Web Case Points for Early Web Size Prediction

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Abstract

The advent of Internet of Things (IoT) has revolutionized the way information and services are delivered via the web. The widespread popularity of web applications has seen a meteoric rise, with organizations of all sizes, both public and private, opting to make their services and operations available online. However, the development of these web-based applications has become increasingly complex, posing a challenge for organizations to manage this growing complexity within budget and timeline constraints. To address this challenge, there is a pressing need for accurate and efficient web effort estimation methods. The accuracy of such estimation has a direct and profound impact on the survival and success of development companies. This research paper proposes a novel approach to web size estimation, the Web Use Case Points (WCP) method, which takes into consideration functional and non-functional size to predict the size of a web application. The study also compares the WCP method with the widely used Function Point (FP) and Web Object (WO) methods. The results show that the size obtained through the WCP method is smaller than that obtained through the WO method, and greater than that obtained through the FP method in almost all ten web projects analyzed in this study. In conclusion, the WCP method provides a new and promising approach to web effort estimation, offering greater accuracy and efficiency for organizations looking to navigate the complex landscape of web application development.

Keywords Web effort estimation · Web size metrics · Technical and environmental web factors · Web case points

Introduction

The dream conceived by Tim-Berners Lee in 1989 to establish a sophisticated online mechanism for sharing research related data and information among the research community. This was not limited to a group of users but was aimed to connect preachers across bounders and nations. The usage, popularity and demand of this way of information and data communication were widely accepted by different groups with different disciplines. This whole infrastructure

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