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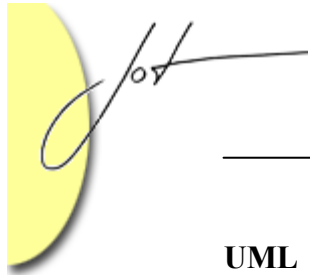
Once upon a time it was possible for every new programmer to quickly learn how to write readable programs to **Create, Read, Update and Delete** business information. These so-called **CRUD** applications, along with reporting, were pervasive throughout business and essentially defined IT or MIS as it was called in those days....

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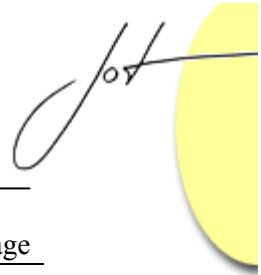
The author has been in several situations in which students would stop him in class and ask with stern faces: “How do you avoid *analysis paralysis*?” First time he heard that he sincerely replied: “How do you get to be paralyzed?”... Indeed, there are many ways to avoid analysis paralysis—at least 5.

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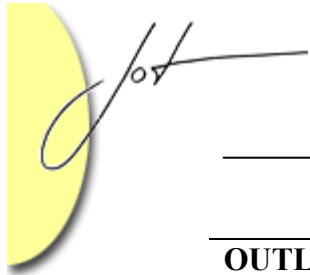
Java, like most new languages, suffered from immature implementations and very weak performance in the early days. The unprecedented success of early Java, though, should teach us the first important lesson about performance – it’s not always critical.



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<p>This is the second in a series introducing the activity model in UML 2, and how it integrates with the action model. The column recaps behavior models in UML and the role of actions in them. It covers the execution characteristics of actions in general, which inherit to the many kinds of actions provided in UML 2. It also covers additional characteristics of actions that invoke behaviors.</p>	
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<p>An important characteristic of real-world agent systems is that the roles played by an agent may change over time. These changes can be of several different kinds. The authors describe an illustrative application where role changes are important, analyze and classify the various kinds of role changes over time that may occur, and show how this analysis is useful in developing a more formal description of the application.</p>	



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<p>Liwu Li and Xin Zhao discuss how to extend the UML metamodel with elements for modeling relational dependencies. They also present techniques for converting structures of relational dependencies to UML constructs. The introduced metaelements and conversion techniques can be used in relational database design that is presented in the UML. They unify object-oriented software design and relational database design.</p>	
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<p>Symmetry is a fundamental principle of scientific inquiry. Though its role in software is less well understood than in the physical sciences, many software design constructs can be formalized as symmetries, especially in object-oriented programming and design. Motivated by the success of symmetry in other disciplines, the authors have made a conscious effort to understand the importance of symmetry in programming and design.</p>	
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