

Department of Computer Science and Engineering

G.PULLAREDDY ENGINEERING COLLEGE (AUTONOMOUS):KURNOOL

(Affiliated to JNTUA, ANANTHAPURAMU)



A Report on “Covid-19 Tracker” developed in 2021

Abstract

A mobile application that tracks the worldwide statistics of COVID-19 pandemic and related news was very much needed. With the alarming increase in Covid-19 cases daily it is important to keep ourselves updated with the latest and authentic information. So, we are super excited to announce a one-stop-shop, the 'Covid-19 Tracker' to create awareness and help to break the chain. This app keeps the latest global health information at your fingertips and also updates daily with the latest news, feature stories, fact sheets, disease outbreak updates, and public health emergency information.

Features included :

- Gives the total cases, deaths, and recoveries in each country, and every Indian state and its districts.
- Gives a clear view of Covid-19 symptoms, spread, and precautions.
- A ' News ' section to know the pandemic-related news in India and even globally.
- A ' Donate ' section through we can donate the funds to PM CARES Fund to fight against Covid-19 outbreak.
- A ' Deep Dive ' Section which gives detailed information about Covid-19 outbreak like its origin, spread, etc.
- An ' FAQ ' section that contains the queries regarding the Covid-19 pandemic.

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COVID-19 TRACKER

BY:

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AKASH DODDA

GUIDE:

K. SRIKANTH

Asst.Professor,

GPREG



Flutter

ABSTRACT

Title: Covid-19 tracker application using Flutter(Hybrid app development)

The recent outbreak of COVID-19 has taken the world by surprise, forcing lockdowns and straining public health care systems. COVID-19 is known to be a highly infectious virus, and infected individuals do not initially exhibit symptoms, while some remain asymptomatic. Thus, a non-negligible fraction of the population can, at any given time, be a hidden source of transmissions. However, tracing apps have generated much discussion around their key attributes, including system architecture, data management, privacy, security, proximity estimation, and attack vulnerability. This app provides count of total number of national and global cases, number of deaths and recoveries. It shows latest news articles about Covid-19 pandemic. This app also provides an option to donate money to Prime Minister's Covid-19 fund.



Flutter

Flutter is Google's UI toolkit for building beautiful, natively compiled applications for [mobile](#), [web](#), and [desktop](#) from a single codebase

