

Solution for Potholes in Goa

Team Name: TechSix

Organization Name:
Government of Goa

Problem Statement Number: **DR112**

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Who are we ?

Group of second year students trying to learn new things, with an outcome that might bring a change in the society.

Problem Statement:

Goa has faced the rage of rains this year and potholes are the biggest problem which government is tackling. Now problem lies in the fact that concerned departments are not able to coordinate to resolve the issue.



Why we need Pothole Management

In Goa, pothole-ridden roads break riders' backs and bones

Lisa Monteiro | TNN | Oct 11, 2019, 7:51 IST

Calangute, Candolim roads rife with potholes

TNN | TNN | Aug 16, 2019, 4:51 IST



A-

A+

Death in pothole accidents on roads 'frightening': SC

PTI | Jul 20, 2018, 17:57 IST



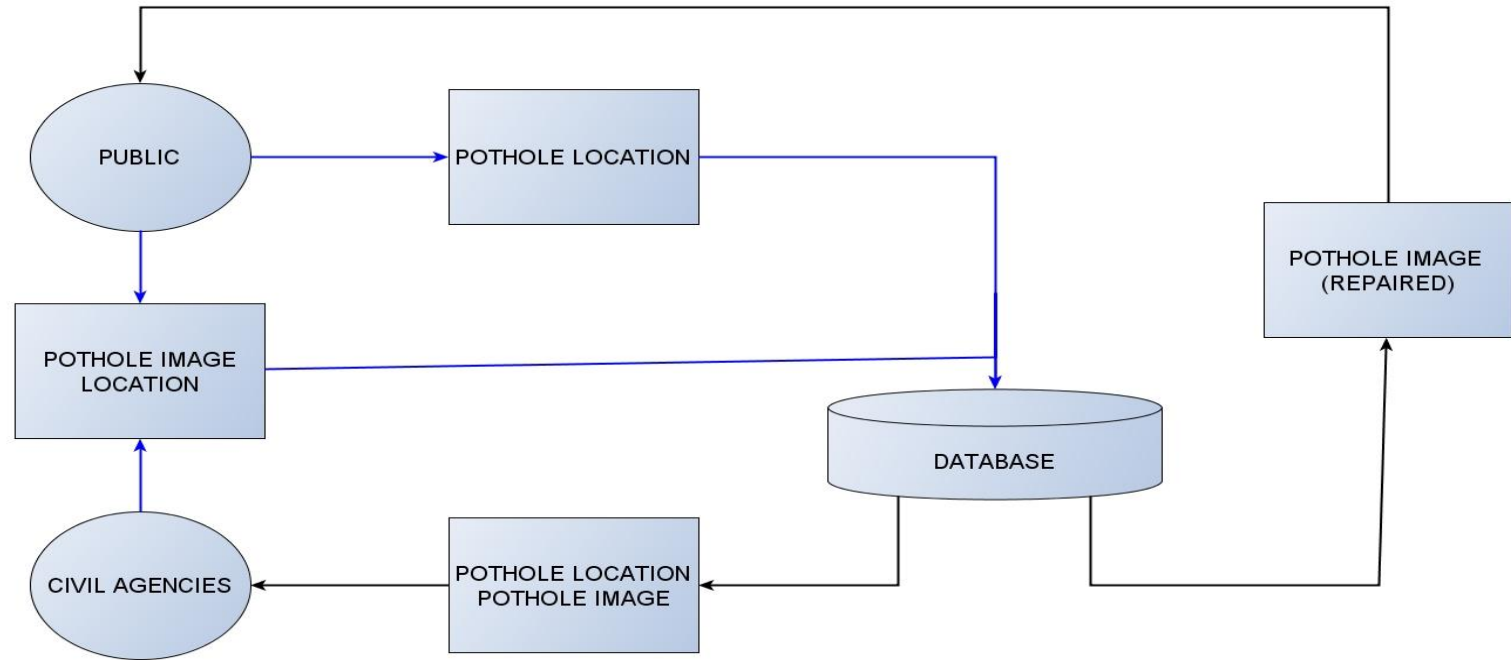
A-

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Solution

A dynamic reporting system that helps connect the public to the government to have the problem solved in lesser time and no effort.

