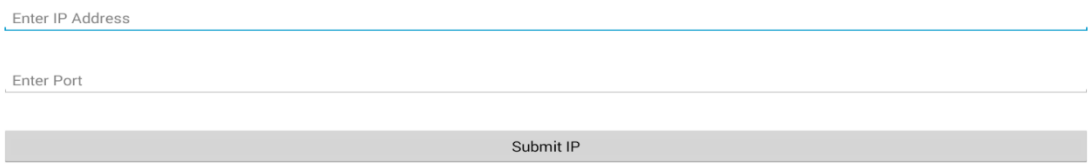
1. Install the given apk **(FordmHealthDemo.apk)** on Android Tab using with a normal installation process.
2. **Device prerequisite**
   - Android device (Phone or Tab) version 4.0 onwards
   - **Phone Screen Size 5” or larger**
   - **Android Tab of 7” or larger;** though screen will look best on a Tab of 10” size
3. Setting to be done on device
   - **Enable the Internet connectivity on the device via Wi-Fi / Mobile SIM (open internet required).**
   - Inter net enabled on the device should have access to the server which is hosting MOTECH services

2 Testing the App

After you install the given APK successfully, start the application.

2.1 Start up

On very first startup App will prompt to enter the IP address and port no. of the MOTECH hosting server.



Enter the IP and port no for android app to connect with backend system.

This will happen only on first time; after that App will store the same in phone local memory and will not prompt user to enter the same again.

2.2 Register the Vehicle

On very first run, application will register the vehicle on server .

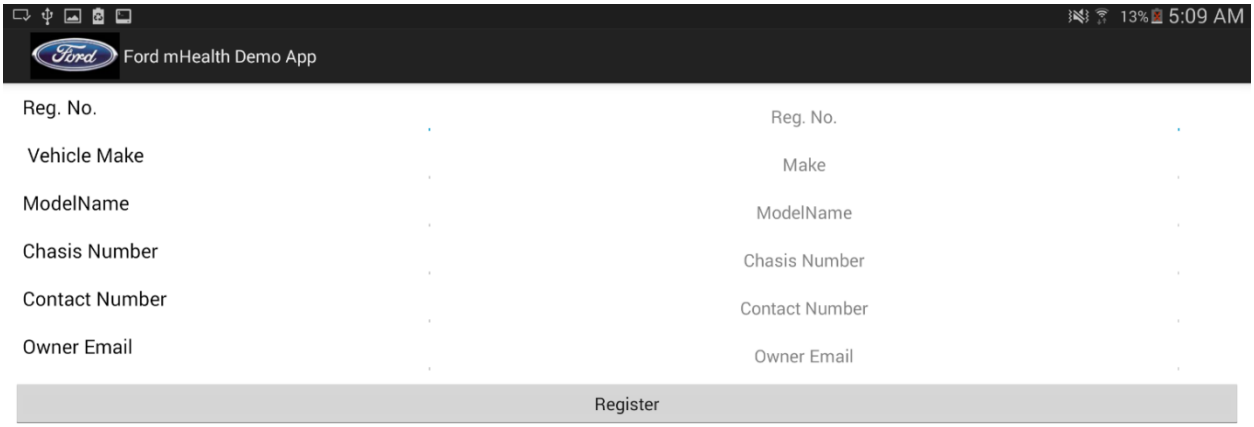
Hence it will prompt below screen for entering various details of the vehicle.

Please enter data appropriately on different fields.

Fields that are to be entered: Vehicle Registration Number, Vehicle make, Vehicle model, Chasis Number, Vehicle owner's contact number and Vehicle owner's email id

All fields are necessary! Some validations are put in fields like email address, contact no

Please enter all the data and press 'Register'



On successful Registration to server, next screen for choosing the 'Drive Trace File' will appear.

2.3 Drive Trace File Selection

Drive trace file is the one that will be used for vehicle run in simulation. Current app doesn't have a provision of doing the test run in actual vehicle! However it provides this way to provide flexibility to run the app with any valid drive trace file.

File selection screen gives two options to select a file.

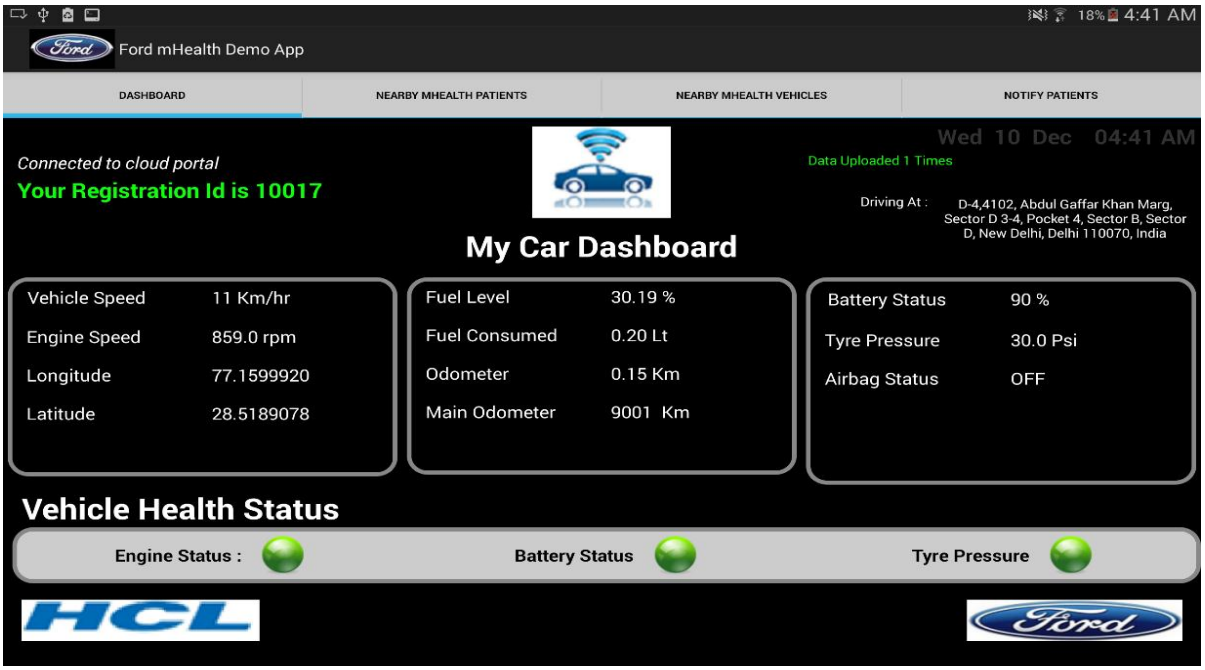
- First option is to show file selector where one needs to choose a valid drive trace file. This is necessary to choose a .txt file with right json data.
- Second option is to choose default trace file. This option will enable the default trace file that is embedded in APK itself