Made by 



Expressive, beautiful UIs

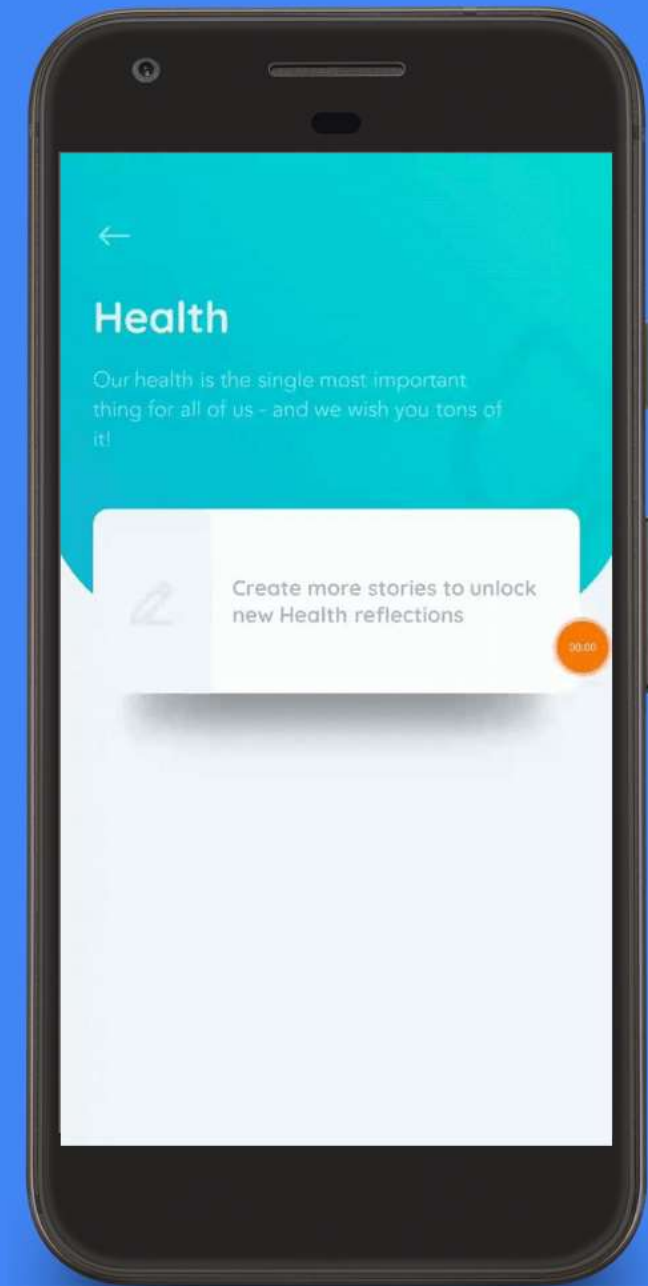
Control every pixel on the screen

Make your brand come to life

Never say "no" to your designer

Stand out in the marketplace

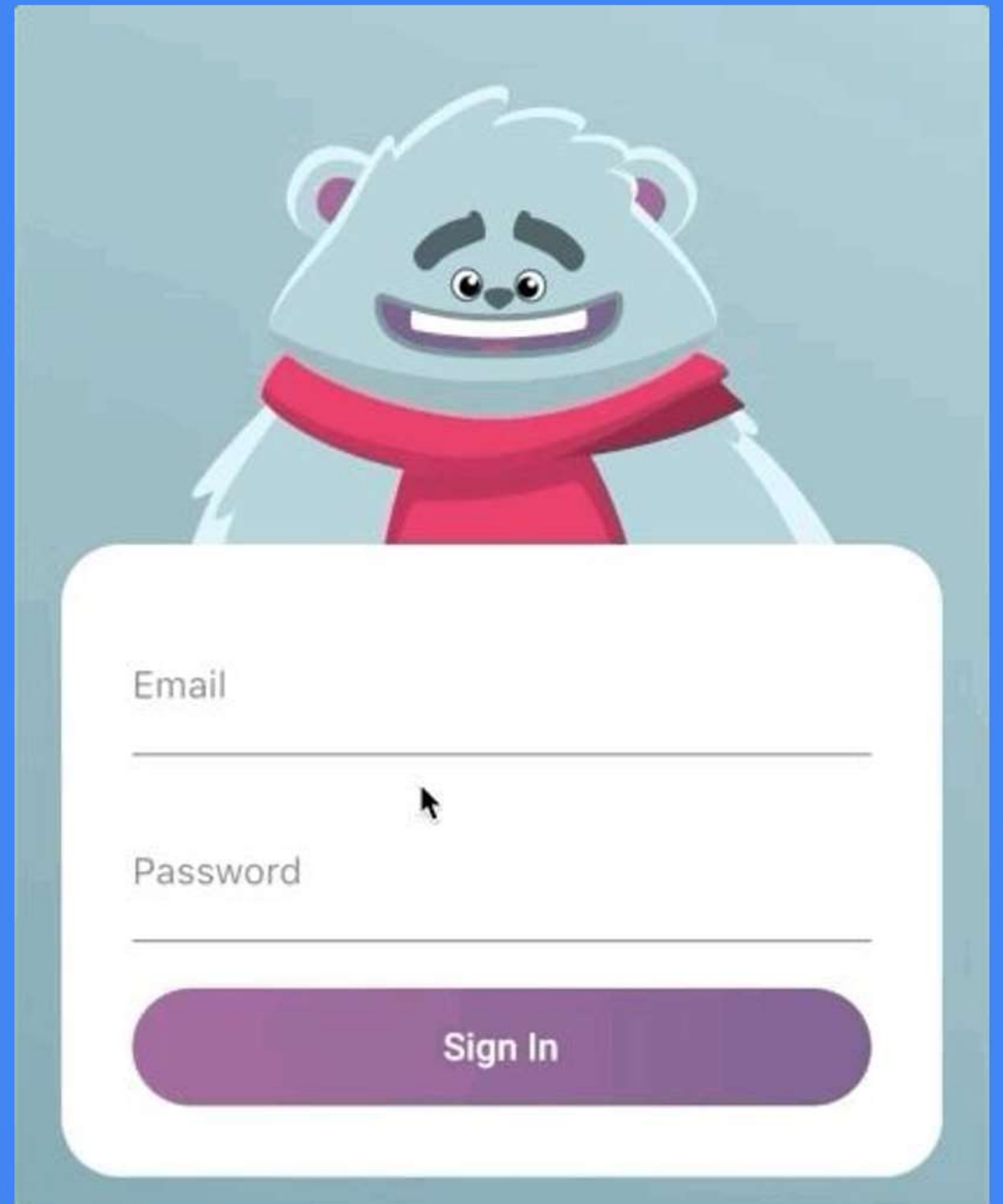
Win awards with beautiful UI



Beautiful Animations

Flutter support many types of Animations

- Tween
- Hero
- Sliver
- Transform
- FadeInWidget
- Animation Builder
- AnimatedOpacity
- Physics-based animation



Android

iOS



Flutter

Web
(Technical Preview)

Desktop

Goal of Dart



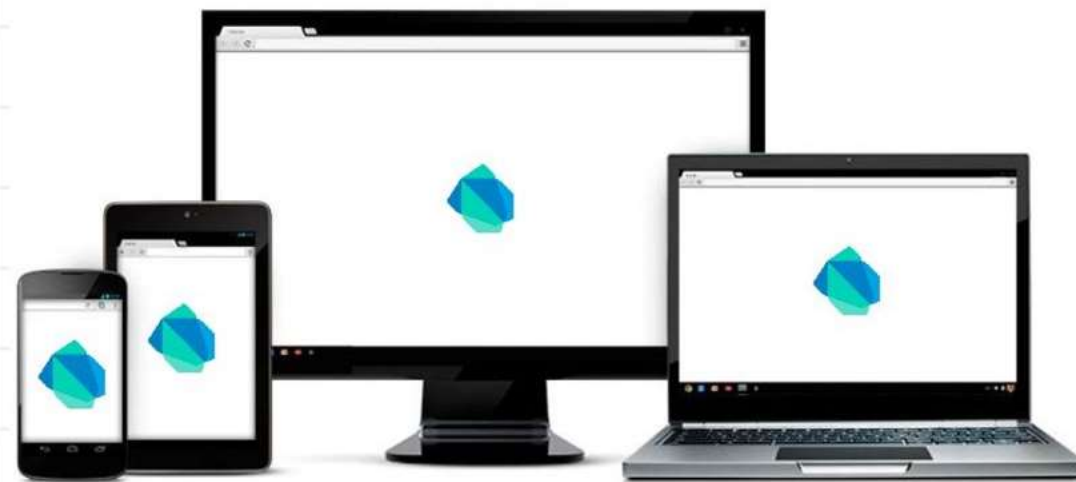
Help app developers
write complex, high
fidelity client apps for
the modern web.



Made by Google

Dart is a client-optimized language for fast apps on any platform!
(Web - Desktop - Mobile - Embedded)?

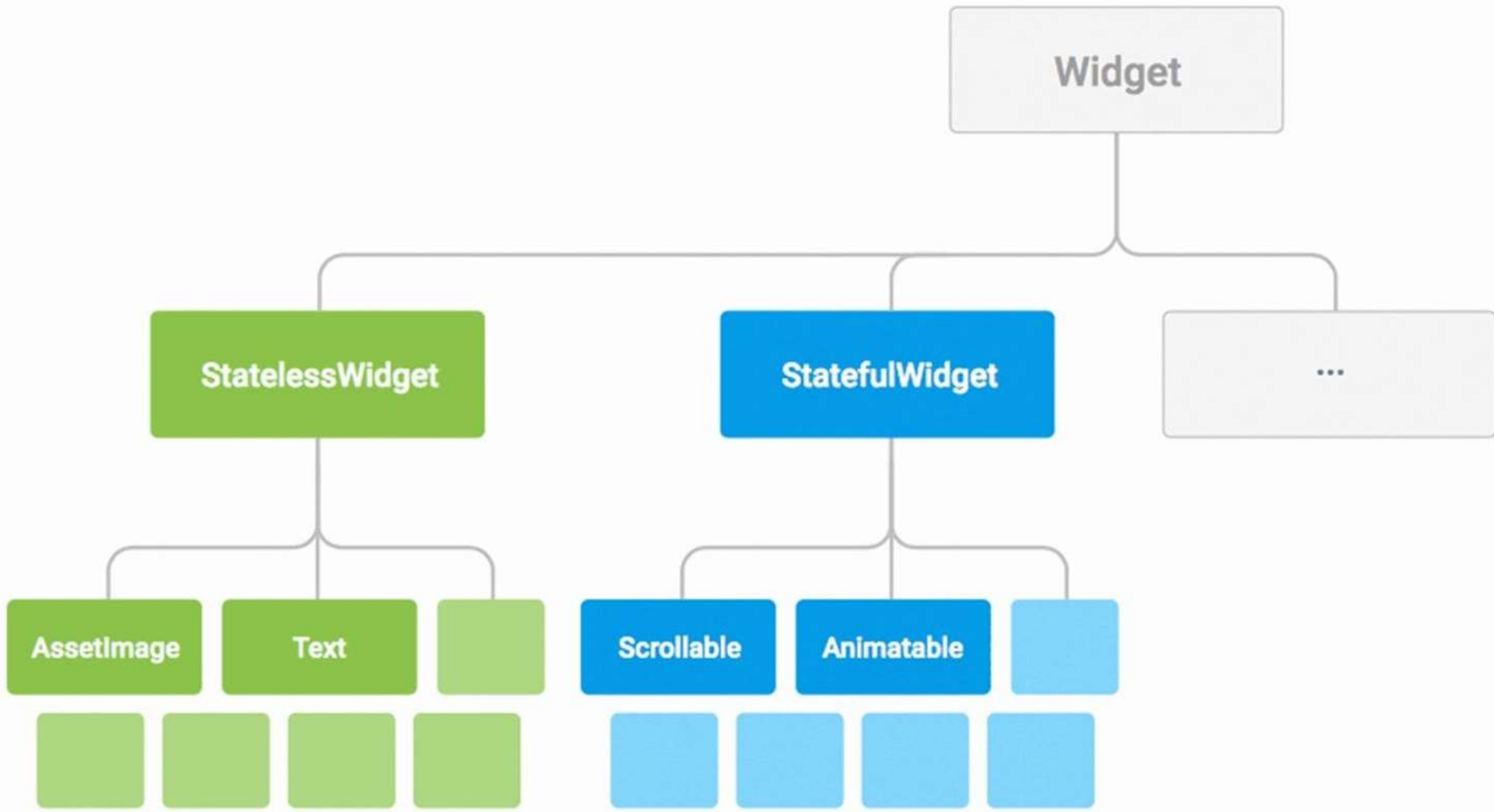
- Language and Libraries
- Packages manager <https://pub.dev>
- Virtual machine
- Compile to Javascript `dart2js`





