



MULTILINGUAL SOFTWARE ANALYSIS

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MOTIVATION

Companies with a large software base:

- have to manage software architectures and libraries
- By different developers (in & out house)
- Over many decades
- In different languages

PROBLEM

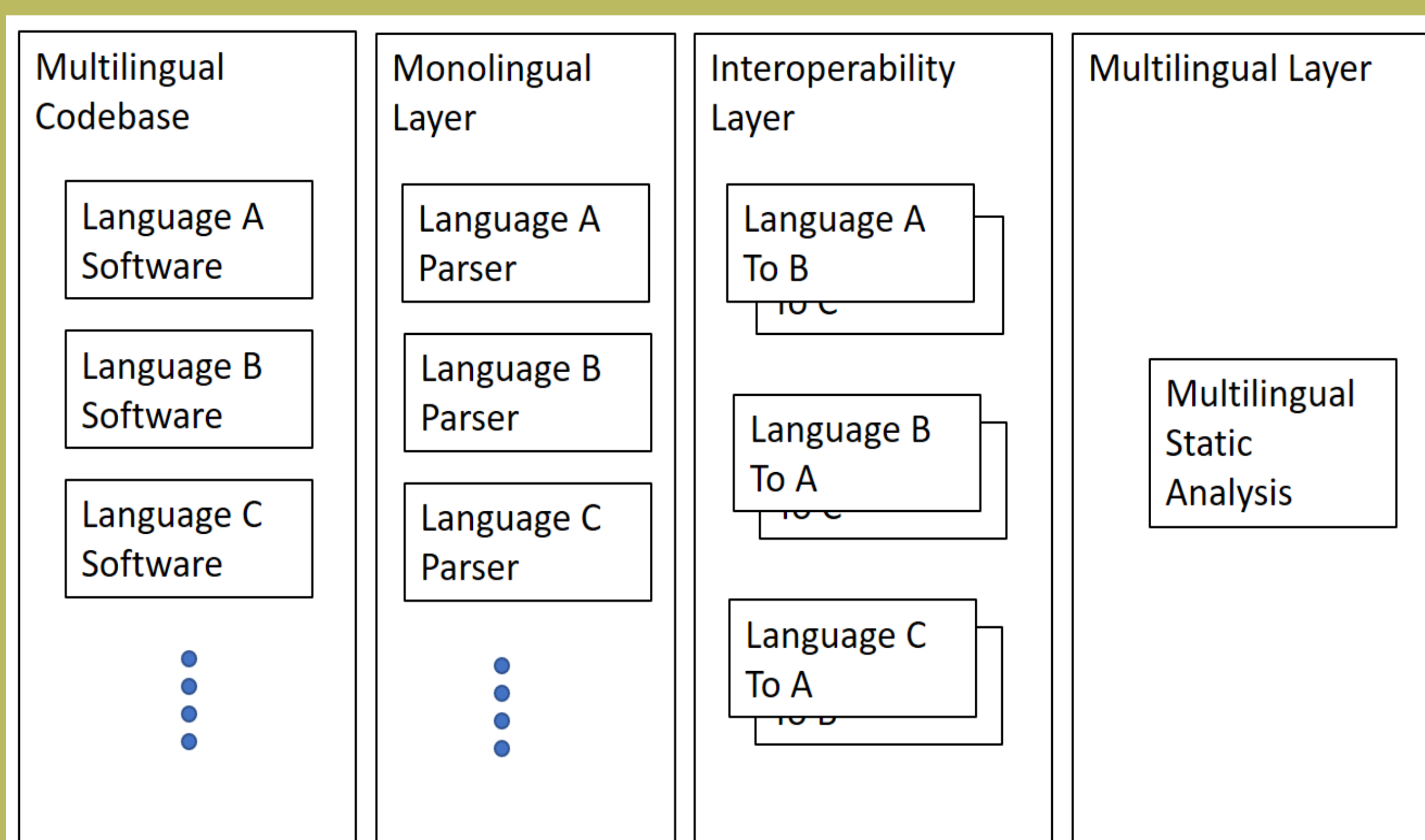
A multilingual codebase gives rise to many software engineering issues at **language boundaries**, including

- Redundancy
- Debugging complexity
- Security issues

BUT Multilingual will always be with us!