Selecting a File: **below screen shot –**

App can only select .txt file with right **json** data in the file. App can't choose other extension file as shown in below screen shot other extension files are not selectable.

2.4 App startup Dashboard screen

Once a trace file is provided, app first screen with dashboard appears –



Dashboard screen shows

- your Registration Id which is provided by server after registration
- your driving location and other vehicle parameters that reads from Drive Trace file
- The connectivity status (on top left)
    - will show connected to cloud portal, if its connected to internet and able to access the server
    - Will show 'not connected to cloud portal. Offline!!', if no network is present
    - will show 'Not connected to cloud portal', if its connected to some network but not able to access the server

2.5 Data Upload process

On every 30 second application uploads a set of vehicle data (Vehicle Id, Vehicle Speed, Latitude, Longitude, and Timestamp) to the server.

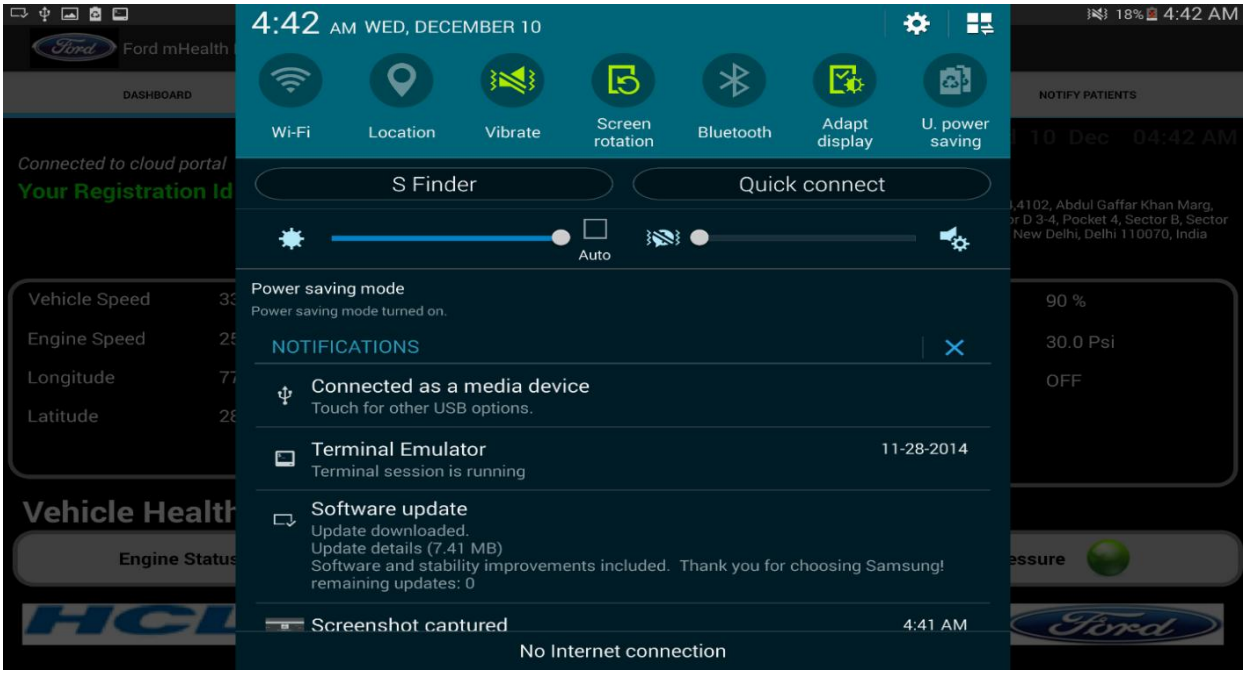
The rate 30 second is easily configurable – however at present it's in source code; not through a configuration file.

Server stores the vehicle data in its database.

