Py*: Python Based Modelling Module For Requirements Engineering

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Abstract

In early phase of software development, mapping functional requirements are critical since this gives a high level insight on the feasibility of the software. UML diagrams were used initially for modelling, but UML often focuses on organisational objects, which are not so important in the early phase, when the emphasis should be on helping stakeholders gain better understanding of the various possibilities for using information systems in their organizations. The i* model was proposed in 2005 to provide an early understanding of the organizational relationships in a business domain. The Use Case development from organizational modeling using i* allows requirement engineers to establish a relationship between the functional requirements of the intended system and the organizational goals. Constructing these models using the current state of the art (OpenOME developed in 2008) is cumbersome, time consuming and makes it hard to perform predictive analysis and optimization on the models. In this project a simple python based module is proposed which can be easily used to create and update the models by the business user based on his requirements. At the same time $\mathbf{P}\mathbf{y}^*$ also reduces the effort of the requirements engineer to predict the outcome of the models and optimize for its feasibility.