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PBL 3 – Literature Review

Cross-platform Development

Cross-platform development has become the mainstay in development. By enabling the usage of applications on desktop, web, and the various mobile operating systems, cross-platform development has revolutionized the software industry. Defined by Charkaoui et al. (2014) in a research paper, cross-platform development is made possible by using the same code that can be deployed to multiple platforms and thus avoid needing to develop the same application multiple times, in different languages.

In total, there are three different types of mobile applications: Native, Web, and Hybrid applications. Native applications are applications targeted at a specific platform, for example the Apple App Store. These applications are made to fully utilize the power of the specific phone and operating system. Web applications operate as websites on the application and uses the web browser of the device. While it is accessible on most, if not all, platforms, it is unable to fully utilize the power and capabilities of the device. Hybrid applications are a mix of the aforementioned applications, mixing native code and HTML. It aims to utilize the capabilities of the device while being able to run on the web framework.

One advantage of cross-platform development is that there is no need to rewrite code for multiple platforms, which saves working hours and effort. Another advantage of cross-platform development is that the software will be able to last a long time. According to a paper done by Bishop and Horspool (2006), cross-platform developed applications can be well maintained across a longer duration of time, reduces development time and cost, and has increased portability. As compared to a natively developed application, which requires maintenance for each separate application made for each platform, cross-platform developed applications are much simpler and easier to maintain.

In conclusion, cross-platform developed applications are more viable for the team in the long term. While it does have certain drawbacks, like not being able to fully utilize the devices' capabilities and power, its advantages certainly outweigh the disadvantages.

References:

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