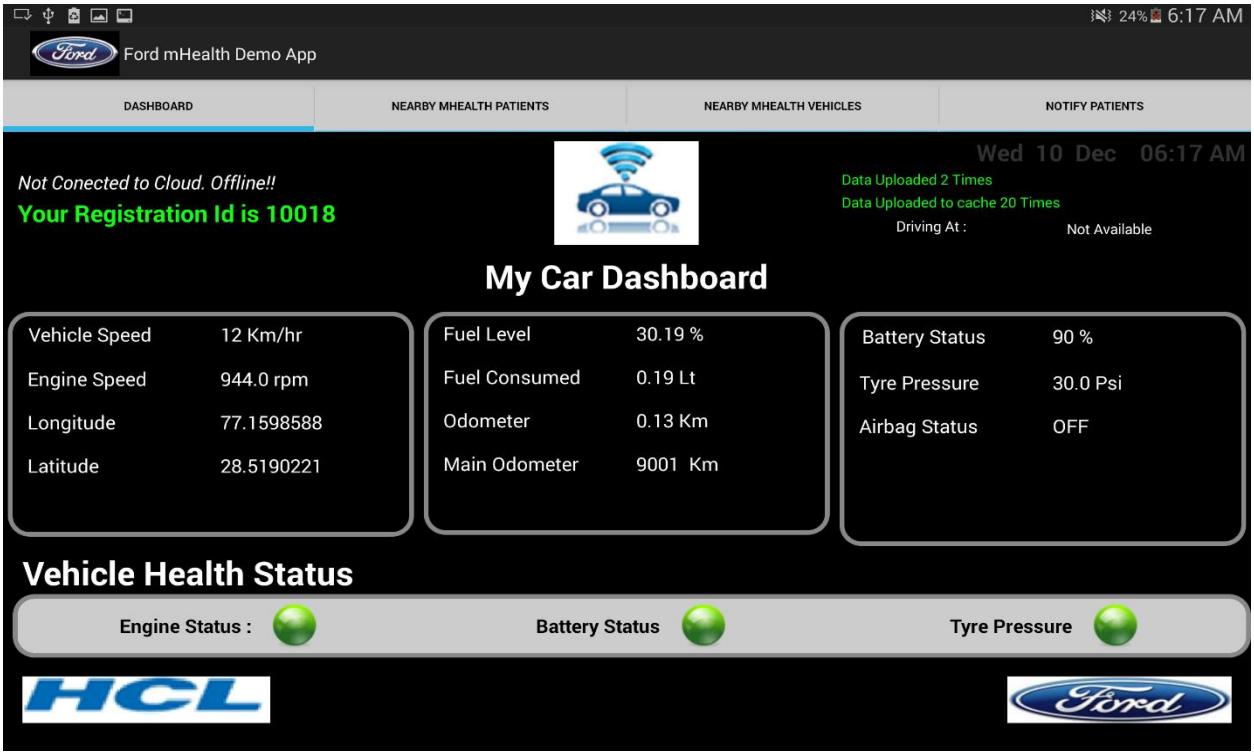
The number of uploaded data count is displayed on the right top corner of Dashboard screen, which keeps increasing every 30 sec if device is connected to cloud portal.

3 Offline Feature Test

To test the offline support app need to close all the network providers, Wi-Fi and Mobile Network data from the Android device settings –

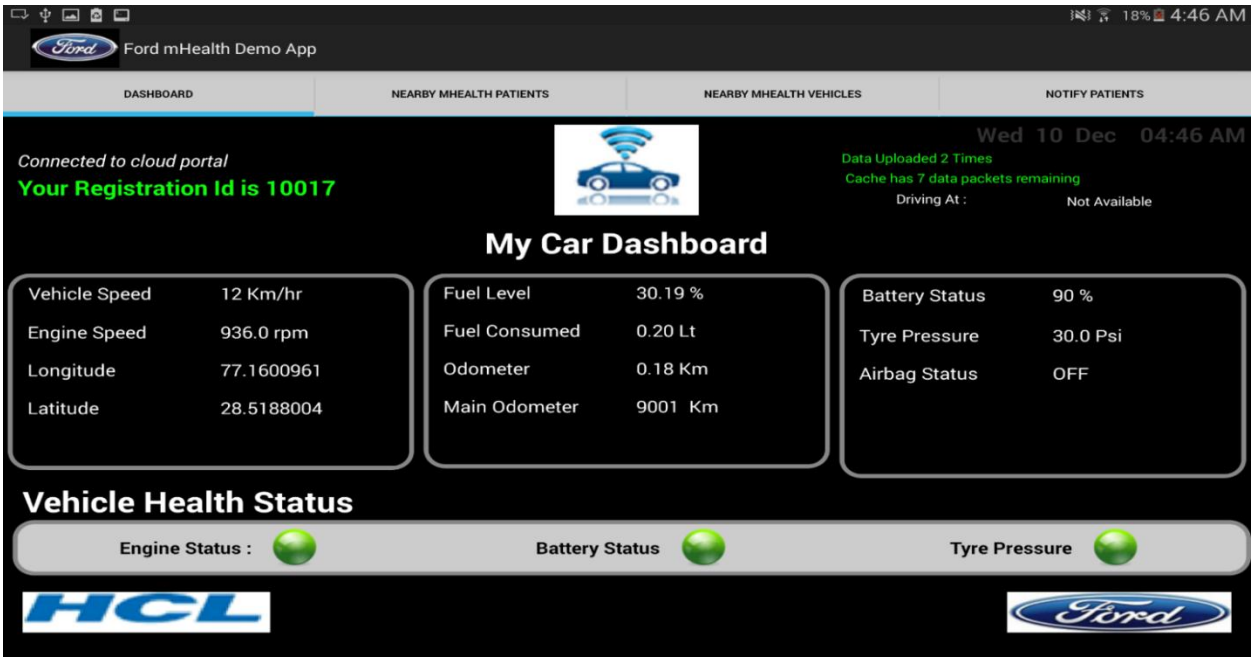


- After Offline mode is activated, data is stored in the local SQLite Database (Offline data). Hence is added up in local database every 30 second per packet. Same is reflected in the cache counter increase by 1. (***Data Uploaded to cache 20 times***)
- Once cache packet count reaches to 120, it will not increase further. Since maximum size of cache on device is configured to 120 packets.
- In offline mode, Current Vehicle Location shows "Not Available" since Address is retrieve from the Latitude, Longitude after Geocoding using Google APIs, which needs internet connection.

