

# Static vs Dynamic Types in Software Development

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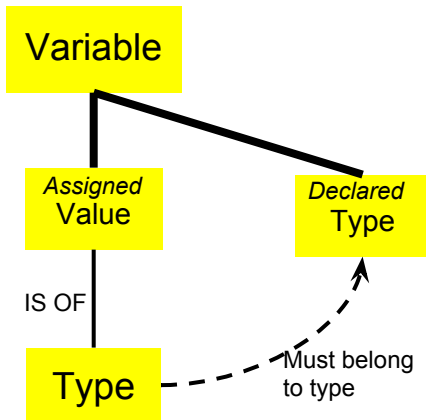
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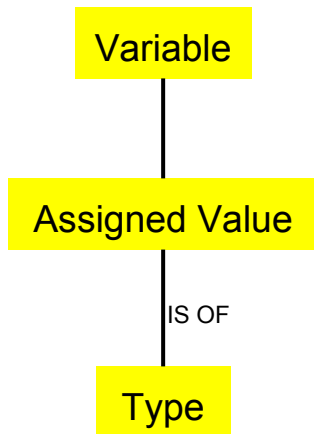
# Outline

- 1 Static and Dynamic Types
- 2 How Programmers use Types
- 3 Influence of Static Types
- 4 Type Systems and Development Time
- 5 Conclusions

# Static Types



# Dynamic Types



## Study of Programmer Preferences

6638 Open Source Groovy projects were analyzed to try to determine 'in which contexts Groovy programmers type or do not type their declarations' to answer five proposed questions on the behavior of programmers.

## Study Questions

- Q 1 Do programmers use types more often in the interface of their modules?
- Q 2 Do programmers use types less often in test classes and scripts?
- Q 3 Does the experience of programmers with other languages influence their choice for typing their code?
- Q 4 Does the experience of programmers with other languages influence their choice for typing their code?
- Q 5 In frequently changed code, do developers prefer typed or untyped declarations?

# Analysis

# Results



# Study of the Influence of Static Types on Usability

# Results

# Study on the Relationship Between Type Casts and Development Time

# Results

# Conclusion