Automating Algorithm Design through Genetic Programming Hyper-Heuristics

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Morris, MN

What does the title mean?

- Reducing the human component in algorithm design
- More work at the beginning, more possibilities
- Genetic programming hyper-heuristics as a method to the madness

https://scratch.mit.edu/discuss/m/topic/200574/

Outline

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Stack-based genetic programming

Data-stacks are used for managing input and output of operations.

Programs are represented as linear sequences of literals and instructions. Below is an example of a simple Push program:

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(1 2 integer_add)
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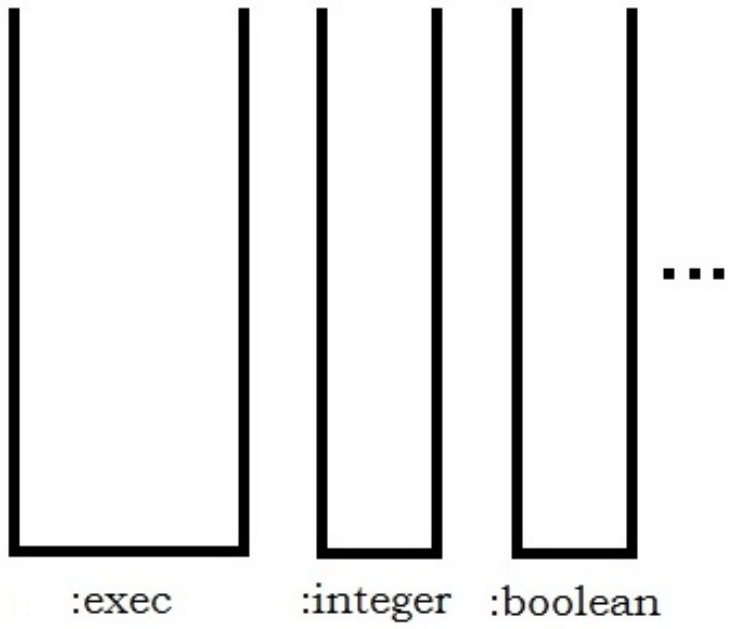

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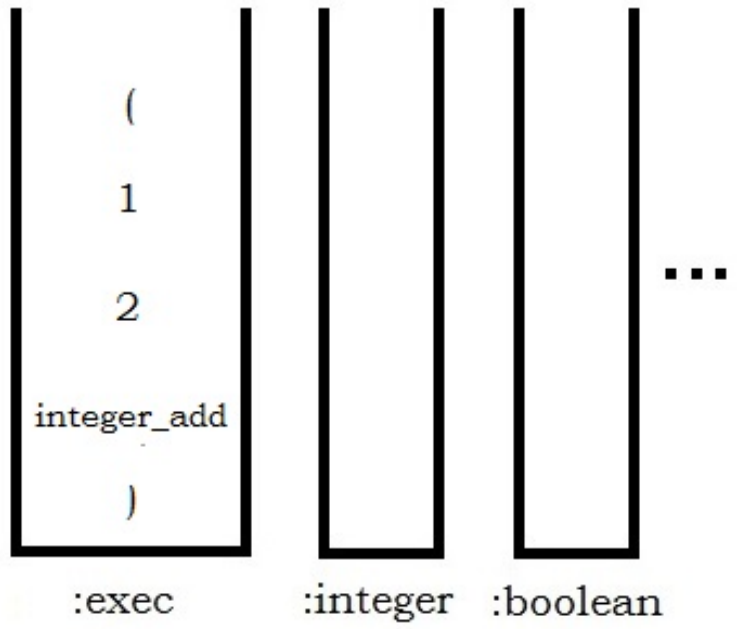

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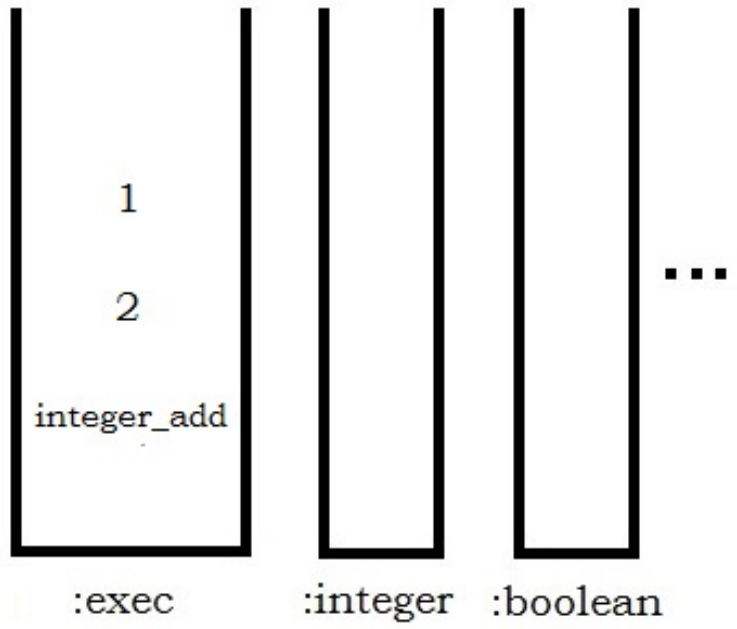

