Vrije Universiteit Brussel

Proposal bachelor thesis

Title: A Web-Based Visual Graph Editor for DisCoPar

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Includes preparation course: ~~Yes~~ / **No** (Select the correct option)

Context

DisCoPar is a component based framework inspired by Flow-Based Programming. Similar to NoFlo[1], it is implemented in JavaScript. In Flow-Based Programming, an application is not considered as a single sequential process which executes once, but rather as a network of asynchronous processes communicating by means of streams data. Each process behaves as a black-box component, which can be reconnected endlessly to form different applications without having to be changed internally.

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The goal of this bachelor thesis is to design a visual graph editor for DisCoPar, and implement it using web technologies. Concretely, you are expected to create an editor that allows a developer to create/add/edit components and connect their in/output ports using a visual interface. For example, clicking a component should open up a code editor that can be used to modify the behavior of that component. The visual graph editor should allow easy debugging, preferably by enabling the graph to (attempt to) execute at any time. Additionally, it should provide functionality to save the resulting graph (and component source code). For more inspiration, have a look at the flowhub[2] website.

This bachelor thesis is a significant programming assignment, and you are thus required to do a proper requirement analysis and design based on our desired functionality. Having decent knowledge of web-based technology is desirable.

[1] http://noflojs.org/
[2] http://flowhub.io/