

Heuristics for Programming Codes

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Abstract

A programming code includes statements written in a programming language and specifies a series of instructions that are processed in a computer to perform a specific task. The programming codes created over time are often reused and/or require maintenance. In both cases, the programmer's work is a difficult task to carry out if the programming codes are poorly written and documented, without following principles such as simplicity and order. User eXperience (UX) considers the perceptions of the users related to the use of products, systems, or services. In a broader approach, Customer eXperience (CX) refers to a person's interactions with various artifacts (products, systems, and services). A specific case of UX is the concept of the Programmer eXperience (PX). We can consider that the programmer is, to a certain degree, a "user" of programming codes, and the programmer could also be considered as a "customer" that is using several artifacts. We present the development of a set of heuristics that incorporate elements of usability and UX to evaluate the programming codes. The heuristics were developed under the methodology established by Quiñones et al. This methodology establishes 8 steps that allow obtaining a set of heuristics in a specific domain. Based on the methodology, we obtained a set of 8 heuristics aimed to evaluate the usability/UX for programming codes. We performed an initial validation, and the results are encouraging. However, we think that the set of heuristics requires further validation and can still be refined. © 2021, Springer Nature Switzerland AG.

Author keywords

Customer eXperience; Heuristic evaluation; Programmer eXperience; Programming codes; Usability; User eXperience