Our Application flow diagram

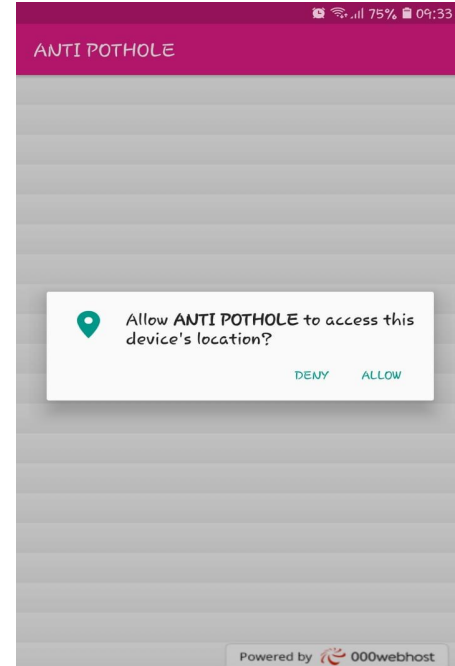
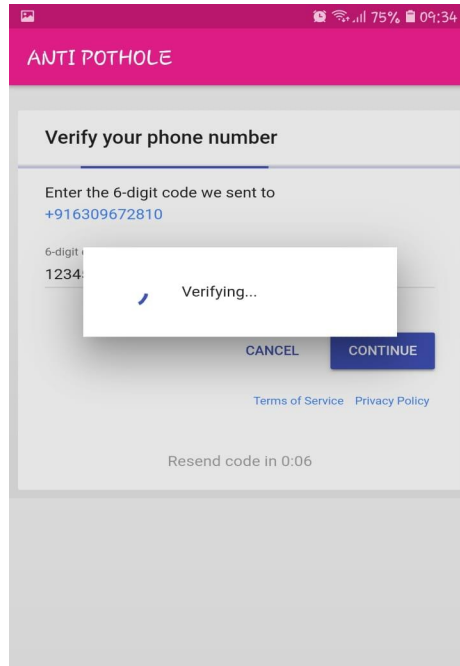


Prototype Screenshots & Explanation

Semi-prototype was built during the **Internal Hackathon** Consisting of **Two Apps** one for **General Public** (to report) and other for **Civil agent** (to repair) designated by the government in a particular locality.

User App (For Public):

Verification of User Mobile Number and accessing his location automatically in the background




Registration of complaint by user. Location of the pothole is obtained automatically in the background.

ANTI POTHOLE

PINCODE
403001

Choose file IMG-20201115-WA0002.jpg



Current Location Obtained

SUBMIT


Powered by 000webhost

ANTI POTHOLE


Complaint Submitted!!!
[Help Build Goa](#)

