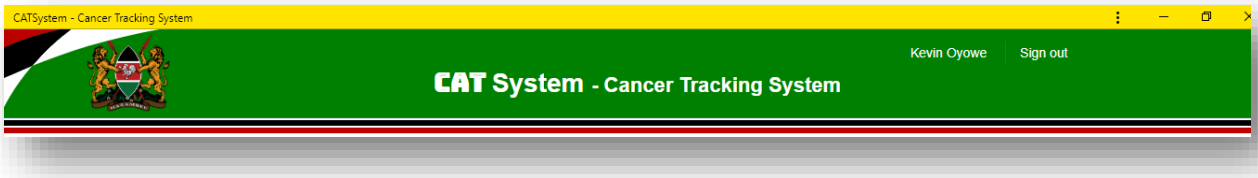


University of Kansas Medical Center

CATSystem Offline App Presentation

Kevin Oyowe

Having an online web application hosted on the Internet to be capable of serving content offline is a ground-breaking technology that I am going to demonstrate in this document. In the current state, our CATSystem – Cancer Tracking System (or the minimal demo version of it) that I will show case is capable of working completely offline on a number of devices including Computers, Tablets, and Mobile phones.

In addition, the app is capable of installing itself on all these devices and will operate more like an Android or IOS native app, while on the Windows computers it is capable of running like a Windows app.

Advantages

This new technology is called PWA – Progressive Web Apps in order to distinguish it from the native mobile apps that it mimics. Some of the advantages of going this way include but not limited to:

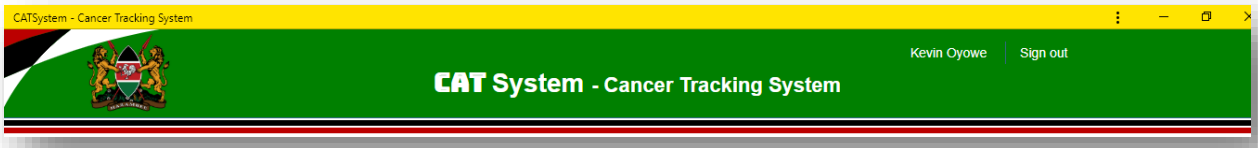
1. Multiplatform capability: The app will work on every other device whose browser supports the technology. That means all of the major platforms I can think about at the moment.
2. Accessibility advantage: Simply open up your browser and type URL of the site and you gain access to everything. No downloading, or installing, or configurations, or long agreement terms.
3. Less loading time, just like it would load on the website, and it can even be faster when offline.
4. Offline support: The app can cache all of its resources locally and serve them in a way that the users won't realize even if the Internet is shaky.
5. Easy to share: Once you have link, you are good to go. No need to upload your app on AppStore or PlayStore.
6. No updates required: PWAs get updated just like web pages

Disadvantages?

Well, I can't think of any, but…

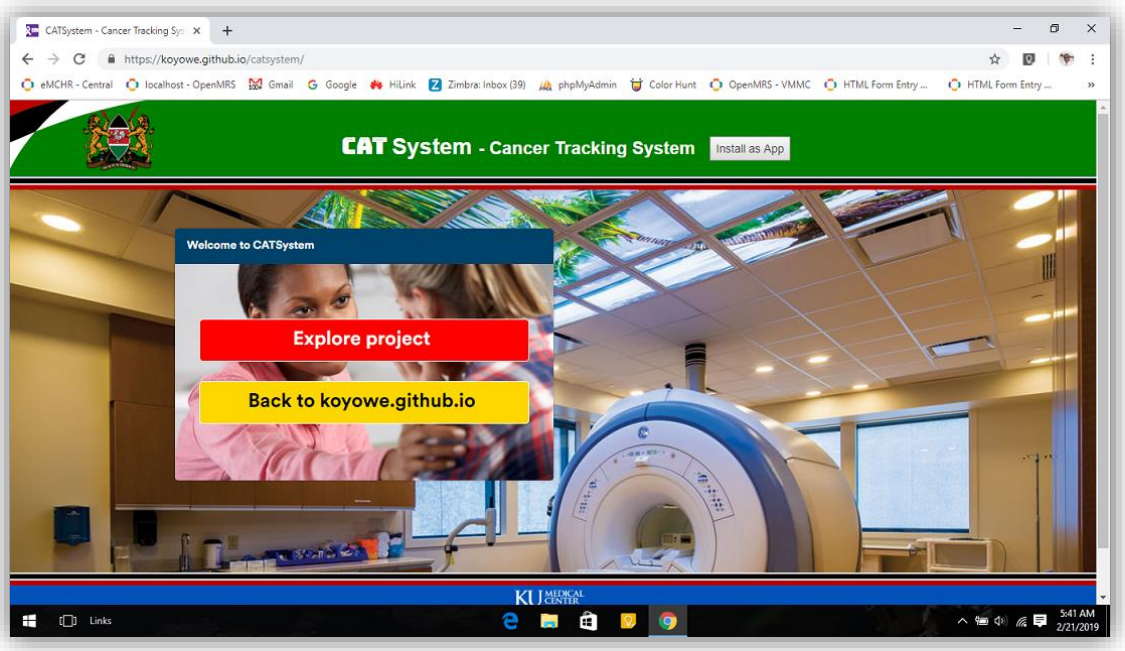
1. Full support for PWAs are mainly available on latest versions of mobile and PC browsers. Anything 2016 and above definitely supports.
2. Currently I use Google Chrome browser as the recommended browser for full functionality, otherwise Microsoft Edge, Mozilla Firefox, Safari, and Opera browsers are all good.

