Flutter uses a single codebase to build apps for multiple platforms by leveraging its custom rendering engine, Skia. It compiles directly to native ARM or Intel machine code for mobile (iOS and Android) and desktop (Windows, macOS, Linux). For web apps, Flutter converts its widgets to HTML, CSS, and JavaScript. Flutter's platform channels allow communication between Dart code and native platform APIs, enabling access to device-specific features. This unified approach ensures consistent UI and performance across platforms while allowing platform-specific customizations when needed.