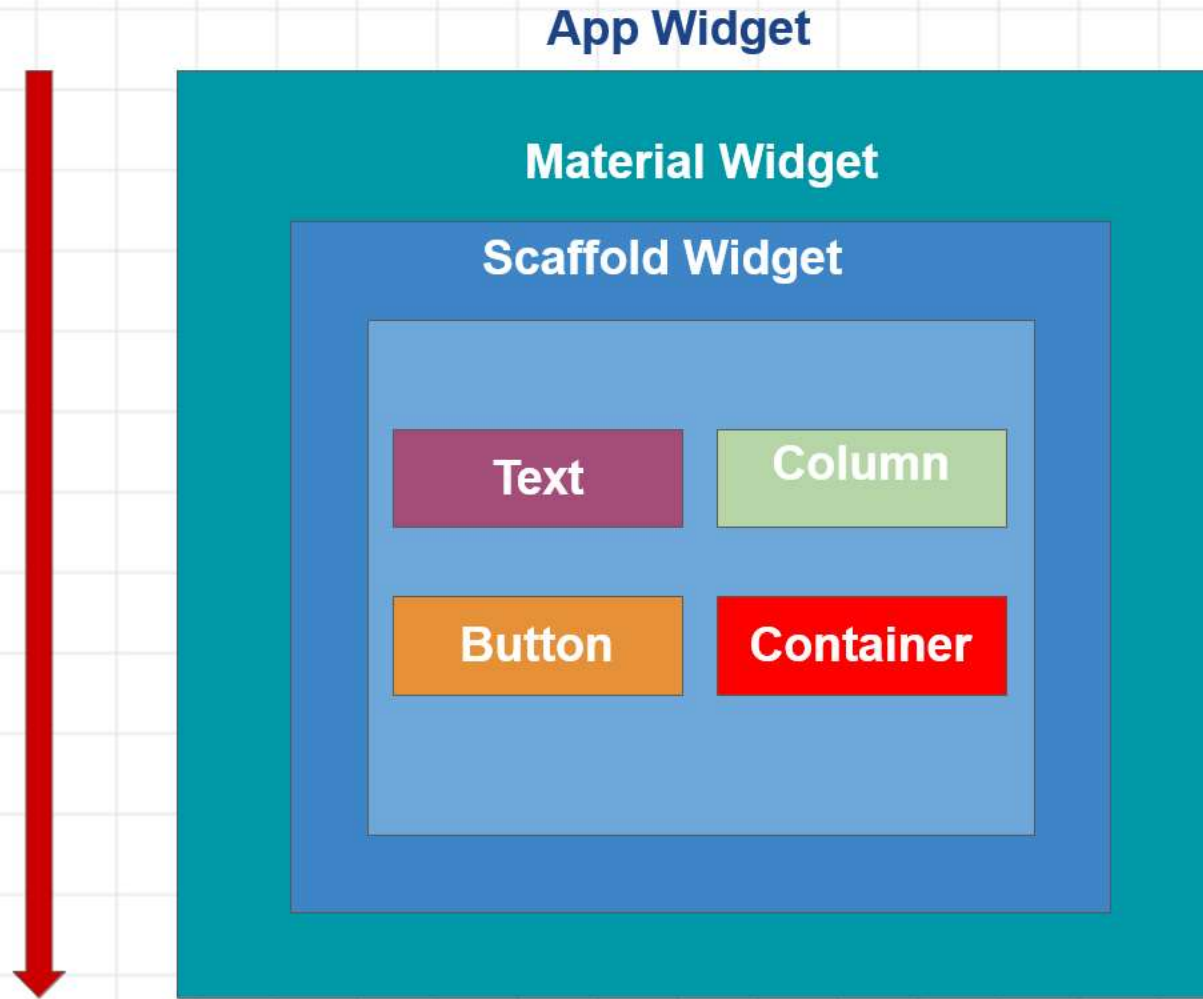
What is Dart

- Dart is for **Scalable, productive app development**.
 - Dart is an **open-source, scalable programming language**, with **robust libraries and runtimes**, for **building web, server, and mobile apps**.
-
- Dart is class based, **purely object oriented, dynamic language** with C style syntax
 - descendant in the ALGOL language family alongside C, Java, C#, JavaScript, and others.
 - Dart is purely object oriented (similar to Smalltalk, Ruby and Scala) - so even basic types (int, float) are objects.
 - Dart supports **optional static typing** and type checks
 - Dart supports **single inheritance** with support for mixins
 - Dart supports Real lexical scoping and closures
 - Dart is heavily influenced by JavaScript, Java and C#
 - Dart is **unsurprising** - becomes familiar to both JavaScript developers and Java/C# developers immediately. Familiar syntax for JavaScript and Java/C# developers.



