Compare different mobile development platforms including cross platform development platforms

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1. **Visual Studio:**

   Microsoft Visual Studio is an integrated development environment (IDE) from Microsoft. It is used to develop computer programs, as well as websites, web apps, web services and mobile apps. Visual Studio uses Microsoft software development platforms such as Windows API, Windows Forms, Windows Presentation Foundation, Windows Store and Microsoft Silverlight. It can produce both native code and managed code.
   Visual Studio includes a code editor supporting IntelliSense (the code completion component) as well as code refactoring. The integrated debugger works both as a source-level debugger and a machine-level debugger. Other built-in tools include a code profiler, designer for building GUI applications, web designer, class designer, and database schema designer. Some of its features are:

   - New User Experienced Start Window
   - Visual Studio Live Share
   - Search Feature While in Debugging
   - Code clean-up in One Click
   - Per Monitor Aware Rendering (PMA)

0. XCode:

   XCode is an Integrated Development Environment, which means it pulls all the tools needed to produce an application (particularly a text editor, a compiler, and a build system) into one software package rather than leaving them as a set of individual tools connected by scripts. XCode is Apple's official IDE for Mac and iOS developers; it was originally known as Project

Builder in the NeXT days, and renamed to XCode somewhere around Mac OS X 10.3 or 10.4. By version 4, Apple had folded in the companion Interface Builder program so there was only one app bundle; the design of the program hasn't changed a whole lot since then, although obviously the tools are updated regularly. Some of its features are:

- Rich Documentation
- Swift Package Manager
- Inline Diff
- Transform iPad Apps to Mac
- Debugging and Simulators

0. Flutter (Cross Platform):

   Flutter, developed by Google, is a UI toolkit to build native applications for the mobile, desktop & web platform. Flutter is a cross-platform mobile app development framework that works on one code base to develop Android as well as iOS applications. The framework provides a large range of fully customizable widgets that helps to build native applications in a shorter span. Moreover, Flutter uses the 2D rendering engine called Skia for developing visuals and its layered architecture ensures the effective functioning of components. Some of its features are:

   - Provides Full Native Performance
   - Flexible User interface (UI)
   - Provides Strong Widget Support
   - Offers Built-in Material Design
   - Fast Application Development

0. React Native (Cross Platform):

   React Native is one of the most recommended Mobile App Frameworks in the development industry. The framework, created by Facebook, is an open-source framework that offers you to develop mobile applications for Android & iOS platforms. The React Native framework is based on React and JavaScript that aims to develop native applications over hybrid

applications that run on a web-view. Moreover, it is a cross-platform development framework that uses the single code base for both Android & iOS applications.
Some of its features are:

- Code Re-usability & Cost-Effective
- Compatible with third-party plugins
- Re-usable components for optimal performance
- Provides hot deployment features
- Ease of Maintenance

0. Xamarin:

   Xamarin is also one of the most popular open-source frameworks used to develop mobile applications. The framework, acquired by Microsoft, is based on .Net and allows you to build native applications for Android, iOS, and Windows platforms. Xamarin comes with almost every required tools and library needed to build native applications and offers you to create rich experiences using native UI elements. Moreover, Xamarin also supports the feature of sharing the common codebase to make the development process more efficient and cost-effective. There are various benefits of Xamarin.
   Some of its features are:

   - Huge Community of around 1.4 million developers
   - Native API Access & UI Support
   - Easier API Integration
   - Target All Platforms
   - Cost-Effective & Faster Development Process