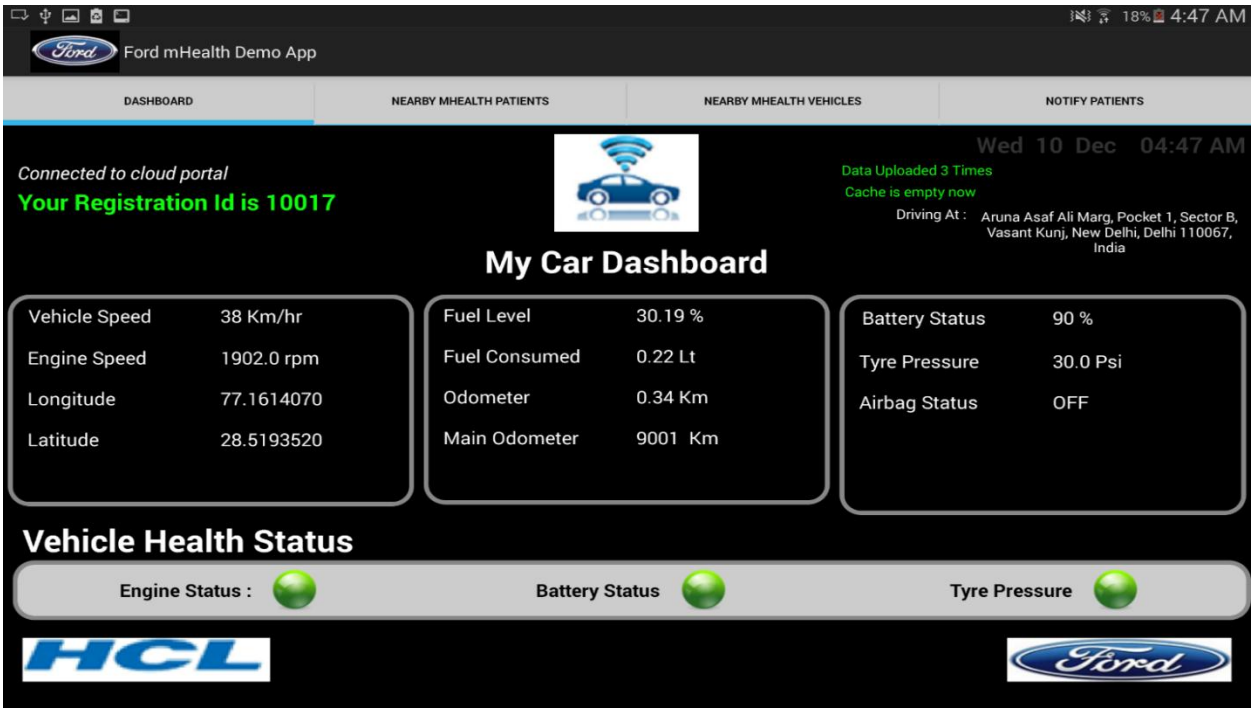


3.1.1 On re-connecting to network

When device gets connected to the Internet again, the offline data uploads to the server one by one and cache counter decreases accordingly.



After all the offline data is uploaded to the server, cache counter is become 0 and on Dashboard screen it shows "**Cache is empty now**" in place of cache counter



