How ?Friendly? Integrated Development Environments Are?

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Programmers and software developers are using different Integrated Development Environments (IDEs) to perform their daily work. IDEs are often complex applications, not friendly for novice programmers, with a learning process of several weeks and with usability and satisfaction of use not always as good as expected. The Programmer eXperience (PX) is a particular case of User eXperience (UX), based on the use of the IDEs and other artifacts. We have found studies about the programmer?s behavior and work, and also articles addressed the usability and new tools proposals for IDEs. In this work, we conducted a survey to evaluate the usability of several IDEs. The survey was based on the System Usability Scale (SUS), which we adapted for the purpose of our research. We focus the study on popular IDEs such as Dev-C++, Eclipse and NetBeans. The survey was conducted in two Chilean universities and one Spanish university, with students enrolled in two undergraduate programs in Informatics Engineering. The results obtained show that the IDEs evaluated have several issues related to the usability perceived by our participants. An interview was conducted with six experienced programmers that are working in different programming environments, in order to consult them on what aspects they would like to improve the IDEs. Their comments indicate that IDEs should incorporate connection with other programmers, and also, they claim for more intuitive interfaces and understandable error messages. © 2019, Springer Nature Switzerland AG.

Integrated Development Environment

Interview

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Survey

Usability

User eXperience

Behavioral research

Human computer interaction

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Students

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