Everything is a Widget

Render Tree



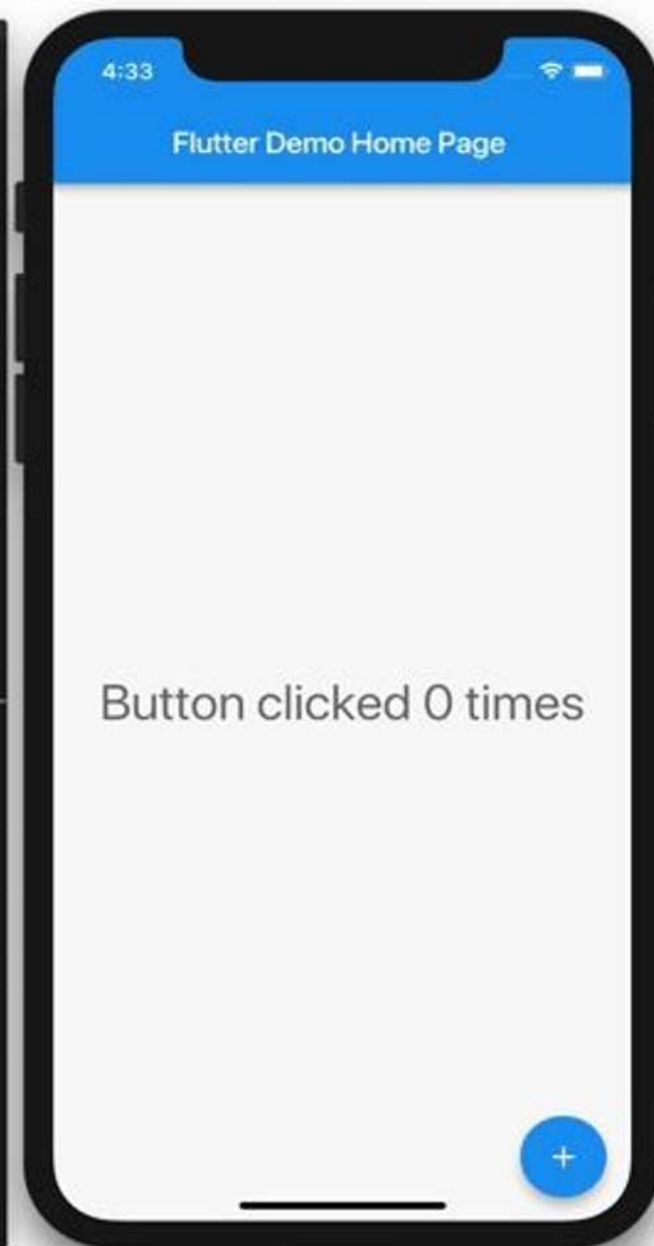
Everything is a Widget

```
class MyApp extends StatelessWidget {  
  // This widget is the root of your application.  
  @override  
  Widget build(BuildContext context) {  
    return new MaterialApp(  
      title: 'Flutter Demo',  
      theme: new ThemeData(  
        primarySwatch: Colors.blue,  
      ), // ThemeData  
      home: new MyHomePage(title: 'ITI Flutter Demo'),  
    ); // MaterialApp  
  }  
}
```

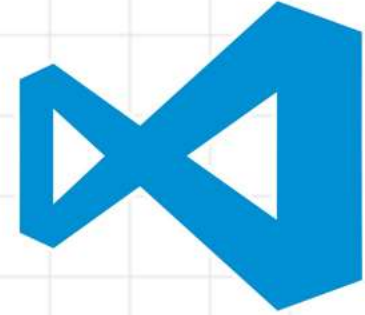
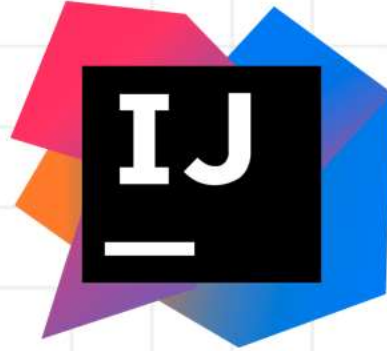
```
return new Scaffold(  
  appBar: new AppBar(  
    title: new Text(widget.title),  
  ), // AppBar  
  body: new Center(  
    child: new Column(  
      // horizontal).  
      mainAxisAlignment: MainAxisAlignment.center,  
      children: <Widget>[  
        new Text(  
          'You have pushed the button this many times:',  
        ), // Text  
        new Text(  
          '$_counter',  
          style: Theme.of(context).textTheme.display1,  
        ), // Text  
      ], // <Widget>[]  
    ), // Column  
  ), // Center  
  floatingActionButton: new FloatingActionButton(  
    onPressed: _incrementCounter,  
    tooltip: 'Increment',  
    child: new Icon(Icons.add),  
  ), // This trailing comma makes auto-formatting nicer for build methods.  
); // Scaffold  
}
```

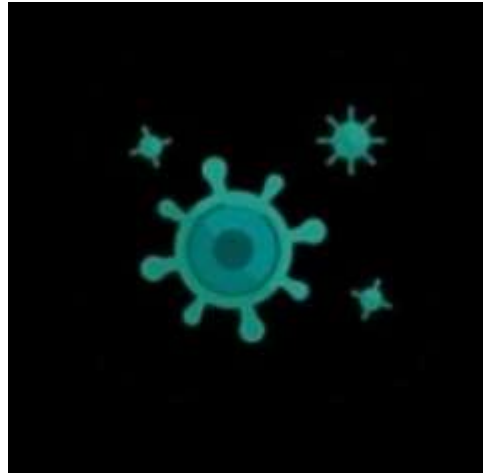


```
main.dart x
29
30 void _incrementCounter() {
31   setState(() {
32     _counter++;
33   });
34 }
35
36 @override
37 Widget build(BuildContext context) {
38   return new Scaffold(
39     appBar: new AppBar(
40       title: new Text(widget.title),
41     ), // AppBar
42     body: new Center(
43       child: new Text(
44         'Button clicked $_counter times',
45         style: Theme.of(context).textTheme.display1,
46       ), // Text
47     ), // Center
48     floatingActionButton: new FloatingActionButton(
49       onPressed: _incrementCounter,
50       tooltip: 'Increment',
51       child: new Icon(Icons.add),
52     ), // FloatingActionButton
53   ); // Scaffold
54 }
55 }
56
```



IDE Support ?





TAP THE APP



Go Corona

Loading screen:

This is the beginning screen shown when the application is tapped, while in background the data is loaded.

HOME SCREEN

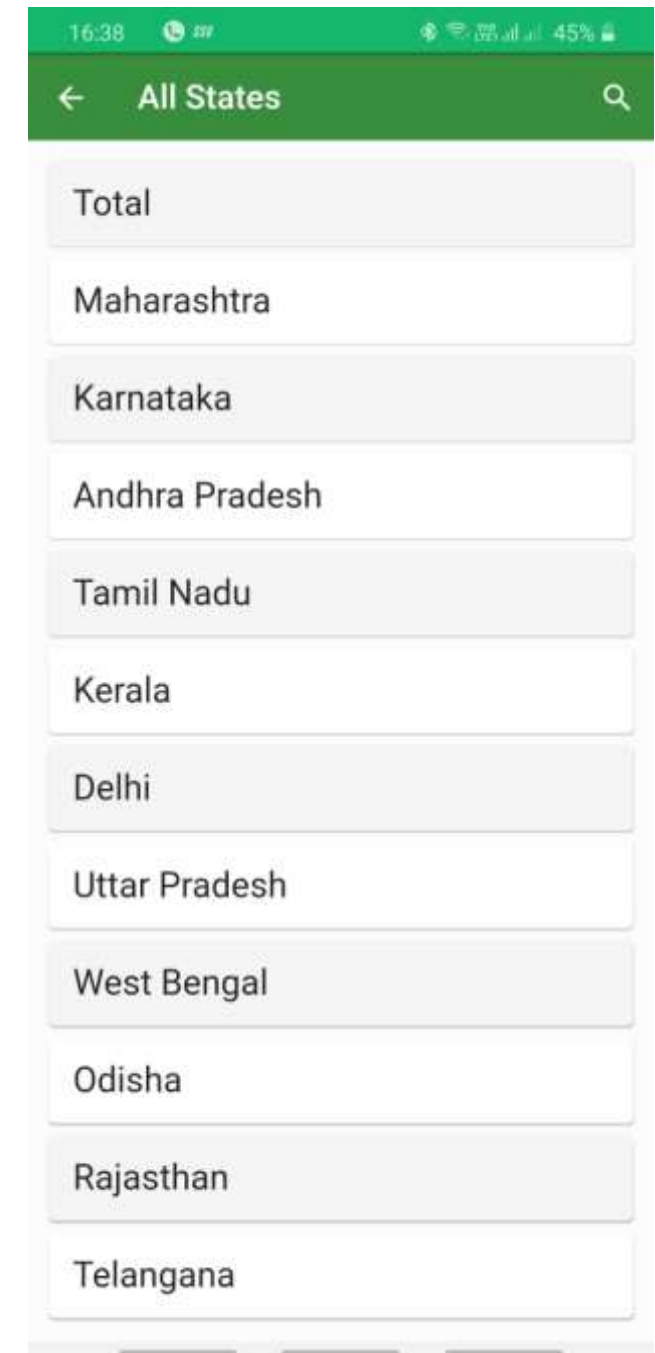
The main screen in which is connected to different screens.





