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Attitudes toward Programming Languages Based on Characteristics

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Abstract : A body of research has been devoted to investigating the preferences of computer programmers. These researches used various questionnaires to find out what programming language is most popular among programmers. The problem with such research is that the programmers are usually familiar with only a few languages; therefore, disregarding a number of other languages which might have characteristics that match their preferences more closely. To overcome such a problem, we decided to investigate the preferences of programmers in regards to the characteristics of languages, which help us to discover the languages that include the most characteristics preferred by the users. We conducted a user study to measure the preferences of programmers on different characteristics of programming languages and then tried to compare existing languages in the areas of application, Web and system programming. Overall, the results of our study indicated that the Ruby programming language has the highest preference score in the two areas of application and Web, and C++ has the highest score in the system area. The results of our study can also help programming language designers know the characteristics they should consider when developing new programming languages in order to attract more programmers.

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