User Statistics Page


ANTI POTHOLE



BEFORE

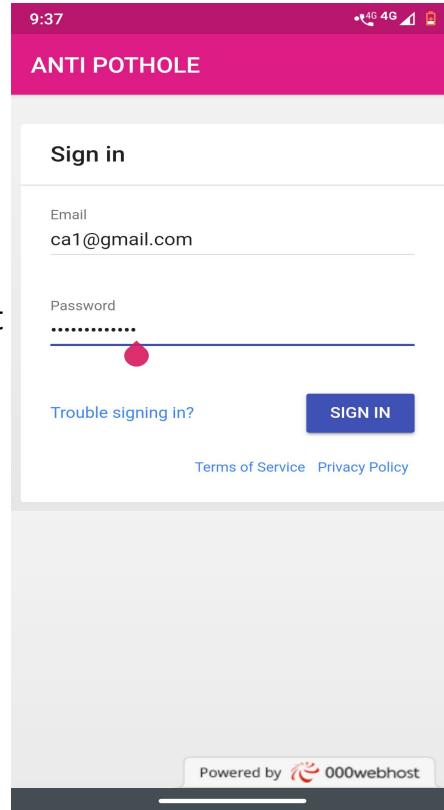


AFTER

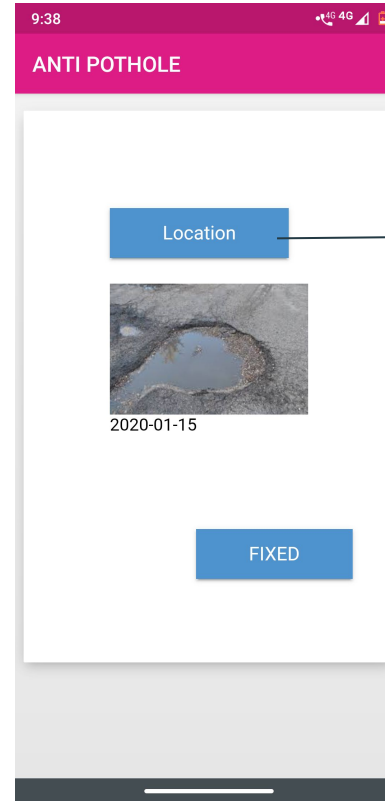


2. Civil Agent App (Appointed by the government in that locality):

Unique Login Credentials will be provided by the government to each CA for every locality identified by postal code.



The screenshot shows the 'ANTI POTHOLE' app interface. At the top, the status bar shows the time as 9:37 and 4G connectivity. The app title 'ANTI POTHOLE' is in a pink header. Below it, a 'Sign in' section contains an email field with 'ca1@gmail.com' and a password field with masked characters. A red dot is visible on the password field. Below the password field is a link 'Trouble signing in?' and a blue 'SIGN IN' button. At the bottom, there are links for 'Terms of Service' and 'Privacy Policy', and a footer that says 'Powered by 000webhost'.



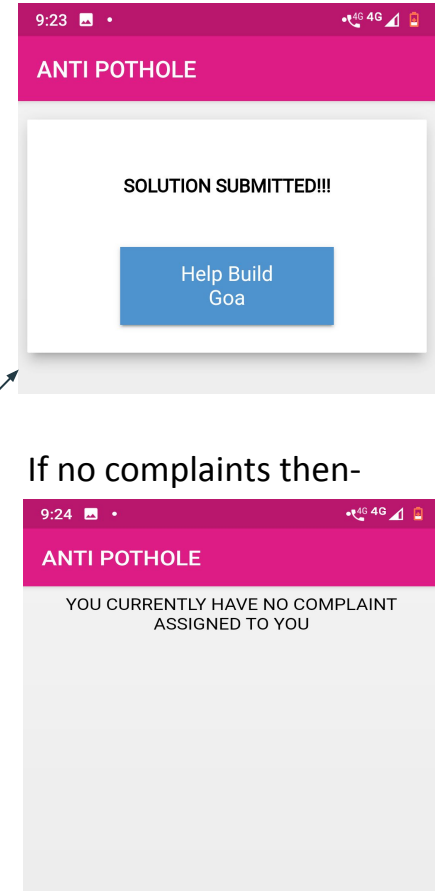
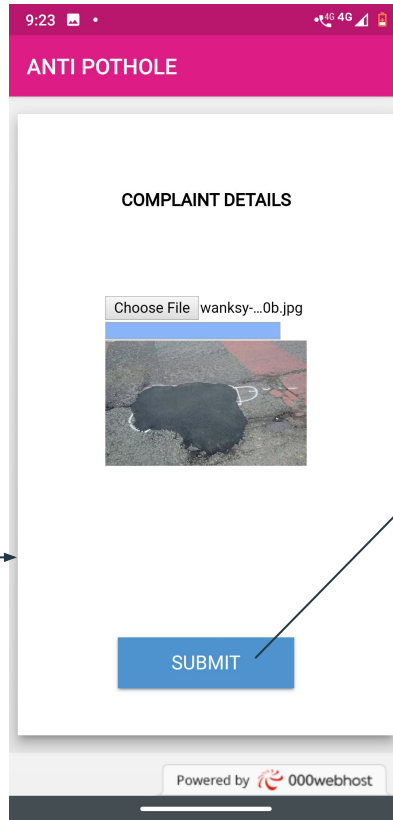
The screenshot shows the 'ANTI POTHOLE' app interface. At the top, the status bar shows the time as 9:38 and 4G connectivity. The app title 'ANTI POTHOLE' is in a pink header. Below it, a 'Location' button is visible. Underneath is a photo of a pothole, dated '2020-01-15'. At the bottom, there is a blue 'FIXED' button.