The following sections illustrate how the apps works on Mobile, Tablet and Desktop scenarios;



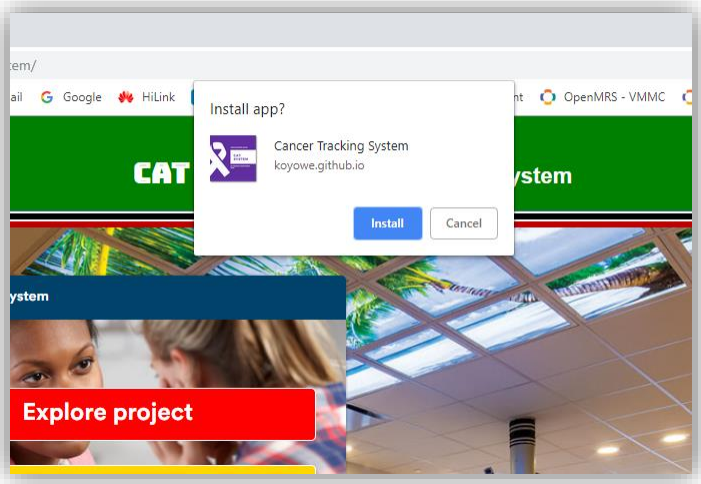
Desktop

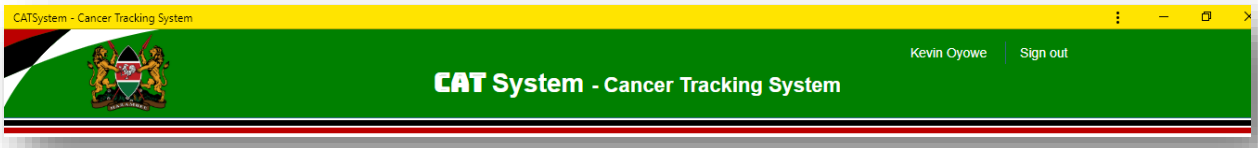
Open Google Chrome on your desktop and visit the demo CATSystem online link at https://koyowe.github.io/catsystem



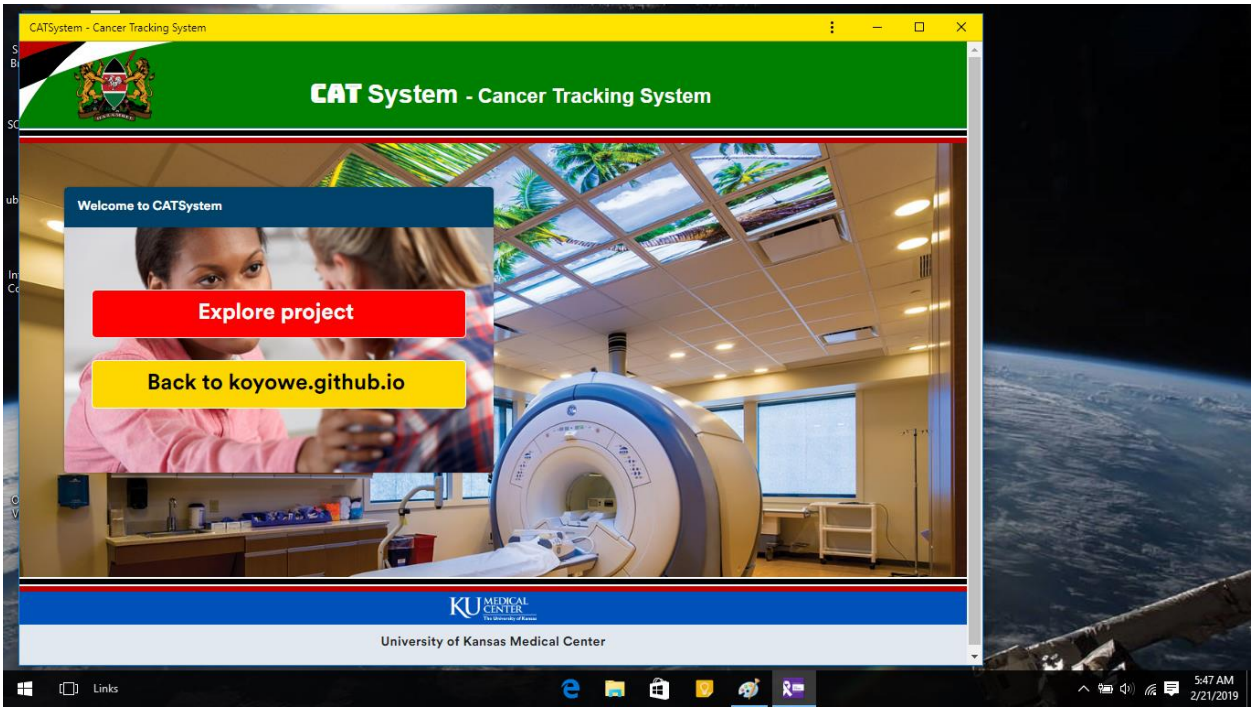
You will see a button that says Install as App. This is not mandatory as the system's offline functionality will work whether you install it as an app or not. The only difference will be the User experience.