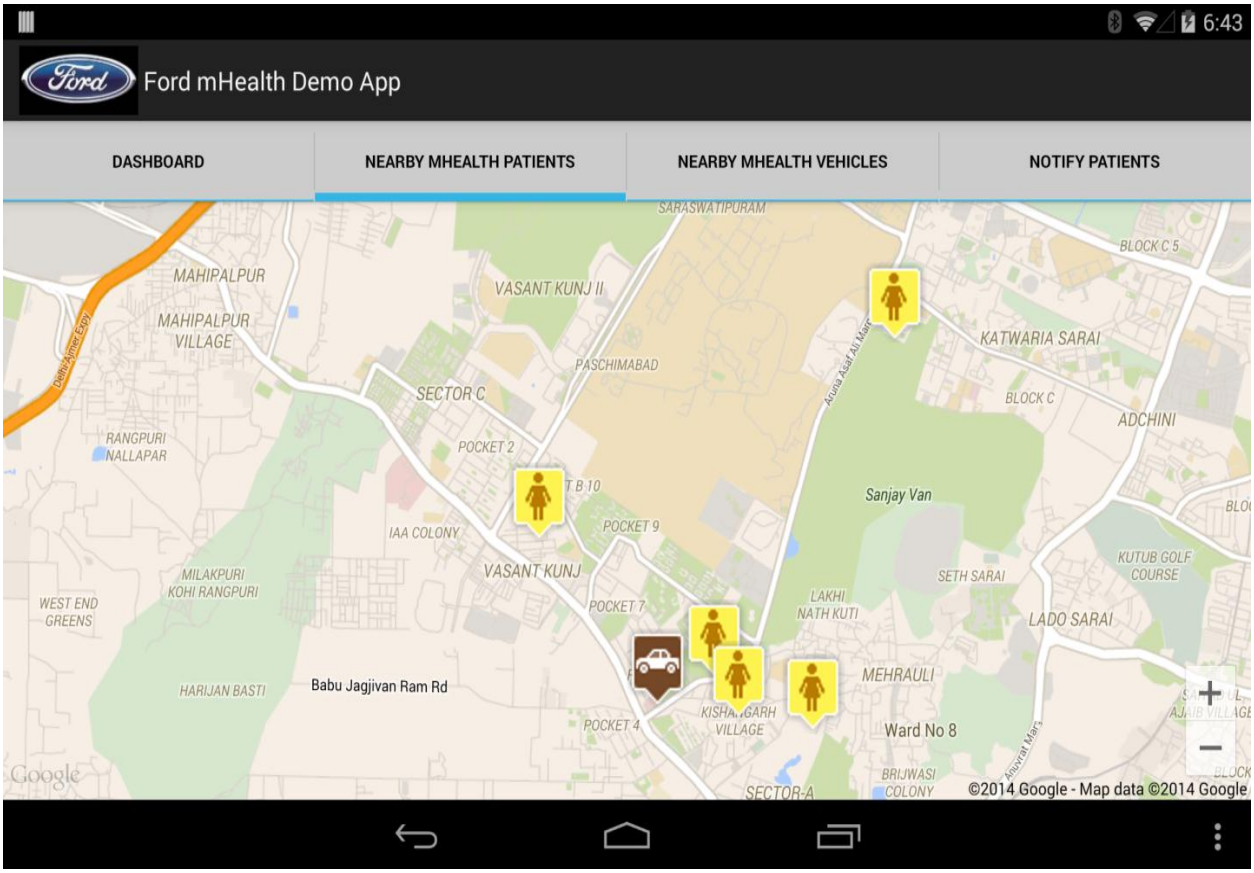
4 Near By mHealth Patients Test

Click on the 'NEARBY MHEALTH PATIENTS' Tab. This is the second tab in the application.

Screen will show up the registered patients nearby to the current vehicle location.

This is acquired via matching the same village where mHealth vehicle is driving at that moment. Thus feature will show up nearby patients to mHealth vehicle.

It also shows the current location of the mHealth Vehicle. Also the vehicle changes its position on the map, as it is moving on its way.



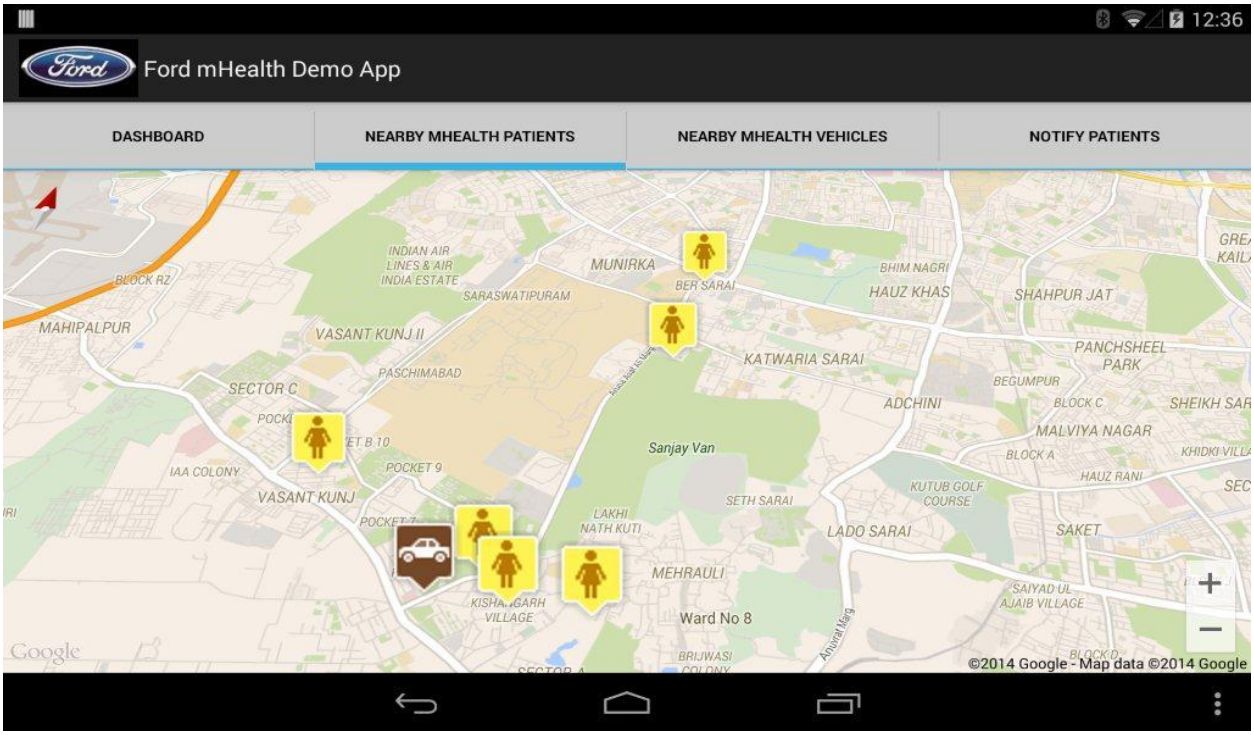
Second Scenario:

Add a new patient to the OpenMRS database using the OpenMRS web portal (***please refer the doc 'Ford mhealth - Steps to Add_Delete patients.docx'***) in the same village, when vehicle is driving at that moment.

After adding the patient, reload the tab 'NEARBY MHEALTH PATIENTS'.

Map screen will show up additional patient which is added just now.

In above screen shot there were five patients. In the below screenshot, six patients are shown after one more is registered.

