The Pascal Programming Language

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for the course
Principles of Programming Languages
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Introduction
This report discusses the Pascal programming language and how it differentiates from similar programming languages. The most obvious programming language to compare Pascal to is C, so I will compare Pascal to C in the first chapter.

There is a lot to say about a programming language. Unfortunately it is too much to discuss in a short paper as this one. Due to time shortage this paper may seem a bit hectic, which is because I have tried to explain most significant issues compactly.

In the second chapter I will discuss significant tradeoffs to the Pascal Programming language. Finally, in the last chapter polymorphism will be briefly discussed.

Many dialects of the Pascal programming language were developed since it was created. Not all features will be discussed, such as object orientation, because this paper will be devoted to the essential trade-offs. The version of Pascal I will use to test features is Free Pascal, which can be found on http://www.freepascal.org.

History, purpose and use
In 1971 Professor Nicklaus Wirth created a programming language based on Algol. He named this programming language Pascal, in honor of the mathematician Blaise Pascal, pioneer of the mechanical calculator. Professor Wirth made this programming language for students to learn structured programming. That is why Pascal is a generally clearly structured programming language, which relatively easily to read (compared to C code, which can be totally unreadable).

Because Pascal meant to be a structured programming language, the code is relatively easily efficiently translated to assembly (or machine code). That is why it was used for system programming purposes by Macintosh developers in the early versions of Mac OS. Therefore Pascal is still very much alive as a programming language on the Macintosh platform (just take a look at the frontpage of http://www.pascal-central.com/ for an illustration).
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