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## Abstract

BioPCD is a new language whose purpose is to simplify the creation of Graphical User Interfaces (GUIs) by biologists with minimal programming skills. The first step in developing BioPCD was to create a minimal superset of the language referred to as PCD (Pythonesque Command Description). PCD defines the core of terminals and high-level non-terminals required to describe data of almost any type. BioPCD adds to PCD the constructs necessary to describe GUI components and the syntax for executing system commands. BioPCD is implemented using JavaCC to convert the grammar into code. BioPCD is designed to be terse and readable and simple enough to be learned by copying and modifying existing BioPCD files. We demonstrate that BioPCD can easily be used to generate GUIs for existing command line programs. Although BioPCD was designed to make it easier to run bioinformatics programs, it could be used in any domain in which many useful command line programs exist that do not have GUI interfaces.

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## **Index Terms**

Computer Science

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## **Keywords**

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