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Bridging The Gap between Android and iOS by Analysing their Incompatibility

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Abstract: In the current generation there is widespread use of mobile devices. Most of them are based on the two widely known operating systems namely iOS and Android. There are few instances where some applications are compatible with Android while others are compatible with iOS, also there are few which work equally fine with both the operating systems. In this research paper we try to highlight the role of operating systems in application development and the reasons for their incompatibility. Along with this we have tried to find out solutions in order to establish a technological harmony between the two operating systems. In this paper we have also mentioned the comparison between the two operating systems and their specifications for application development.

Keywords: Operating System, Android, iOS, Application, Incompatibility, Comparison, Analysis, Convertor, Swift, Kotlin, Xamarin, Android studio, XCode, Architecture

REFERENCES

- [1]. Lazareska, Lazarela. "Analysis of the Advantages and Disadvantages of Android and IOS Systems and Converting Applications from Android to IOS Platform and Vice Versa." American Journal of Software Engineering and Applications 6, no. 5 (2017): 116. doi:10.11648/j.ajsea.20170605.11.
- [2]. Gyorödi, Robert, Doina Zmaranda, Vlad Georgian, and Cornelia Gyorödi. "A Comparative Study between Applications Developed for Android and IOS." International Journal of Advanced Computer Science and Applications 8, no. 11 (2017). doi:10.14569/ijacsa.2017.081123.
- [3]. Tracy, Kim W. "Mobile Application Development Experiences on Apples IOS and Android OS." IEEE Potentials 31, no. 4 (2012): 30-34. doi:10.1109/mpot.2011.2182571.
- [4]. Khalid Lamhaddab, Mohamed Lachgar, Khalid Elbaamrani, "Porting Mobile Apps from iOS to Android: A Practical Experience", Mobile Information Systems, vol. 2019, Article ID 4324871, 29 pages, 2019. https://doi.org/10.1155/2019/4324871
- [5]. "Operating Systems Technical Implementation (software) Higher Computing Science Revision BBC Bitesize." BBC News. Accessed January 2021. https://www.bbc.co.uk/bitesize/guides/zprkd2p/revision/1.
- [6]. "5 Major Differences Between IOS and Android App Development." EGO Creative Innovations We Develop Mobile Apps for Businesses. https://www.ego-cms.com/post/5-major-differences-between-ios-and-android-app-development.
- [7]. Chen, James. "Android Operating System: What You Need to Know." Investopedia. May 07, 2021. https://www.investopedia.com/terms/a/android-operating-system.asp.
- [8]. Kenton, Will. "Apple IOS." Investopedia. September 17, 2020. https://www.investopedia.com/terms/a/apple-ios.asp#:~:text=Apple (AAPL) iOS is the seamless networking between Apple products.
- [9]. Nations, Daniel. "What Is IOS?" Lifewire. November 09, 2019.. https://www.lifewire.com/what-is-ios-1994355.
- [10]. "Requirements: Android Open Source Project." Android Open Source Project .https://source.android.com/setup/build/requirements.
- [11]. Editor. "Top 20 Tools for Android Development." AltexSoft. February 28, 2020. https://www.altexsoft.com/blog/engineering/top-20-tools-for-android-development/.
- [12]. Kaczorowski, Miłosz. "Picking The Best Language For IOS App Development In 2021." Agile Software Copyright to IJARSCT

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Development Agency in Europe. https://www.ideamotive.co/blog/picking-the-best-language-for-ios-app-development.

- [13]. "Architecture of IOS Operating System." GeeksforGeeks. March 15, 2021. https://www.geeksforgeeks.org/architecture-of-ios-operating-system/.
- [14]. "Pros and Cons of Mobile App Development Using Cross-Platform Technologies: GoodWorkLabs: Big Data: AI: Outsourced Product Development Company." GoodWorkLabs. December 10, 2019. https://www.goodworklabs.com/pros-and-cons-of-mobile-app-development-using-cross-platform-technologies/#:~:text=One of the limitations of,same application on different platforms.
- [15]. "Cross-Platform Mobile App Development: Challenges and Opportunities." VertexPlus Blog. February 18, 2020.. https://blog.vertexplus.com/cross-platform-mobile-app-development-challenges-and-opportunities/.
- [16]. "Convert Android App to IOS: Android App to IOS App." JumpGrowth. May 04, 2021. Accessed https://jumpgrowth.com/convert-android-app-to-ios/?utm_source=&utm_medium=&utm_campaign=&utm_content=&utm_term=.

BIOGRAPHY



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