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## Candidate Interest #1

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### Cognitive Maps for Describing the Rust Programming Language

Concept maps are a visual framework for organizing ideas by representing relationships among the ideas, but possess connotations of hierarchy and logical coherence to a degree that distinguishes them from the mind maps that tend to be associated with brainstorming.

Concept maps can be used as a learning tool or as a communications tool. They are valued by students and CEOs, by designers, researchers, and engineers, by artists and by scientists. They have considerable appeal because they have broad applicability and they provide a relatively simple knowledge representation that supports discovery and understanding within complex domains.

Rust is a programming language that draws on powerful ideas associated with influential programming languages, augments them with a few novel ideas, and seamlessly integrates the language with elegant infrastructural mechanisms that appeal to forward thinking software engineers.

This project will endeavor to describe Rust's most salient features and trace their origins to other prominent programming languages, to describe its internal linguistic structure, and to describe the aforementioned infrastructure, all by means of concept maps of varying sorts. In doing so, this project will at once investigate the nature of concept maps and the essence of Rust, all with an eye towards examining the degree to which concept maps prove useful in revealing principles of the Rust language and practices associated with programming in the language.

The description of Rust in terms of concept maps that results from this investigation turn out to be useful, as a complement to traditional materials, for those interested in learning to program in Rust.