Clicking on Install as App will prompt you to accept the installation as shown below:





The installation is more of a formality than a process and it won't take even a minute. Immediately when done you will be presented with a beautiful standalone desktop app that looks like this:

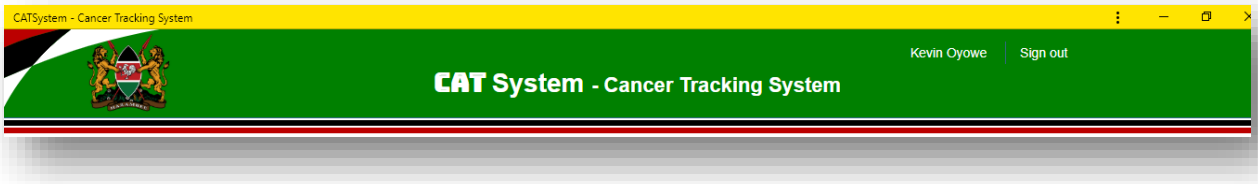


Explore the project however you may. The first time accessing the link is the most critical since that is the phase where the apps features gets cached in the local browser caches.

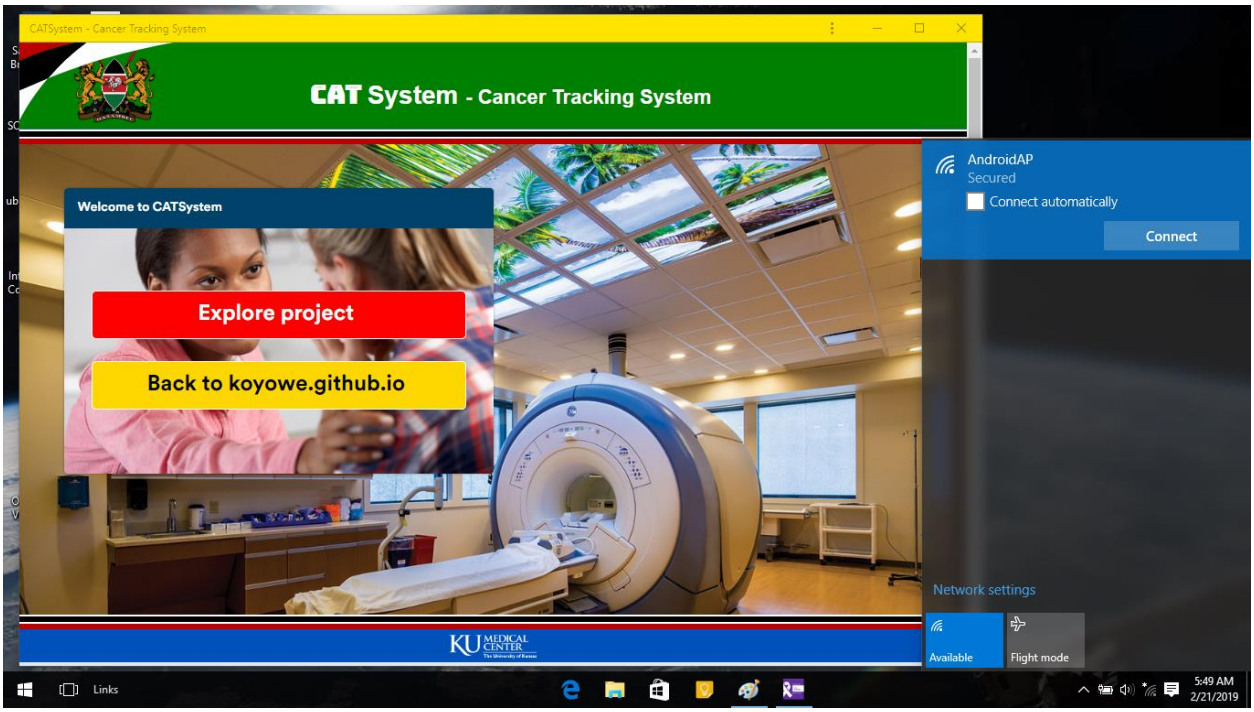
Perform the following click or touch tasks:

1. Click Explore project
2. Go in and access Register Patient
3. Click Back and access Cervical Cancer Screening Form
4. Scroll down the screening form and click Submit
5. On the dashboard, you can view the summary, Charts, Alerts, Reports.
6. Click Sign Out when satisfied to go back to the demo login page.

