

Quantitative release planning in Extreme Programming

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Abstract

Extreme Programming is an agile software development methodology defined through a set of practices and values. Its value is established through many real-life case studies, but it lacks practices for project planning. Therefore we provide a multiple knapsack model to assist in release planning. Our model gives a plan that maximizes expected business value. The plan consists of several sets of stories that can be implemented with decreasing probability given the predicted velocity distribution. We evaluate parameterization of the model with simulation and its application in a real-life case.

Keywords: Project Management and Scheduling; Programming, Integer; Open Source Software