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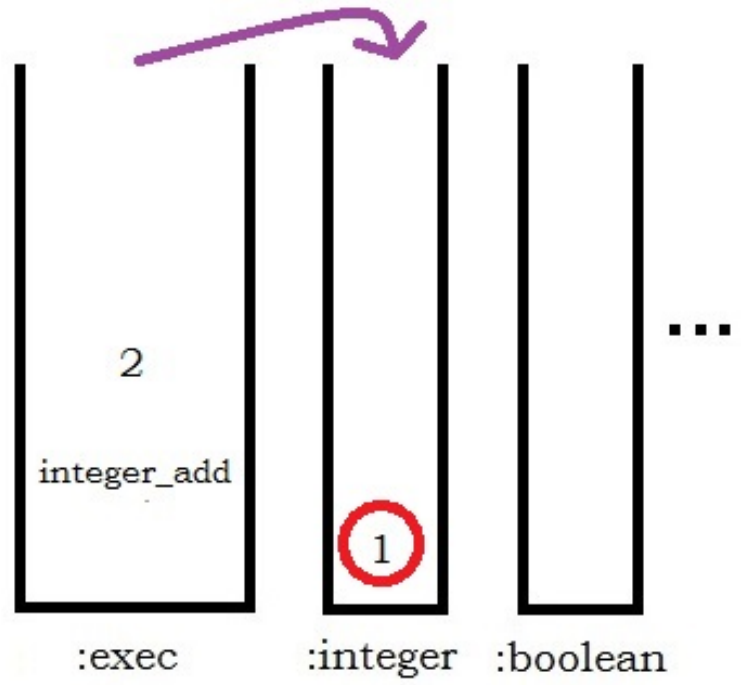

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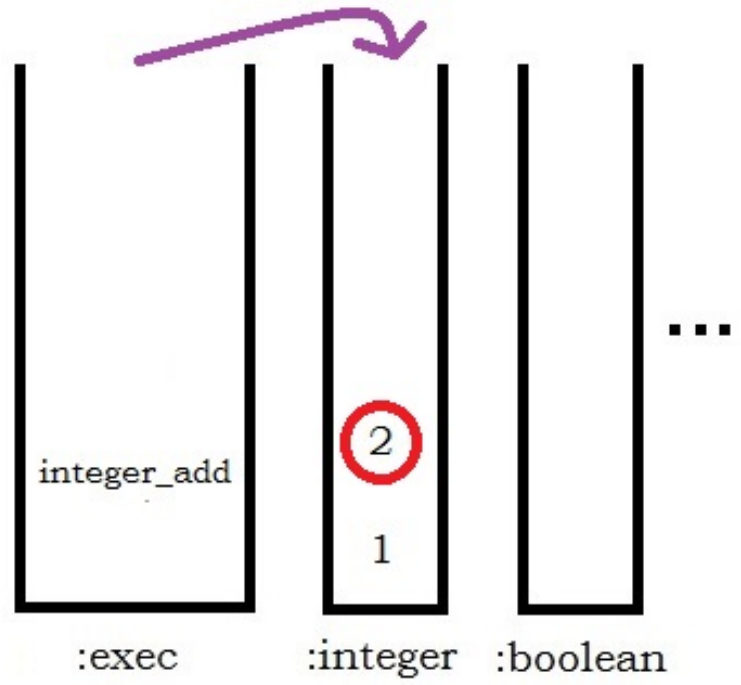

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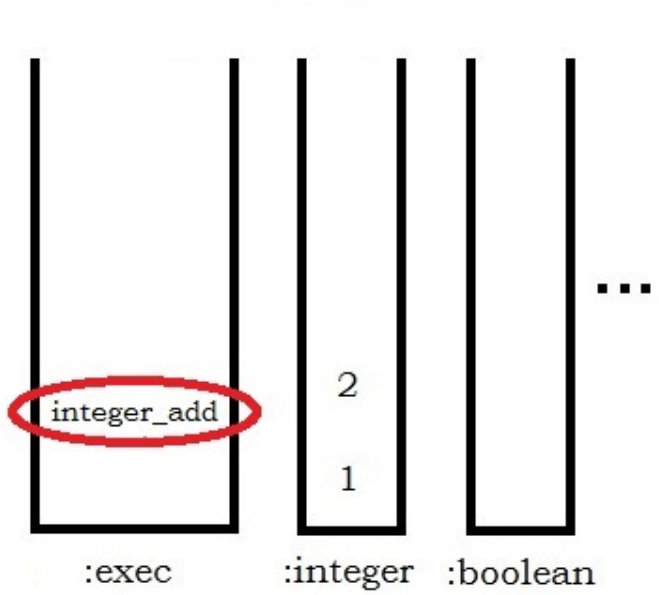