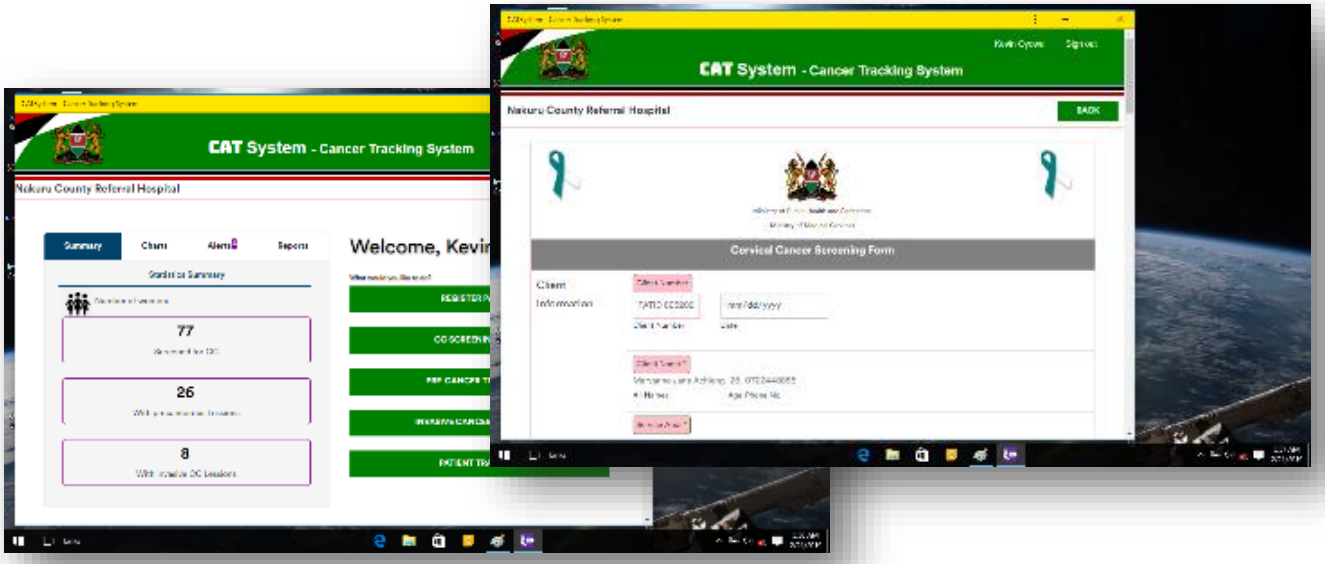
Now here is the test, turn off your internet connection by turning off WiFi or unplugging the modem or Ethernet cable that connects your device to the Internet, so that your laptop goes completely offline.

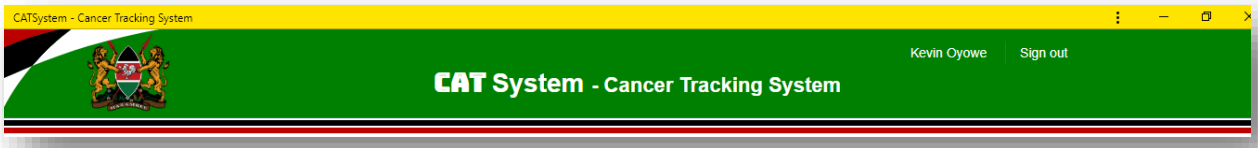


Then go to CATSystem and click on Explore project while your computer is offline as show below:



The system still works and should be able to load all the pages again comfortably, over and over again.