Shows the Location of pothole.





Fixes the
pothole
and
uploads
the
picture

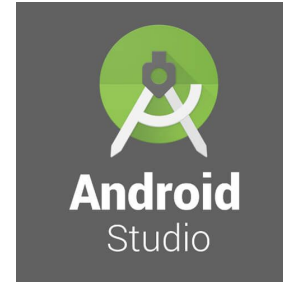


Technology Stack

Technology Stack used for making the Prototype:

- Firebase Authentication
- Firebase Storage Bucket
- Google API (for Geo location)
- Online Webhost MySQL Database
- Webview on Android Studio
- Online Webhost (Cpanel)

Languages Used : Java,JavaScript,HTML,CSS,MySQL



Impact and Perks of our App

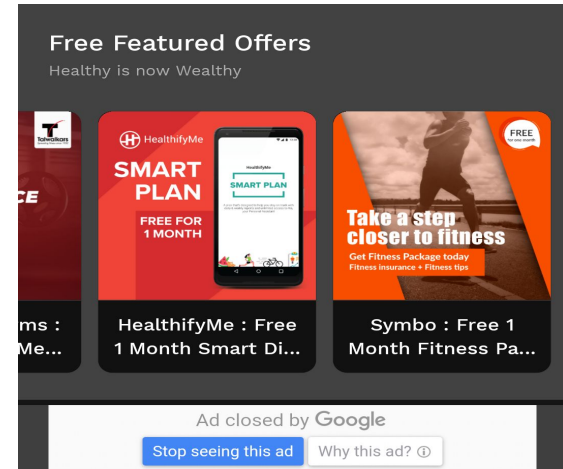
- Life saving.
- **Statistics** of the potholes in a area.
- The good road conditions equals good infrastructure, which in turn attracts **more tourists** which is beneficial for the place.
- **Reward system** as an attraction.
- Government profit, Good and **easy governance**.
- Time saving.
- User friendly App.

Dependencies / Show Stoppers

1. At present the app works only for Android applications in further versions it can be made available for **IOS devices** too.(Using Flutter).
2. The prototype works on a free host so it's slow, while making it for a **larger scale** we need to pay a minimal amount of fee for using its paid resources like integration of Google Maps API , Google Cloud etc.
3. Inclusion of **Image processing** for verification of user input image of pothole.
4. Adding a **Reward System** which would allow user to gain coins by reporting potholes, which can be redeemed for Medical related vouchers and consultancy coupons etc. This will increase the interaction of public with the app.

➤ [Internal Hackathon-Prototype Video \(2 mins\)](#)

Reward system which allows user to buy coupons for medical related issues. Reward expenses can be drawn from running small banner ads at the bottom of the app can be added further on.



The slide features a white background with a grey border. In the top-left corner, there are three parallel grey diagonal lines. In the bottom-right corner, there are three parallel teal diagonal lines. In the bottom-left corner, there are three parallel blue diagonal lines.

THANK YOU!!