

HASKELL

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In this work we looked at the main features of the Haskell language, including its lazy computational strategy, syntax, type system, performance, applications, and usage.

The Haskell programming language was developed in the late 1980s and is named after the logician Haskell Curry. It is an open-source language that is becoming increasingly popular nowadays because of its unique features and advantages.

Haskell is a high-level, purely functional programming language based on lambda-calculus, with strong static typing. Its syntax is based on mathematical notation, which makes it more readable and concise. It was developed with category theory in mind and has a strong connection to mathematical logic.



Haskell Curry

One of the unique features of Haskell is the lazy computational strategy, which avoids the need to explicitly specify the order of computation. This means that Haskell does not compute function values until they are needed to run the program, which optimizes computation and saves memory. In addition, Haskell has full support for functional programming, which allows programmers to use higher-order functions and recursion to write compact and elegant code.

Haskell uses a simple and straightforward syntax that makes the code easy to read and understand. Haskell code is written in a declarative style, that is, it describes what the code should do, not how it should do it. Haskell uses functions as basic building blocks, and functions can be composed to create more complex functions.

The Haskell type system allows programmers to write safe code that is checked at compile time. This reduces errors related to data types and makes debugging easier. In addition, the Haskell type system allows the use of polymorphism, which increases flexibility and code reuse.

Haskell's performance is one of the main reasons for its popularity. Haskell has high performance due to its lazy computational strategy and optimizations performed by the compiler. In addition, Haskell allows the use of parallel computing, which speeds up tasks on multiprocessor systems.

The Haskell language is used in a variety of fields, including finance, academia and software development. In finance, Haskell is used because of its powerful type system and support for high-performance computing. In academia, Haskell is used for research and teaching. In software development, Haskell is used for a variety of tasks, including web development and system programming.