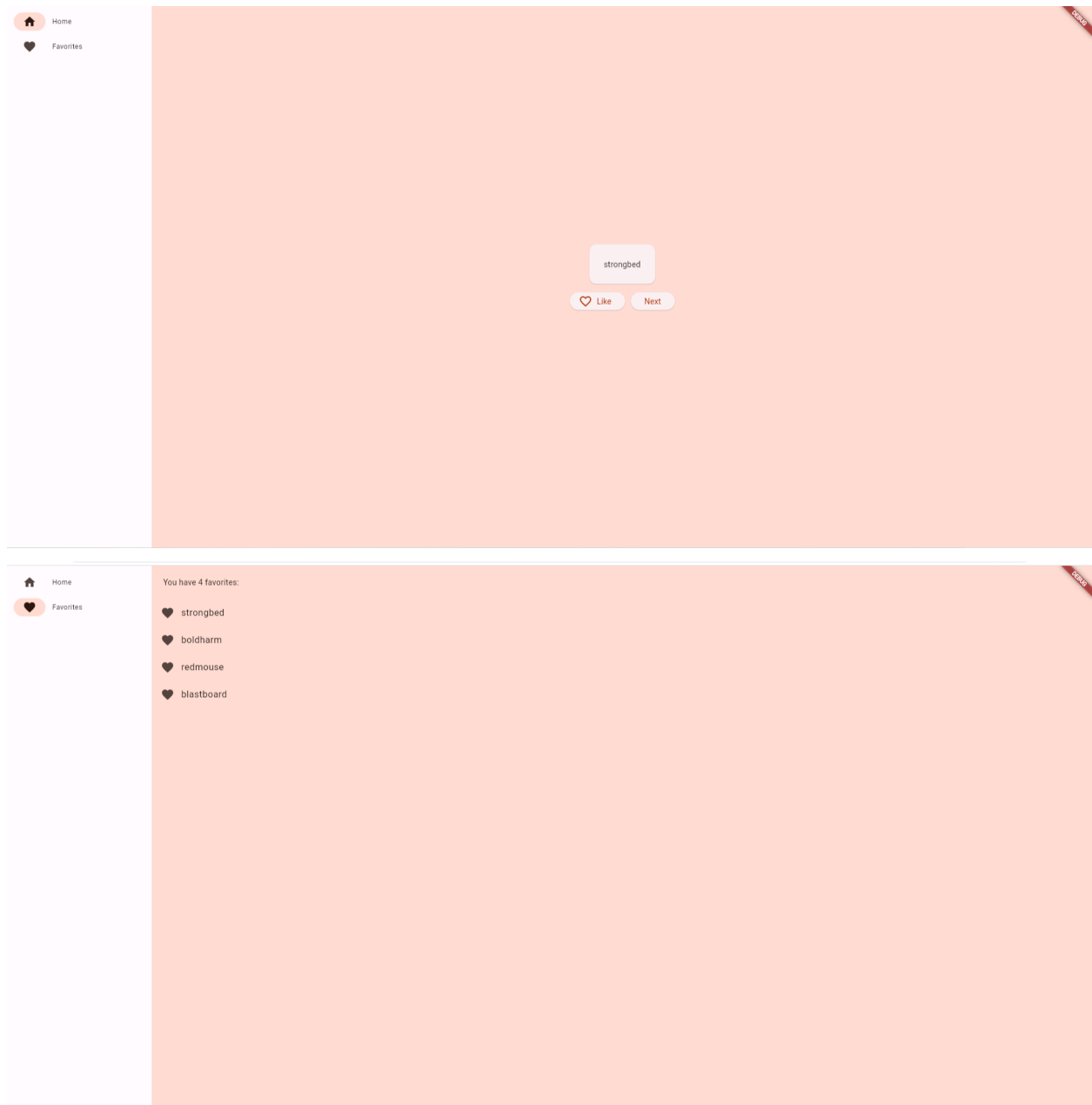


- 1. Summary of the article: you should write a summary of the reading provided (at least 200 words). The summary should contain your impression of Dart, interesting observations from the reading, comments on the differences between other languages and Dart. Make sure to include examples.**

The development of the Dart programming language is quite remarkable, gaining attention and popularity, especially among experienced C# and Java developers. Dart was first criticized for its release in 2013 due to a number of flaws, but with the release of Dart 2 it has undergone significant improvements that make it more appealing to the developer community. One of Dart's standout features is its associative nature, cleverly combining compiled type safety with scripting techniques reminiscent of Python and JavaScript. This unique combination allows developers to enjoy the benefits of static typing while incorporating dynamic scripting elements, making it a flexible language suitable for a wide variety of applications.

One of Dart's main strengths is cross-platform interoperability. This feature makes it the preferred choice for developers looking to build web and mobile applications, reducing the need to learn multiple programming languages for different platforms. Dart has made significant progress since its initial release and has established itself as a top choice for C# and Java programming. In summary, it is suited to individuals with limited programming knowledge. Its hybrid nature, cross-platform capabilities, flexible type system, rich library, and unique features make it an attractive choice for web and mobile application development. As it grows, Dart will likely remain the leading programming language in the world of programming languages.