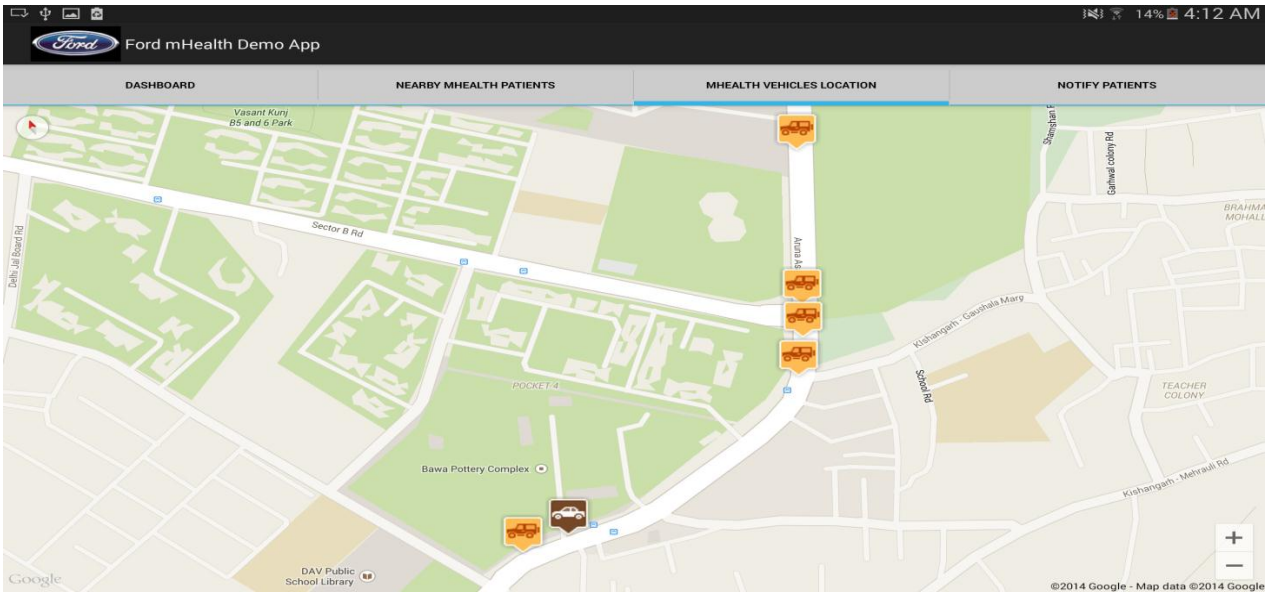


5 mHealth Vehicles Location

Please click on the 'MHEALTH VEHICLES LOCATION' Tab, which is the third tab in the application.

The feature shows the current location of current (own) mHealth Vehicle and all other registered mHealth vehicles on the map per their present location.

It also shows current vehicle position moving on the map as per the vehicle move per the trace file.

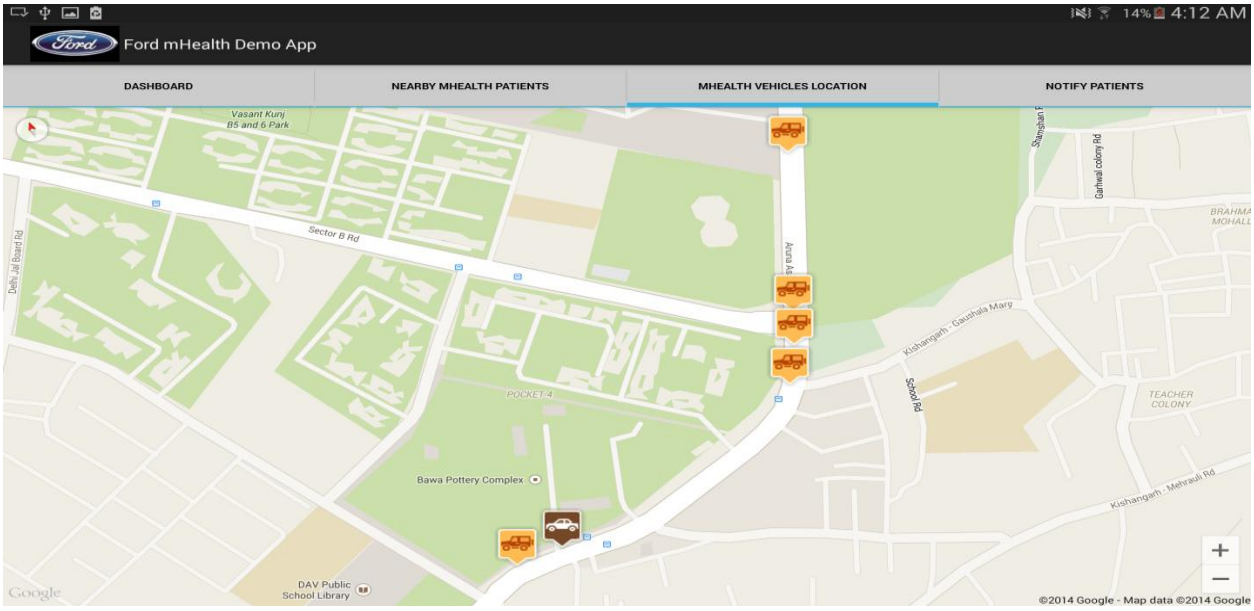


5.1 Register/Add Vehicle

This feature is developed to show the real time addition of registered vehicle. To register a new vehicle, just install and run the application on android tablet/mobile device other than the testing device.

After registration of new vehicle, click on the 'MHEALTH VEHICLES LOCATION' menu tab on the testing android device, screen will display the additional vehicle on the map

That is to reflect that feature is showing up all registered mHealth vehicle current location on map.