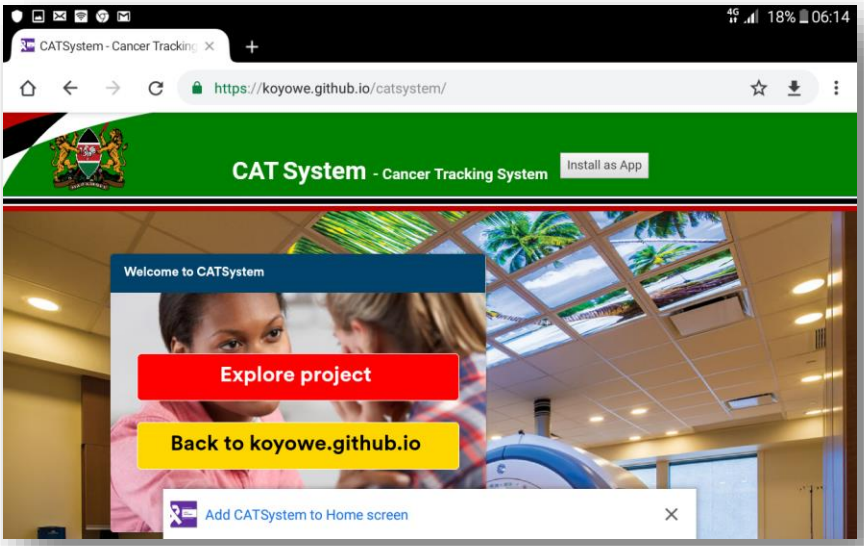




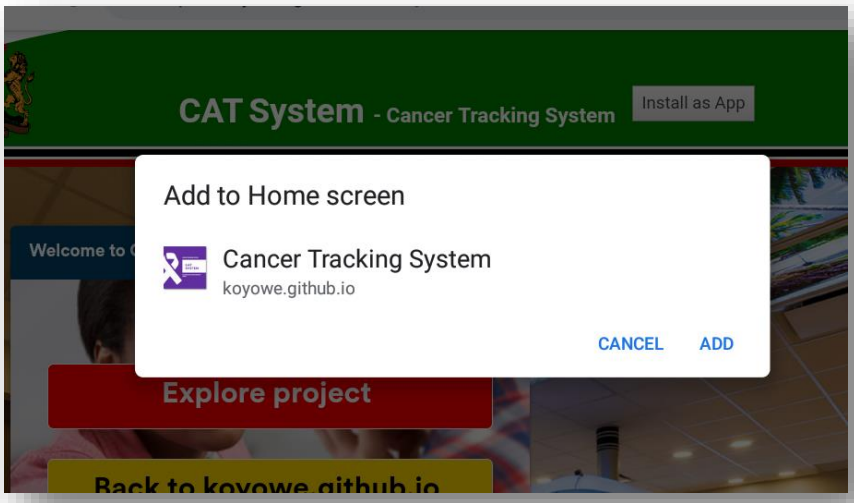
Tablet

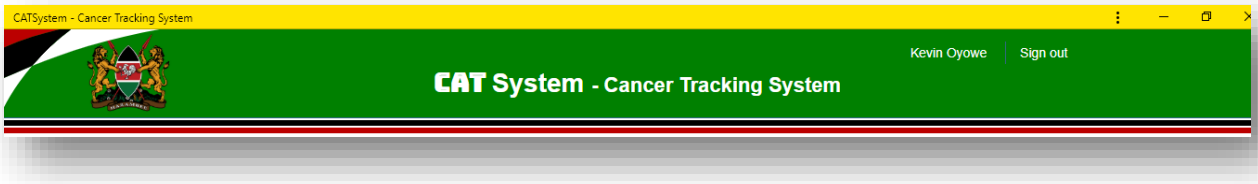
On the Tablet, the system behaves almost just like on the Desktop. But it shows some elements of an Android app. Take a look at the following illustrations.

The first time you access https://koyowe.github.io/catsystem using Chrome browser for Android on the tablet, the system will display a banner that prompts you to “Add CATSystem to Home screen”.

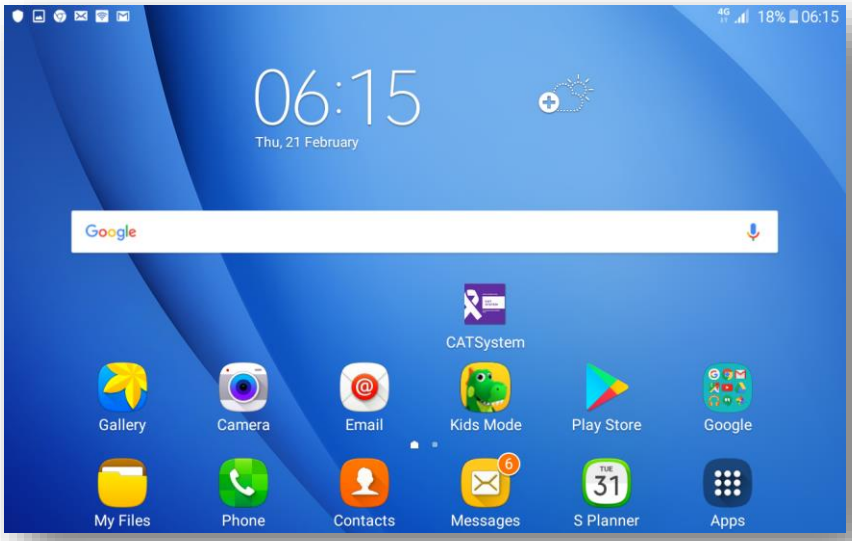


Simply click on the Add to Home screen banner at the bottom and accept the next prompt to Add.