2. Screenshot of your completed Dart Lab example showing the program after completing step 8:



3. A copy of your lib/main.dart

```
import 'package:english_words/english_words.dart';
import 'package:flutter/material.dart';
import 'package:provider/provider.dart';

void main() {
  runApp(MyApp());
}

class MyApp extends StatelessWidget {
  const MyApp({super.key});

  @override
  Widget build(BuildContext context) {
    return ChangeNotifierProvider(
      create: (context) => MyAppState(),
      child: MaterialApp(
        title: 'Namer App',
        theme: ThemeData(
          useMaterial3: true,
          colorScheme: ColorScheme.fromSeed(seedColor: Colors.deepOrange),
        ),
        home: MyHomePage(),
      ),
    );
  }
}

class MyAppState extends ChangeNotifier {
  var current = WordPair.random();
```

```

void getNext() {
    current = WordPair.random();
    notifyListeners();
}

// ↓ Add the code below.
var favorites = <WordPair>[];

void toggleFavorite() {
    if (favorites.contains(current)) {
        favorites.remove(current);
    } else {
        favorites.add(current);
    }
    notifyListeners();
}
}

// ...

class MyHomePage extends StatefulWidget {
    @override
    State<MyHomePage> createState() => _MyHomePageState();
}

class _MyHomePageState extends State<MyHomePage> {
    var selectedIndex = 0;

    @override
    Widget build(BuildContext context) {
        Widget page;

```

```
switch (selectedIndex) {  
  case 0:  
    page = GeneratorPage();  
    break;  
  case 1:  
    page = FavoritesPage();  
    break;  
  default:  
    throw UnimplementedError('no widget for $selectedIndex');  
}  
  
return LayoutBuilder(builder: (context, constraints) {  
  return Scaffold(  
    body: Row(  
      children: [  
        SafeArea(  
          child: NavigationRail(  
            extended: constraints.maxWidth >= 600, // ← Here.  
            destinations: [  
              NavigationRailDestination(  
                icon: Icon(Icons.home),  
                label: Text('Home'),  
              ),  
              NavigationRailDestination(  
                icon: Icon(Icons.favorite),  
                label: Text('Favorites'),  
              ),  
            ],  
            selectedIndex: selectedIndex,  
            onDestinationSelected: (value) {  
              setState(() {
```

```

                selectedIndex = value;

            });

        },

    ),

),

Expanded(
    child: Container(
        color: Theme.of(context).colorScheme.primaryContainer,
        child: page,
    ),
),

],

),

);

});

}

}

```

```

class GeneratorPage extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    var appState = context.watch<MyAppState>();
    var pair = appState.current;

    IconData icon;

    if (appState.favorites.contains(pair)) {
      icon = Icons.favorite;
    } else {
      icon = Icons.favorite_border;
    }
  }
}

```

```
return Center(  
  child: Column(  
    mainAxisAlignment: MainAxisAlignment.center,  
    children: [  
      BigCard(pair: pair),  
      SizedBox(height: 10),  
      Row(  
        mainAxisAlignment: MainAxisAlignment.min,  
        children: [  
          ElevatedButton.icon(  
            onPressed: () {  
              appState.toggleFavorite();  
            },  
            icon: Icon(icon),  
            label: Text('Like'),  
          ),  
          SizedBox(width: 10),  
          ElevatedButton(  
            onPressed: () {  
              appState.getNext();  
            },  
            child: Text('Next'),  
          ),  
        ],  
      ),  
    ],  
  ),  
);  
}
```

```
class BigCard extends StatelessWidget {  
  const BigCard({  
    super.key,  
    required this.pair,  
  });  
  
  final WordPair pair;  
  
  @override  
  Widget build(BuildContext context) {  
    return Card(  
      child: Padding(  
        padding: const EdgeInsets.all(25),  
        child: Text(pair.asLowerCase),  
      ),  
    );  
  }  
}  
  
class FavoritesPage extends StatelessWidget {  
  @override  
  Widget build(BuildContext context) {  
    var appState = context.watch<MyAppState>();  
  
    if (appState.favorites.isEmpty) {  
      return Center(  
        child: Text('No favorites yet.'),  
      );  
    }  
  
    return ListView(  

```



```

children: [
  Padding(
    padding: const EdgeInsets.all(20),
    child: Text('You have '
      '${appState.favorites.length} favorites:'),
  ),
  for (var pair in appState.favorites)
    ListTile(
      leading: Icon(Icons.favorite),
      title: Text(pair.asLowerCase),
    ),
],
);
}
}

```

4. Submit the link from an online resource. You should include a short description (at least 50 words) along with the link and mention why it is interesting/helpful to learn Dart

I read from the website called the geeksforgeeksIt advised me which one to use and provided instructions on how to install the Dart SDK. The next step is to explain how to run the Dart as well as how to access the Dart Environment. They finally demonstrated how to configure my path configuration, which enables the file system to add the dart sdk bin folder to the path system's environment variables.