6 Search and Notify Patients

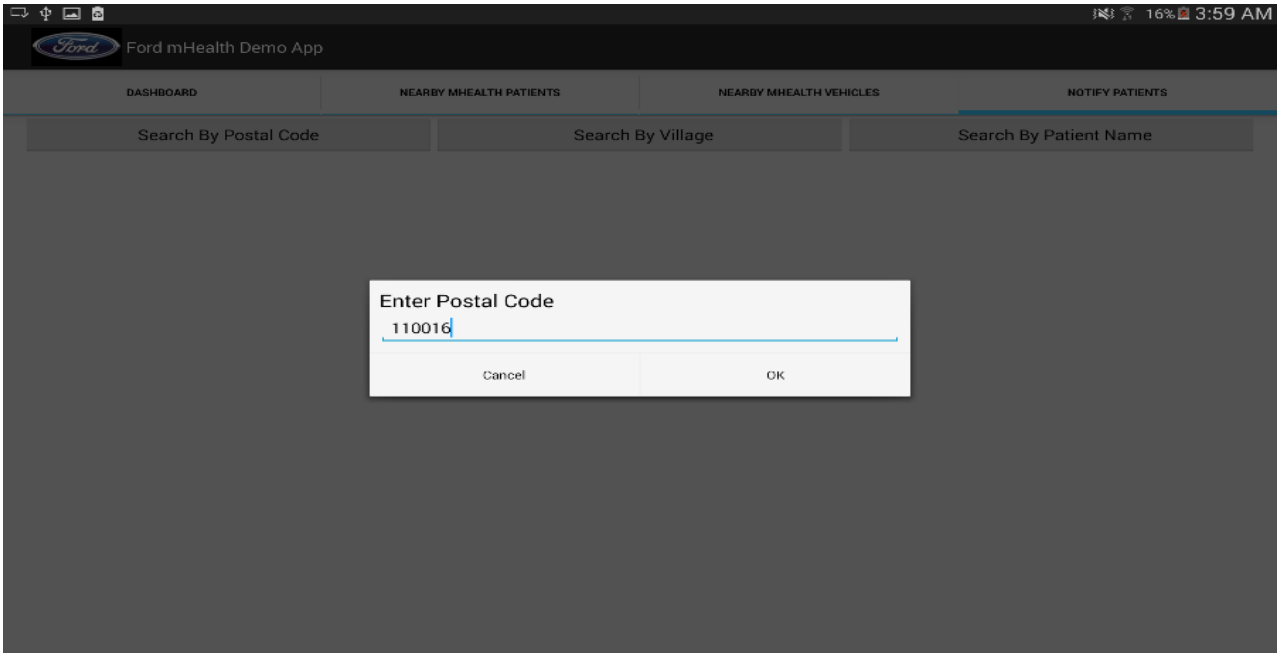
The feature is used by a health worker to send a SMS message to selected mHealth patient when s/he is visiting a village. Health worker selects a patient s/he wants to visit and s/he can send a SMS about the visit to the selected patient

Click on the 'NOTIFY PATIENTS' Tab, which is the fourth tab in the application.

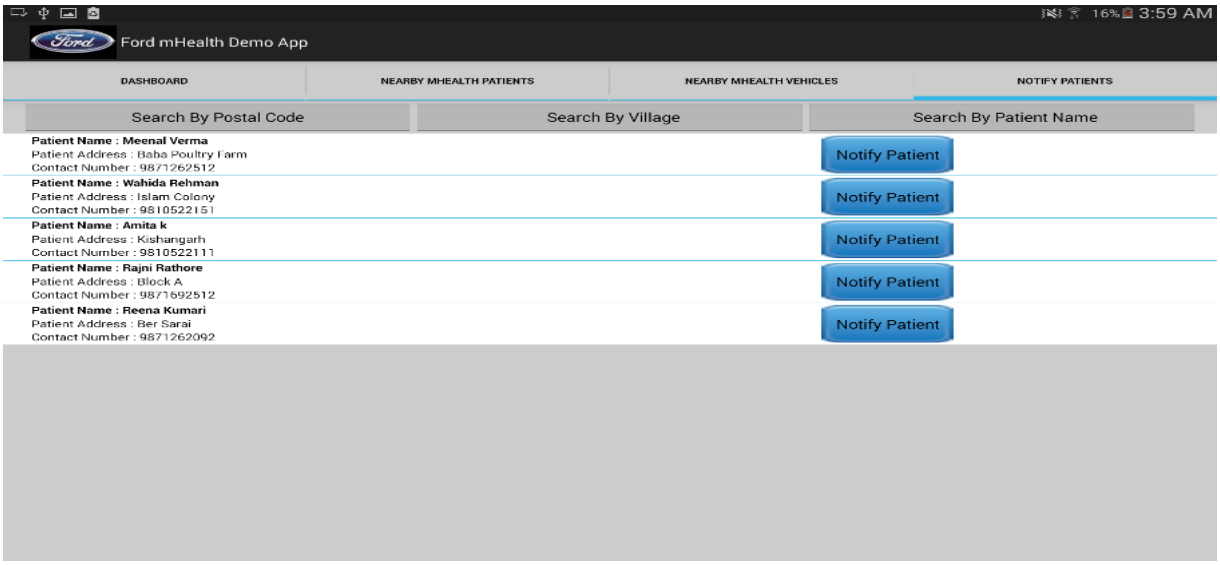
Screen will show up the three buttons

1. Search By Postal Code
2. Search By Village
3. Search By Patient Name

a. Click on any button to provide the input value on selected search criteria, it will prompt dialog to enter the search criteria.

