

## **THE HISTORY OF THE CREATION OF THE PROGRAMMING LANGUAGE PASCAL**

student Naumets S.A.

scientific supervisor – lecturer Dzerhachova A.A.

Belarusian National University of Technology

Minsk, Belarus

Programming languages are an essential tool for developers to build and develop software applications. Pascal is one of the programming languages that has gained significant popularity among developers due to its numerous benefits. Pascal was developed in 1969 by Niklaus Wirth as a programming language intended to teach structured programming. Pascal is named after the mathematician Blaise Pascal and is used for a wide range of applications, including desktop applications, scientific and engineering applications, and education. One of the benefits of Pascal is its simplicity. The syntax of Pascal is easy to understand, making it an excellent choice for beginners. Pascal's structure emphasizes structured programming and modularity, making it easier to write code that is maintainable and scalable. In addition, Pascal's syntax enforces good programming practices and reduces the likelihood of errors in code. For instance, Pascal requires that all variables are defined before use, which helps catch errors that might arise from uninitialized variables.

Another benefit of Pascal is its portability. Pascal is a cross-platform language, meaning that code written in Pascal can run on different operating systems with minimal modifications. This feature makes Pascal a suitable language for writing applications that can run on different platforms such as Windows, Linux, and macOS. Pascal also supports libraries, which are collections of pre-written code that can be used to simplify the development process.

Pascal is also a high-level language, meaning that it is designed to abstract away the complexities of the underlying hardware. This feature allows developers to write code that is more focused on the problem at hand than on the details of the hardware. Pascal also supports object-oriented programming, which is a programming paradigm that emphasizes the use of objects to represent data and the behavior of the program.

In addition, Pascal is a compiled language. This means that code written in Pascal must be compiled before it can be executed. Compiling a program involves translating the human-readable code written in Pascal into machine code that the computer can understand. This process results in programs that are faster and more efficient than interpreted programs. Pascal's compiled nature also allows for easier debugging since the compiler can catch errors before the program is executed. Although Pascal has been around for several decades, it continues to be relevant in modern programming. Pascal has influenced the development of other programming languages, including Delphi, which is a popular programming language used for developing Windows applications.

In conclusion, Pascal is a powerful programming language that offers numerous benefits to developers. Pascal's simplicity, portability, and support for high-level programming and object-oriented programming make it a popular choice for a wide range of applications. Furthermore, Pascal's compiled nature makes it an efficient language that produces faster programs. As a result, Pascal remains a popular language for developers, especially those involved in scientific and engineering applications, desktop applications, and education.

In addition, Pascal has inspired the development of other programming paradigms, such as the Object Pascal language. With its continued relevance, simplicity, and efficiency, Pascal is an excellent language for both beginners and experienced developers who want to create efficient, portable, and maintainable applications.