INDIA WIDGET LEADS TO:

Displays all the states of INDIA





SEARCH ICON

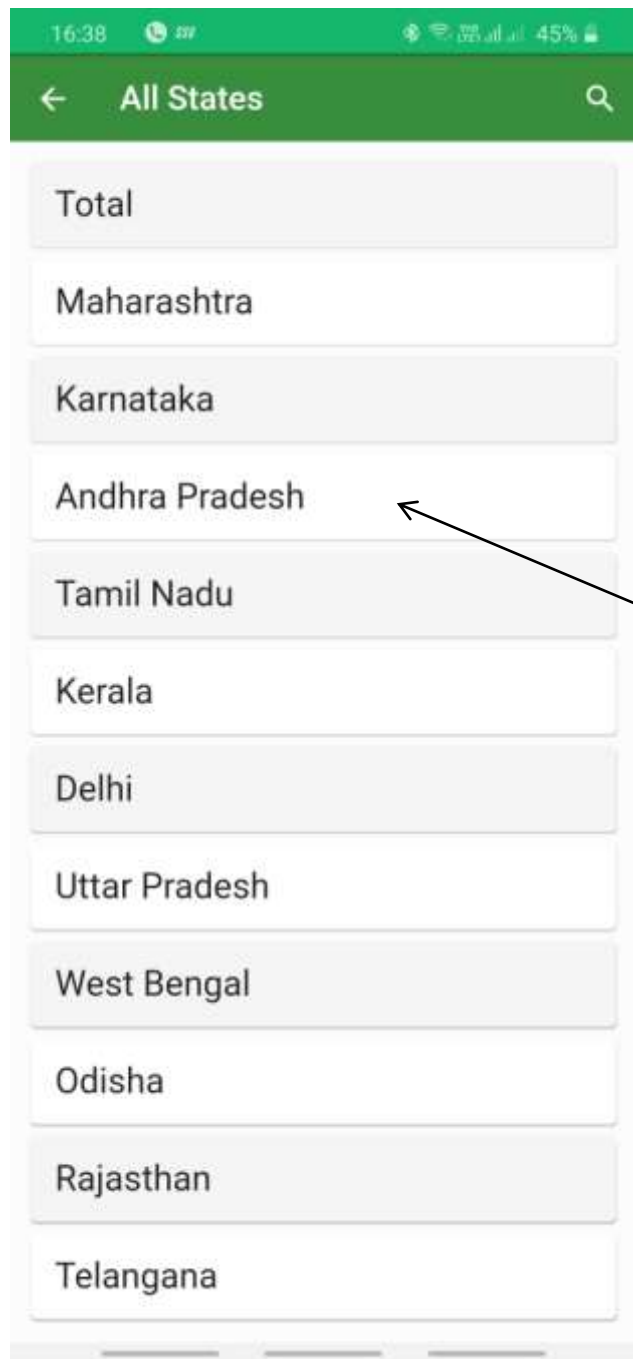
Searches for the results.

Ex: Andhra Pradesh



If no result found, the following screen is displayed





Clicking on a state leads to:

Details of the Covid-19 cases of the state



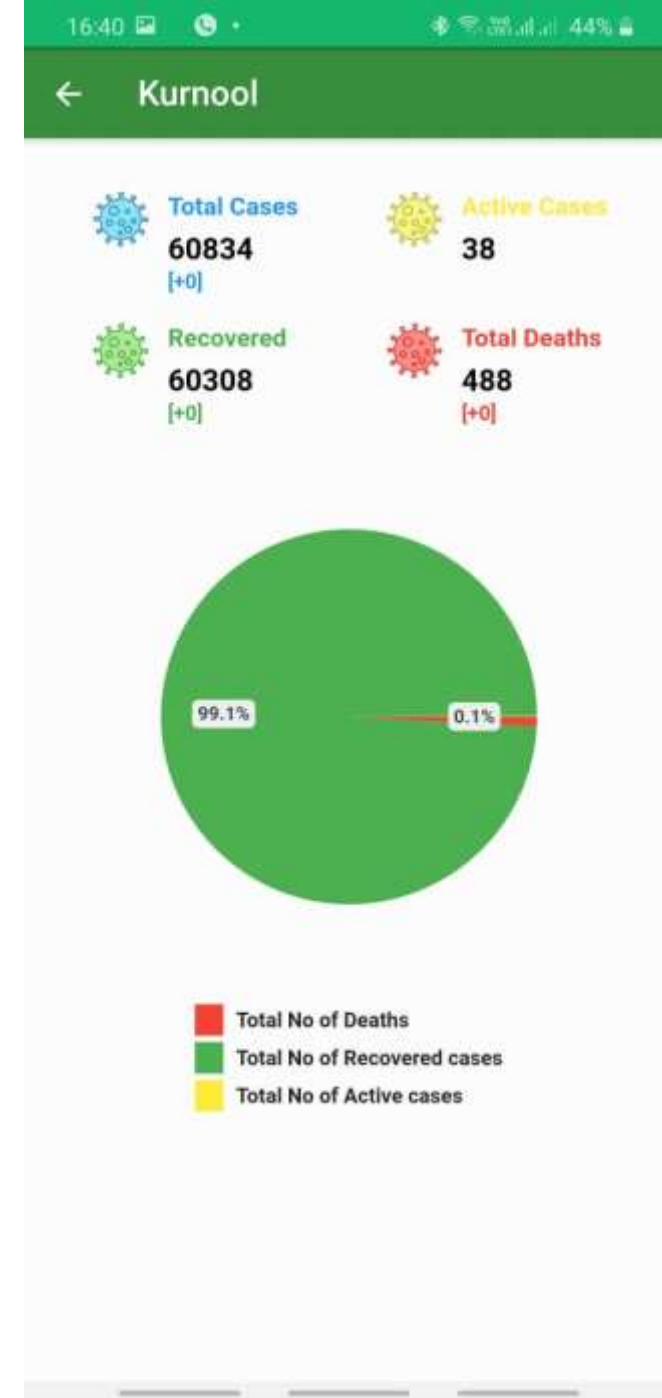
Clicking on districts leads to:

