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***What Is Flutter?***

Flutter is an open-source mobile application development framework created by Google. It allows developers to build high-performance, natively compiled applications for mobile, web, and desktop platforms from a single codebase. Flutter uses the Dart programming language and provides a rich set of customizable widgets and tools for building beautiful, responsive, and fast user interfaces. Flutter also includes features like hot reload, which enables developers to see the changes they make to the code in real-time, and it has a large and active community that supports developers with a wealth of resources and documentation. Overall, Flutter is a powerful tool for developers looking to build cross-platform mobile applications quickly and efficiently.

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***How Flutter works?***

Flutter is a framework for building mobile applications that allows developers to create high-quality, fast, and responsive apps using a single codebase. Here's how Flutter works:

1. The developer writes code in the Dart programming language, which is used by Flutter.
2. Flutter's core engine, written in C++, provides a set of low-level platform-independent libraries for rendering graphics, managing input, and handling network requests.
3. Flutter's widgets, written in Dart, are built on top of the core engine and provide a rich set of customizable and reusable UI components, such as buttons, text boxes, and image placeholders.
4. When the app is launched, the Flutter engine compiles the Dart code into native machine code for the target platform (iOS, Android, or web) using just-in-time (JIT) compilation or ahead-of-time (AOT) compilation.
5. The native code is then executed by the platform-specific runtime, which results in fast and efficient app performance.
6. Flutter's hot reload feature allows developers to quickly see changes they make to the code in real-time, which helps to speed up the development process.
7. Flutter also provides access to a variety of plugins and packages, which allow developers to extend the functionality of their apps with features like geolocation, camera access, and push notifications.

Overall, Flutter's architecture and framework allow developers to write high-performance apps that can run seamlessly on multiple platforms, with the ability to customize and extend the UI to meet their specific needs.

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***Why we use flutter instead of the native platforms?***

The high usage of React Native and Flutter is because of their ability to develop cross-platform apps with the same code. This saves cost and time and gets the same convenience as native development. Moreover, it is easier to maintain and update hybrid apps than native applications.

Here are some reasons why developers may choose to use Flutter instead of native platforms:

1.Faster development: Flutter provides a hot reload feature that allows developers to quickly see changes made in the code, which can significantly reduce the time it takes to develop an app.

2.Single codebase: With Flutter, developers only need to write one codebase for both Android and iOS platforms, which reduces the amount of time and effort required to maintain multiple codebases.

3.Customizable widgets: Flutter provides customizable widgets that can be easily customized to match the specific design requirements of an app.

4.High-performance: Flutter is built using the Dart language, which compiles to native code, allowing for high performance and faster app execution.

5.Cross-platform development: Flutter enables developers to create apps that work on multiple platforms, including Android, iOS, web, and desktop, allowing for broader reach and greater user engagement