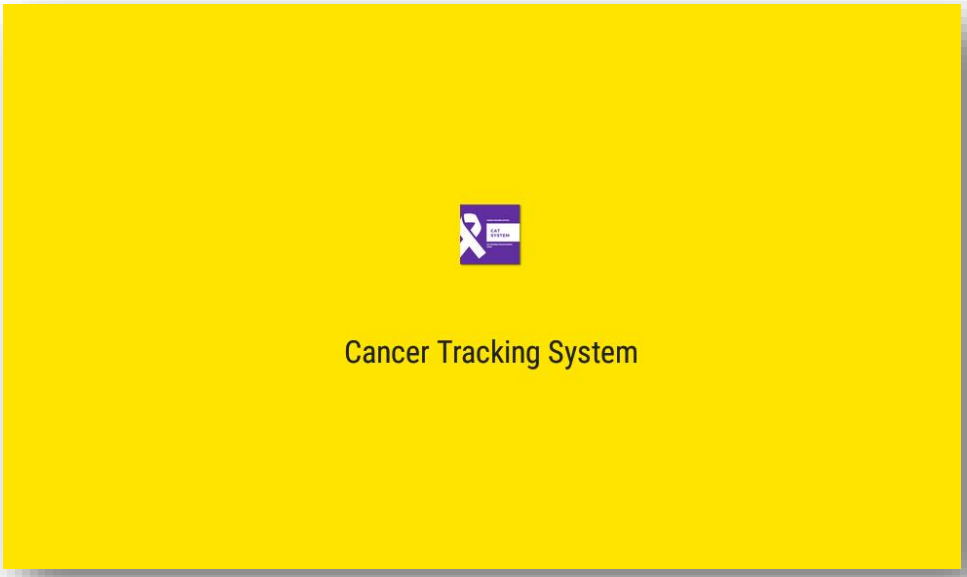


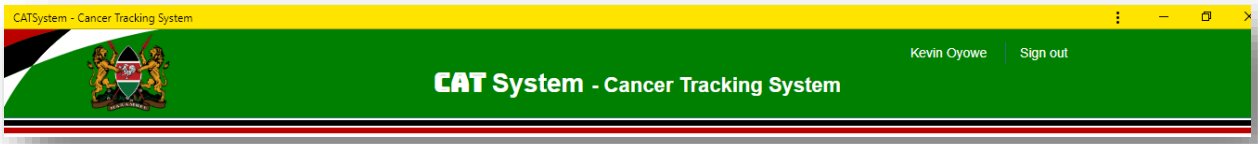


An Android app like shortcut will be created somewhere on the Home screen that looks similar to this.