All the districts of Andhra Pradesh

Clicking on a
district leads to:

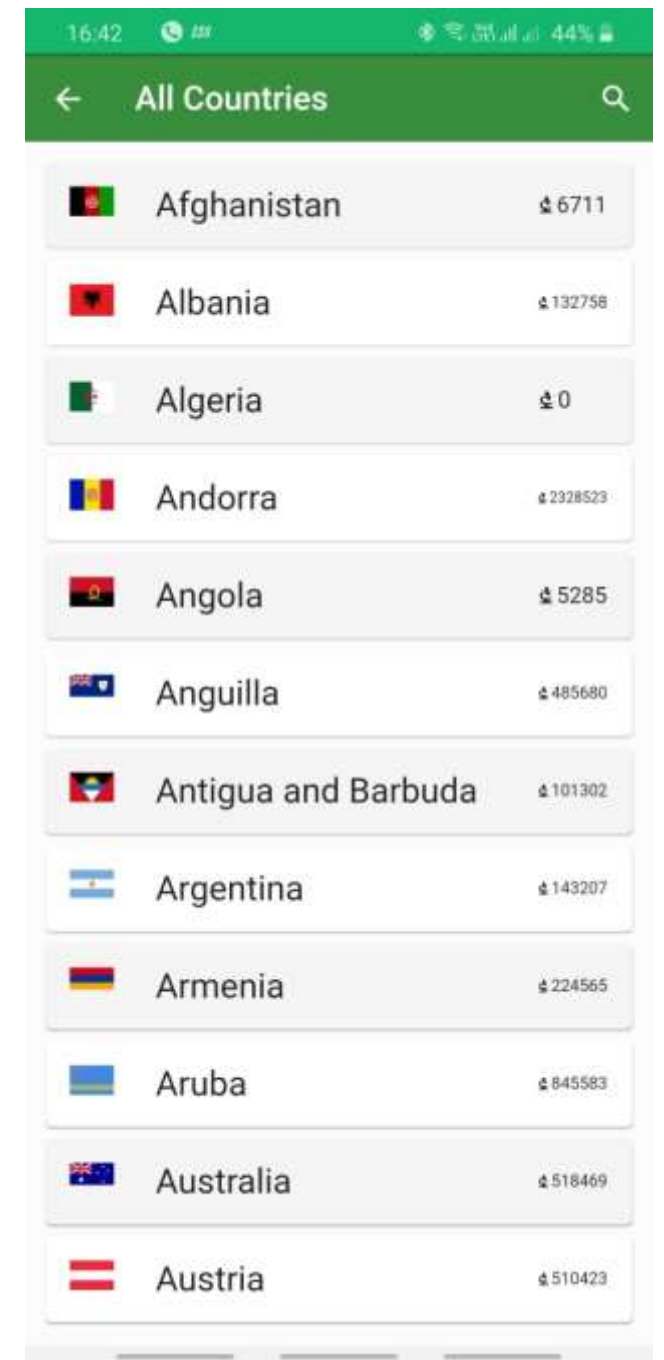


details of the COVID-19 cases
in the district



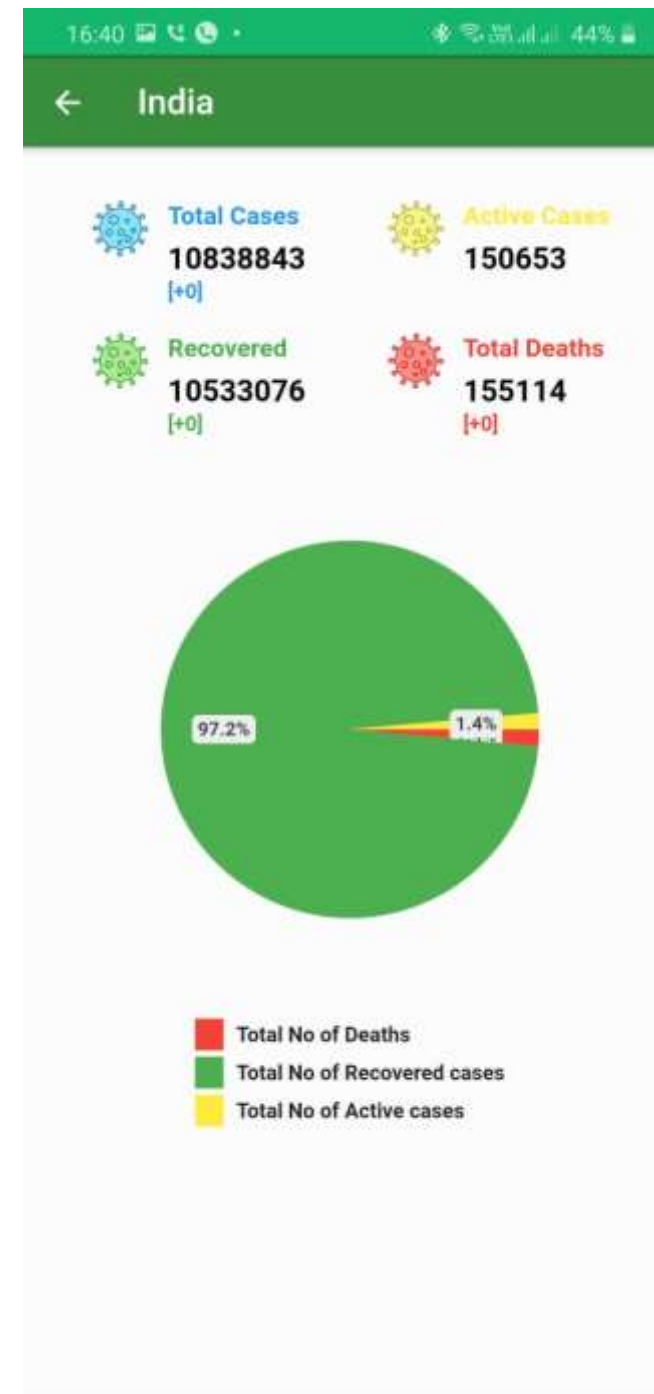


Returning to home screen and clicking on the “Global” widget leads to:



Clicking on any country leads to the details of the COVID-19 details of the country.