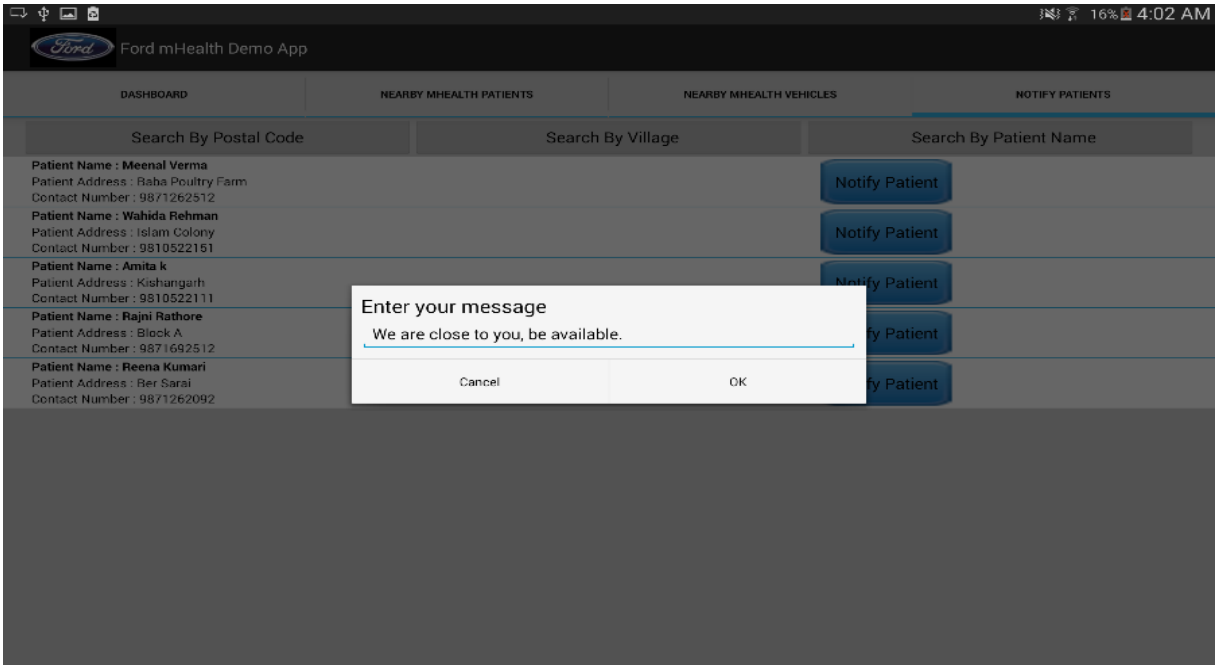


b. Enter valid value in search criteria and click on "OK" button. Next screen will display patient list which matches the given criteria.

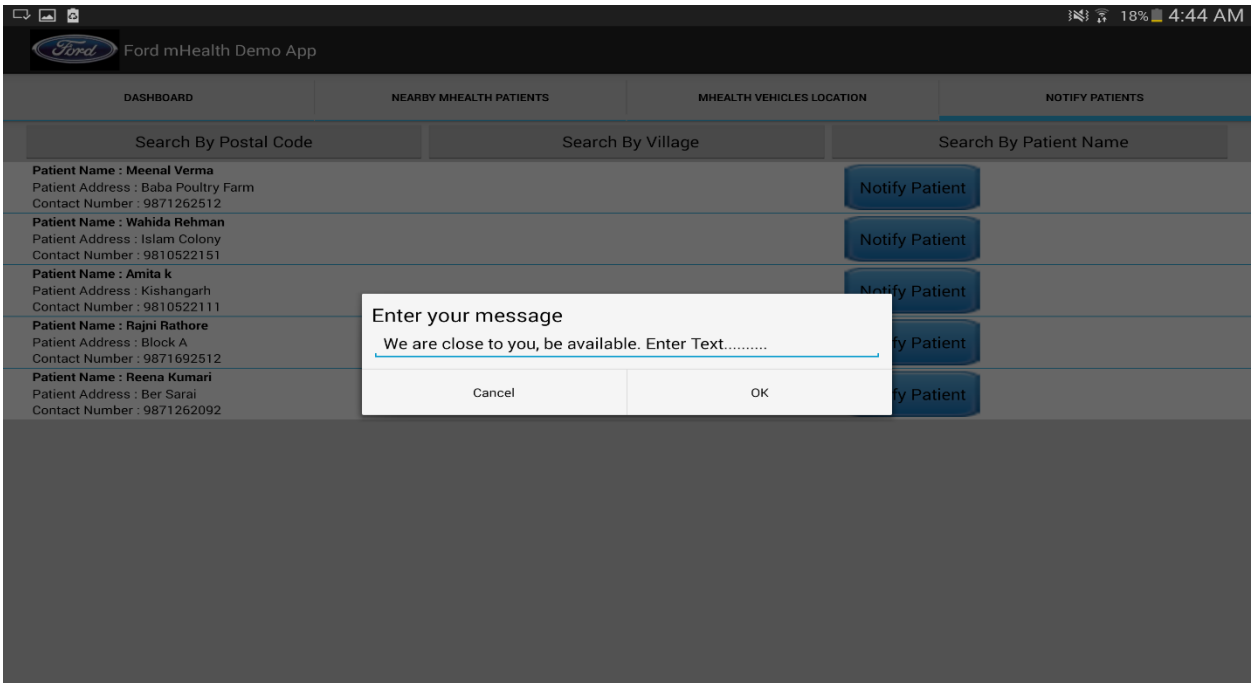


c. Select any one patient from the list and click on “Notify Patient” button.
Please make sure that phone no. given for patient is one of phone that you have. Phone numbers of patients can be edited via the OpenMRS portal (***please refer the doc ‘Ford mhealth - Steps to Add_Delete patients.docx’***).

It will prompt dialog to enter the message text with default text *“We are close to you, be available”.*



d. Type your message on prompt dialog, if you want to change the default message



e. Click on “OK” button to send message to the selected patient.

The SMS will be sent to the given phone no of the patient. This could be checked in the recipient phone.

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