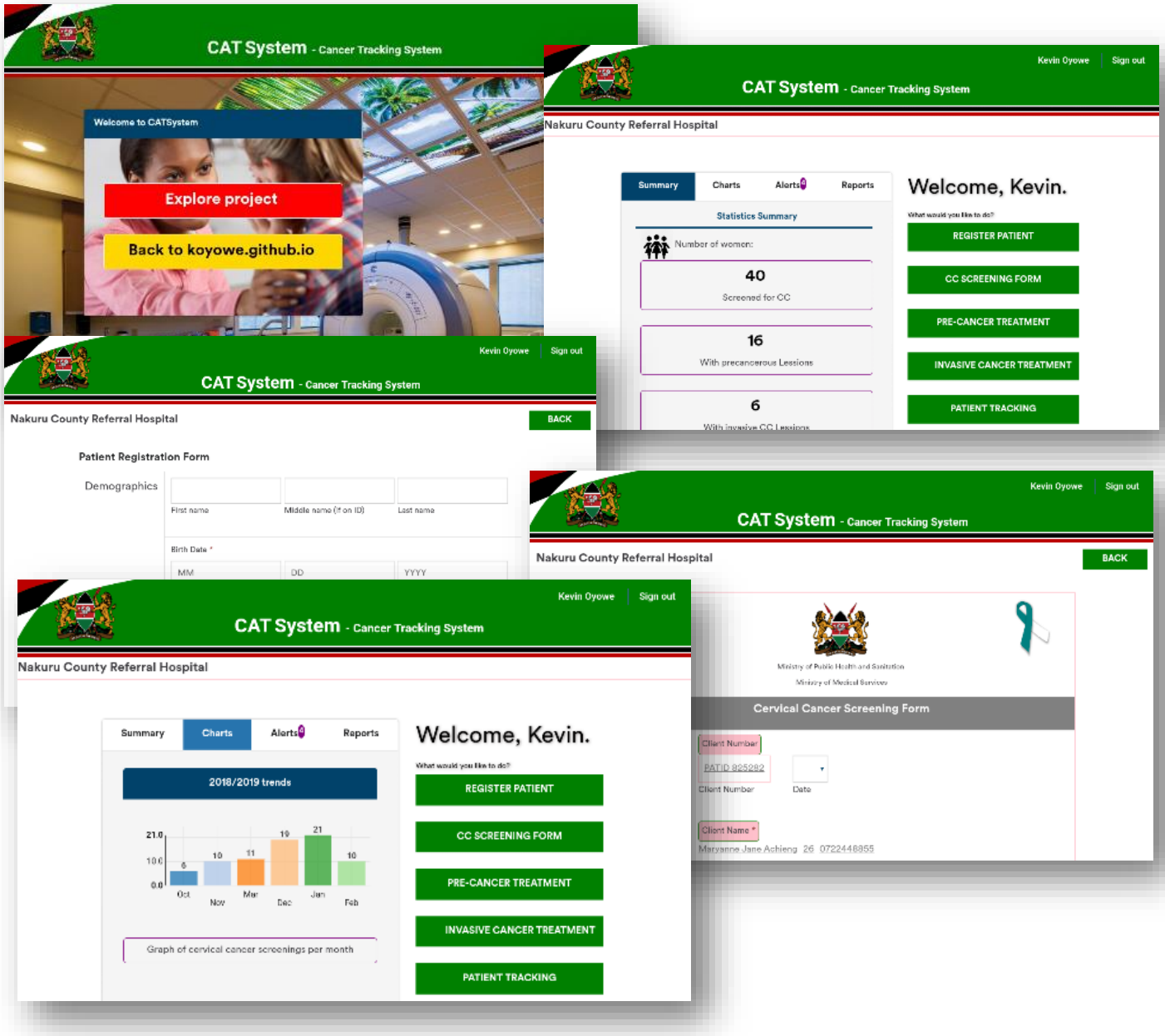


Launch the app by touching / tapping on the Icon launcher. It will start with a splash screen as it waits for the page to load momentarily. This behavior is so much like that of an Android app.



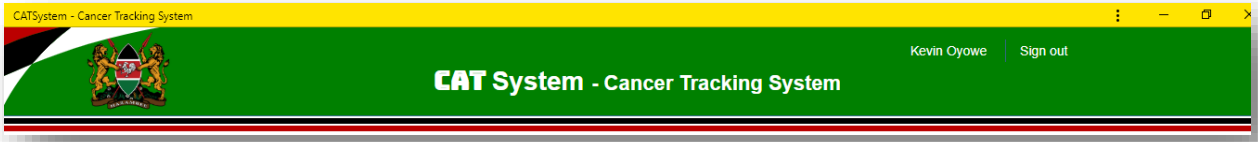


And then finally the app as it appears on tablet:

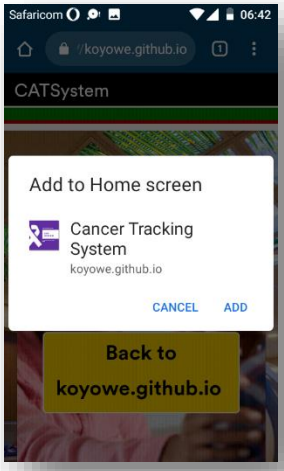


Mobile phone - Android

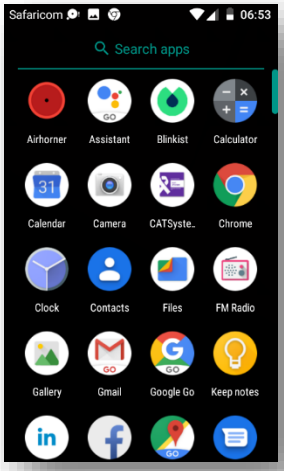
And on the smallest device, using the cheapest smart phone available in Kenya, the Safaricom Neon phone. This phone costs just about US $ 35.00 at Safaricom retail shops in Kenya. The screenshots collection below is adorable.

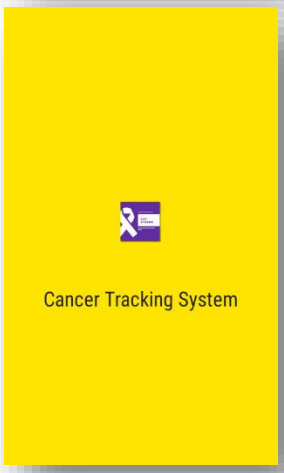

CATSystem - Cancer Tracking System
Kevin Oyowe
Sign out
CAT System - Cancer Tracking System


Safaricom 06:42
koyowe.github.io
CATSystem
Welcome to CATSystem
Explore project
Back to koyowe.github.io
Add CATSystem to Home screen

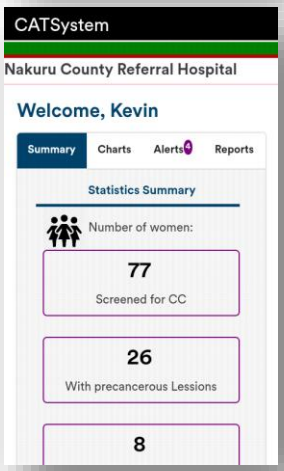

Safaricom 06:42
koyowe.github.io
CATSystem
Add to Home screen
Cancer Tracking System
koyowe.github.io
CANCEL
ADD
Back to koyowe.github.io


