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Comparative Programming Languages

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## Kotlin

Kotlin is a uniquely interesting language as it was created with Java's downfalls in mind seeking a way to fix them. This document will provide a proposal for an in-depth research project of the programming language Kotlin. The project will seek to examine Kotlin's history, an overview of the language along with its features, and an analysis and evaluation of the language itself. In addition, the project will also aim to make a comparative analysis with Java, a close cousin of Kotlin.

Kotlin is a fascinating language given its history with Java, and its relations with Google and Android development. Kotlin is a language I personally plan on learning in-depth in the future, as it is used in Android development, which is something that interests me. Kotlin is backwards compatible with Java code as well despite not having all the same features. Kotlin is also a well-documented language which allows for a much easier learning curve as well. It is also a much newer language which leads to more features than some older languages, and the language is constantly being updated with new and useful features. This in turn keeps the language current in today's programming world, keeping in mind its principles and practices. Interestingly Kotlin is also open source and provides support for both Object-oriented and functional programming. Its close counterpart, however, only supports object-oriented programming, and low-level functional programming. The syntax is also like that of Java and C#, both of which I have experience using. Lastly, Kotlin could be considered a serious competitor to Java, and an in-depth look into the level of competition it holds could prove quite useful.

To conclude, Kotlin appeals to me as it reminds me of both Java, by supporting object-oriented programming, and Python, by supporting functional programming. Kotlin's history and features are also interesting and detailed thoroughly. As mentioned, the full project will attempt to go into further detail about its history, provide a general overview of the language and its features, and to analyze and evaluate the language. Due to the closeness of Kotlin to Java a brief but comprehensive comparative analysis will also be included.

Confirmation Information

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