JungleGym: A Visual Programming Language for iOS

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Abstract

JungleGym is a Visual Programming Language (VPL) compatible with iOS devices created with the goal of raising and stimulating interest in computer science and programming in children. Related research studies have shown the effectiveness of VPLs with children in both generating interest and performance with programming.

Motivations

Accessibility
Because the main component is web based and the projects get uploaded to any iOS device, anyone with a laptop and iOS device can use JungleGym

Educational
Syntax independence allows students to more easily learn the logic behind coding in an environment (iOS) that is relevant to their lives

Creativity
Adequate paradigm support allows users to create many different applications

Evaluation

Visual Nature
The degree to which information is represented in a graphical form i.e. as icons, diagrams, graphs, etc

Functionality
The general applicability of the language rather than its restriction to a specific field of application

Ease of Comprehension
The ease with which programs in this language can be understood

Paradigm Support
The degree to which the language supports its intended programming paradigm

Scalability
A measure of the capability of creating large programs in this language