Safaricom 06:52
Rangers fc
CATSyste m
Google
Contacts
Calendar
Play Store

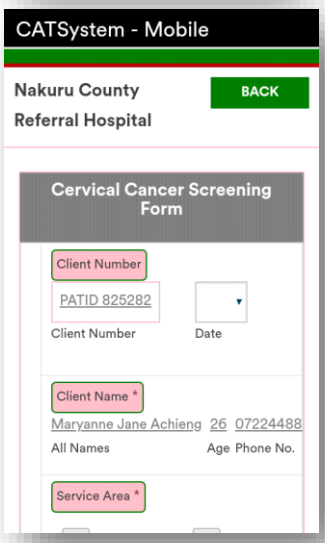

Safaricom 06:53
Search apps
Airhorner
Assistant
Blinkist
Calculator
Calendar
Camera
CATSyste..
Chrome
Clock
Contacts
Files
FM Radio
Gallery
Gmail
Google Go
Keep notes

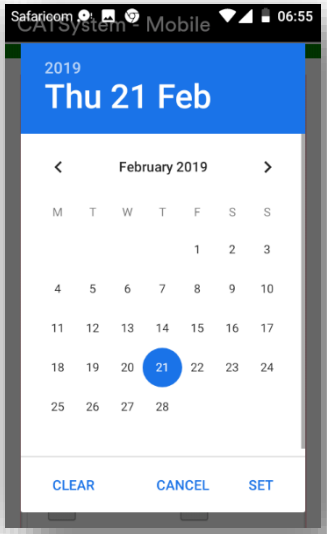

Cancer Tracking System

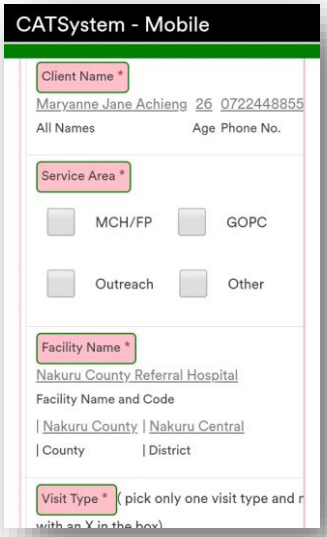

CATSystem
Welcome to CATSystem
Explore project
Back to koyowe.github.io

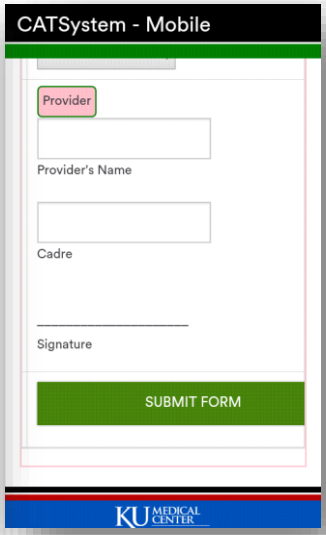

CATSystem
Nakuru County Referral Hospital
Welcome, Kevin
Summary
Charts
Alerts
Reports
Statistics Summary
Number of women:
77
Screened for CC
26
With precancerous Lessions
8


CATSystem
Nakuru County Referral Hospital
Welcome, Kevin
Summary
Charts
Alerts
Reports
2018/2019 trends
Graph of cervical cancer screenings per month

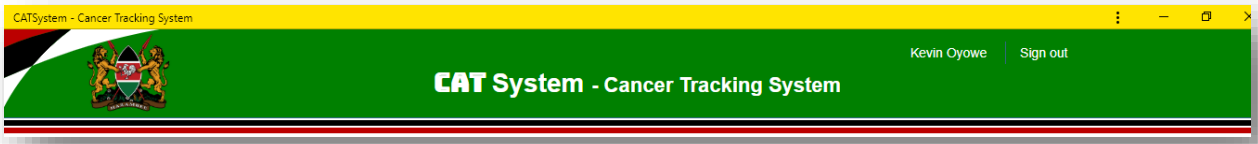

CATSystem - Mobile
Nakuru County Referral Hospital
BACK
Cervical Cancer Screening Form
Client Number
PATID 825282
Client Number
Date
Client Name *
Maryanne Jane Achieng 26 07224488
All Names
Age Phone No.
Service Area *


Safaricom 06:55
CATSystem - Mobile
2019
Thu 21 Feb
February 2019
M T W T F S S
1 2 3
4 5 6 7 8 9 10
11 12 13 14 15 16 17
18 19 20 21 22 23 24
25 26 27 28
CLEAR
CANCEL
SET


CATSystem - Mobile
Client Name *
Maryanne Jane Achieng 26 0722448855
All Names
Age Phone No.
Service Area *
MCH/FP
GOPC
Outreach
Other
Facility Name *
Nakuru County Referral Hospital
Facility Name and Code
Nakuru County
Nakuru Central
County
District
Visit Type *


CATSystem - Mobile
Provider
Provider's Name
Cadre
Signature
SUBMIT FORM
KU MEDICAL CENTER


KU MEDICAL CENTER
University of Kansas Medical Center



Visit https://koyowe.github.io/catsystem