Given ex: INDIA



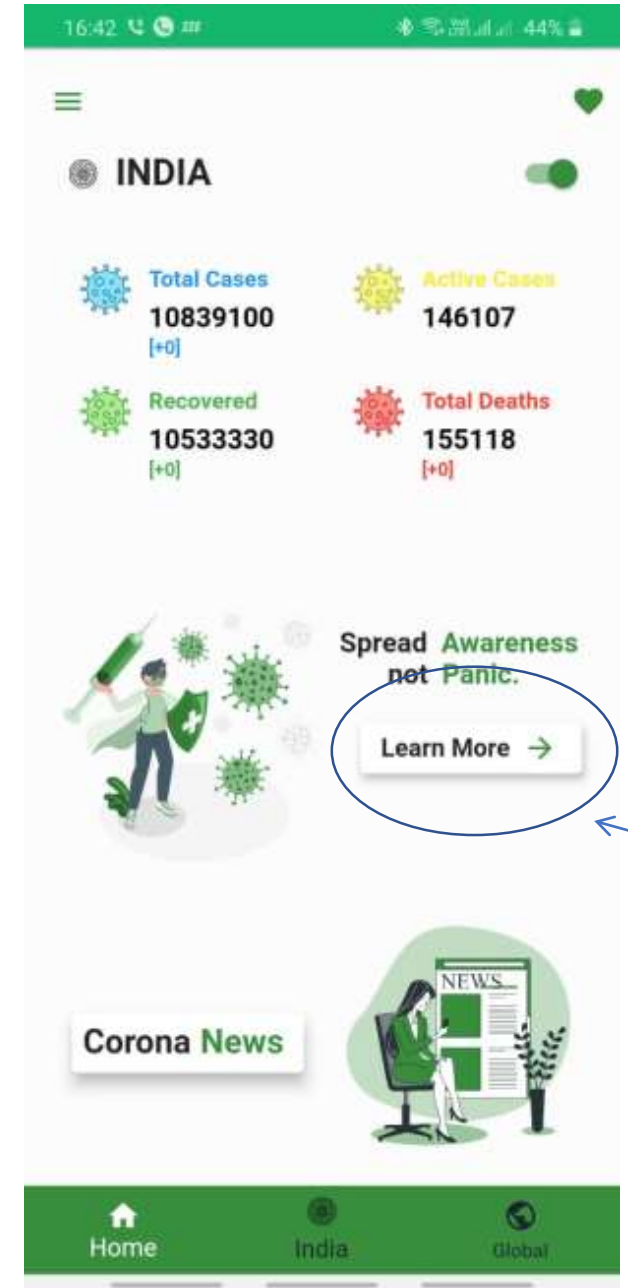
Returning to home screen



The above widget is used to show the details of the GLOBE and INDIA.



Learn More widget leads to:



Details about COVID-19

- Symptoms
- How it spreads
- preventions



COVID-19 (Coronavirus)

Coronavirus disease (COVID-19) is an infectious disease caused by a newly discovered coronavirus.

Most people who fall sick with COVID-19 will experience mild to moderate symptoms and recover without special treatment.

Symptoms



How it Spreads?

Most people who fall sick with COVID-19 will experience mild to moderate symptoms and recover without special treatment.

Symptoms



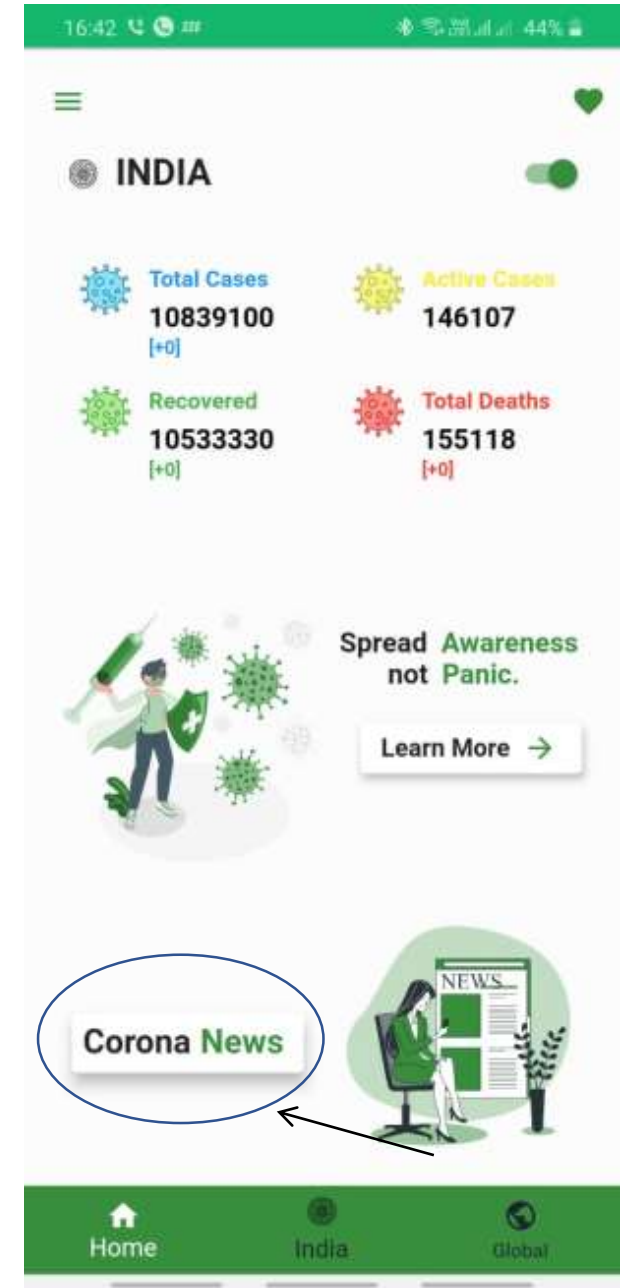
How it Spreads?



Preventions



Corona News widget leads to:



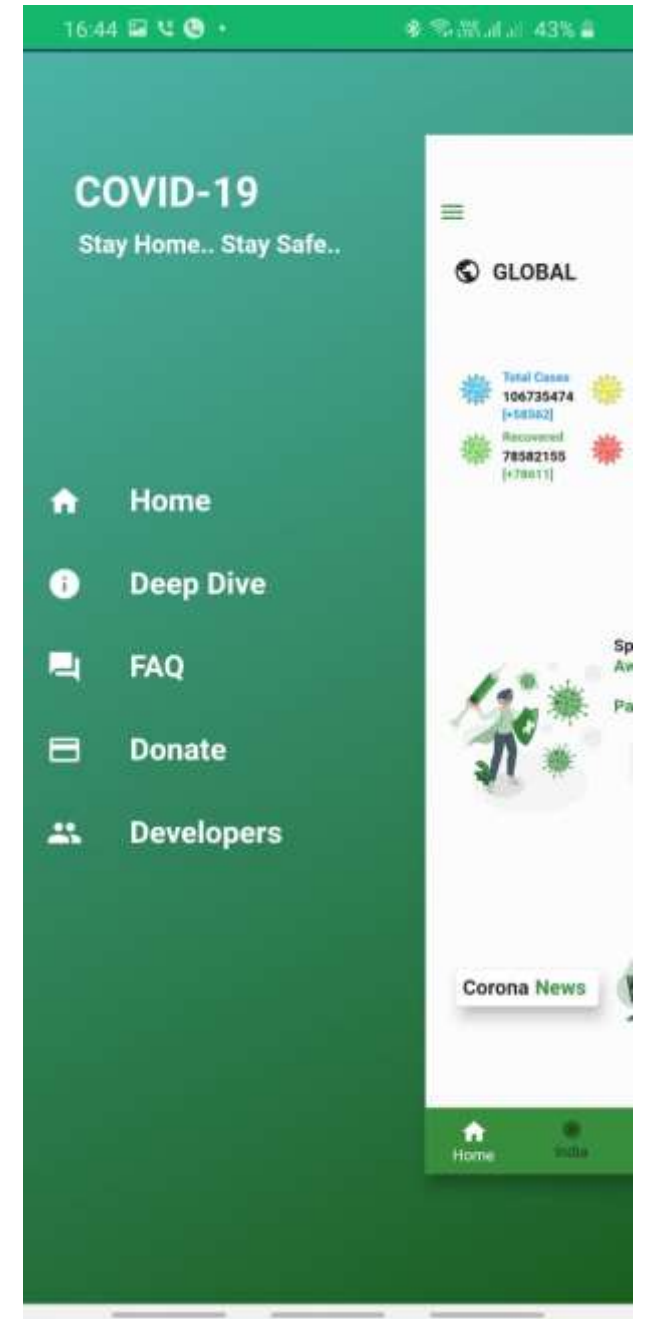
News regarding GLOBAL and INDIA.