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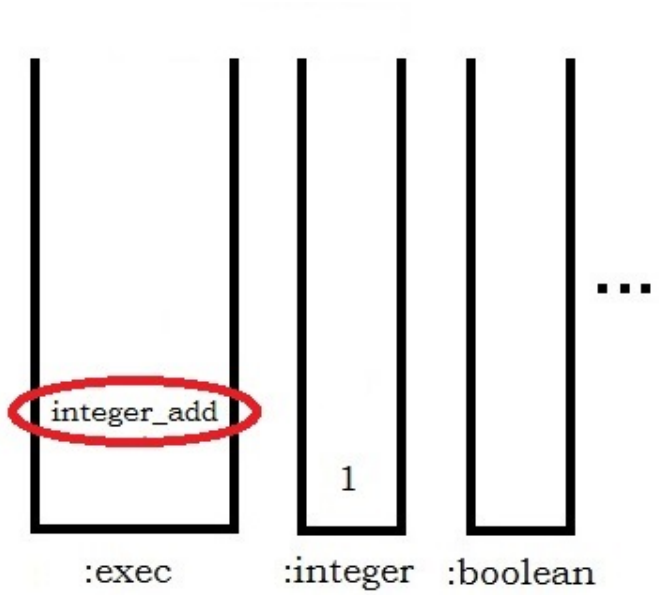

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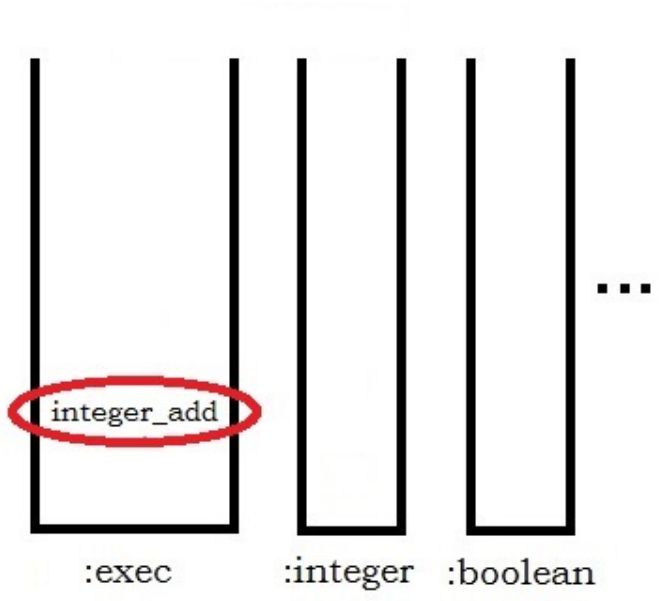

2 + 1 = 3

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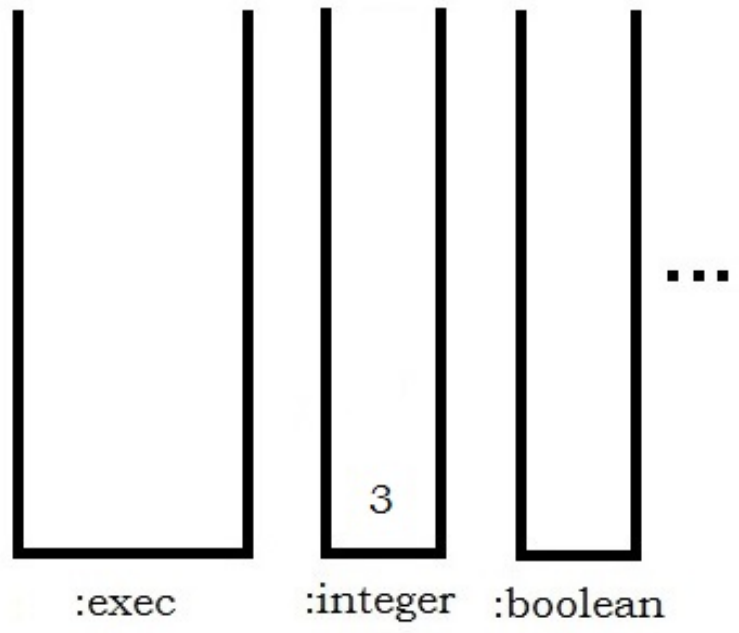

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