MENU SCREENS

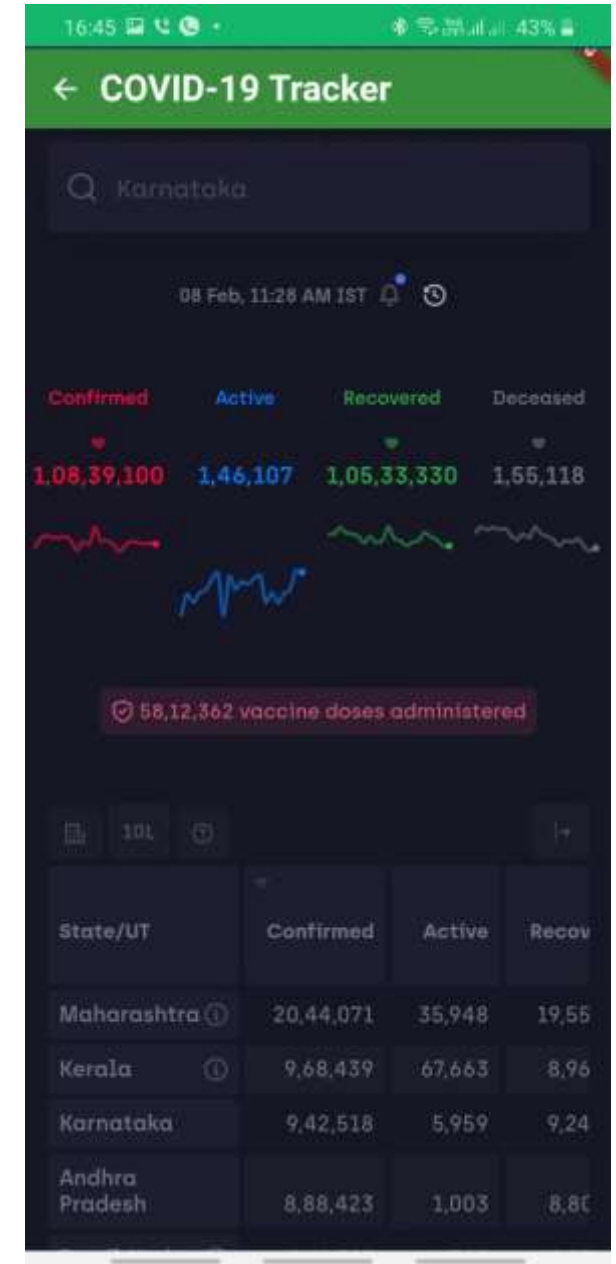
The following action takes place by clicking on the shown widget.





DEEP DIVE widget

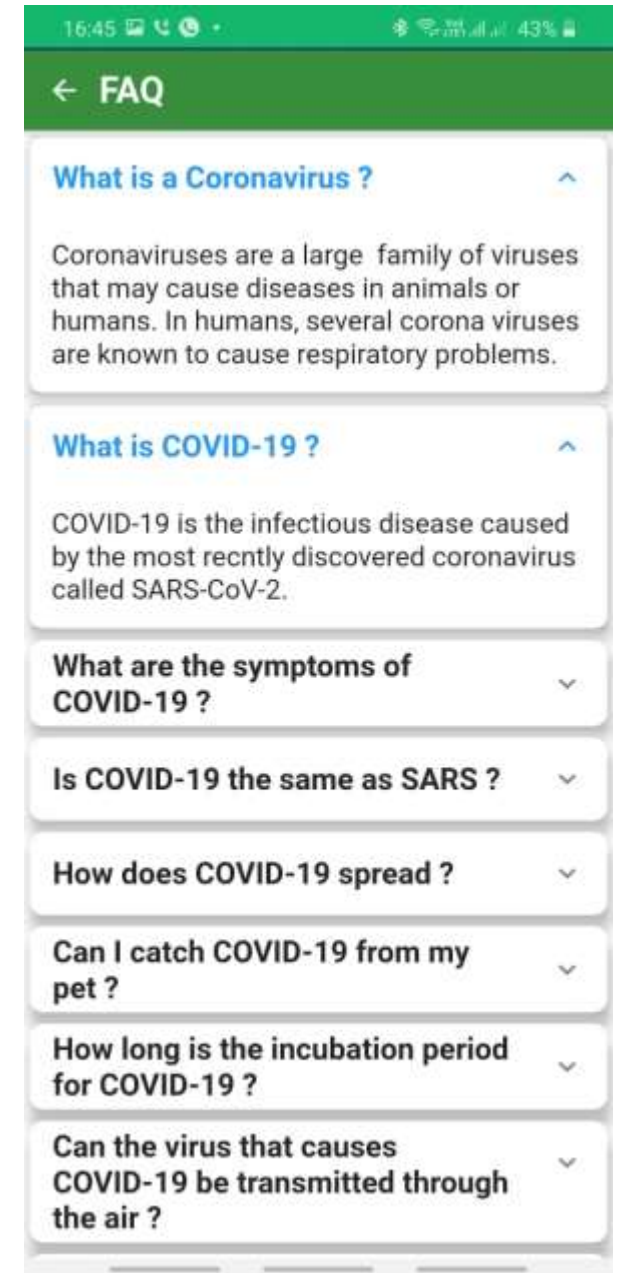
API which gives more information about the COVID-19 case details.





FAQ widget

Shows the frequently asked questions regarding COVID-19.





DONATE widget

Leads to the PMCARES website where donations are made.





DEVELOPERS widget

Leads to the details of the developers.



Developers

 **Harshith Ravinoothala**
Flutter Developer  

 **Manideep Gummadala**
Flutter Developer  

 **Akash Dodda**
Flutter Developer  



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thankyou.TM