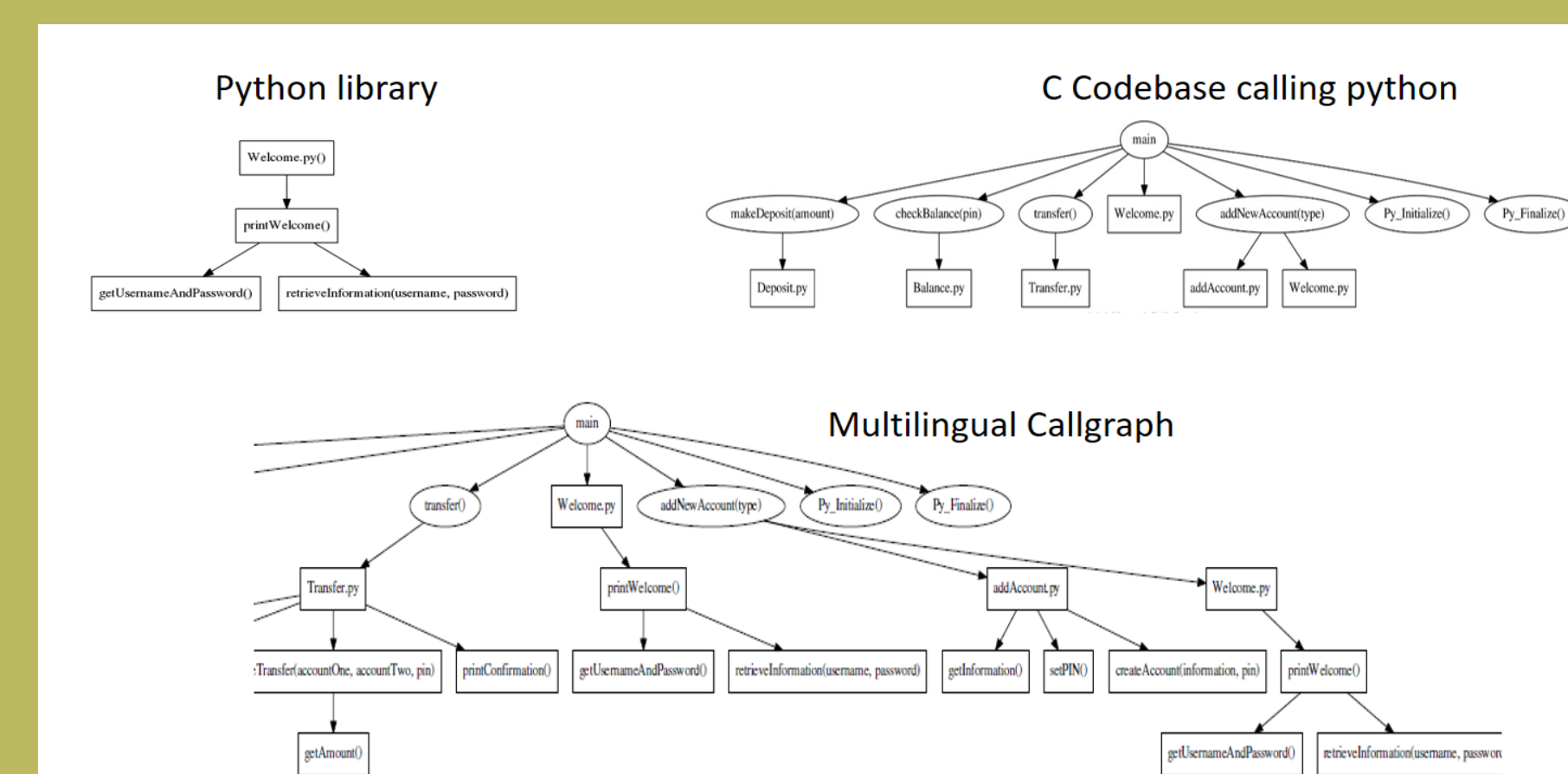
=> **MLSA Research Group:** 

Develop lightweight tools to process multilingual codebase into **unified common representations** such as callgraphs, flowgraphs, etc.

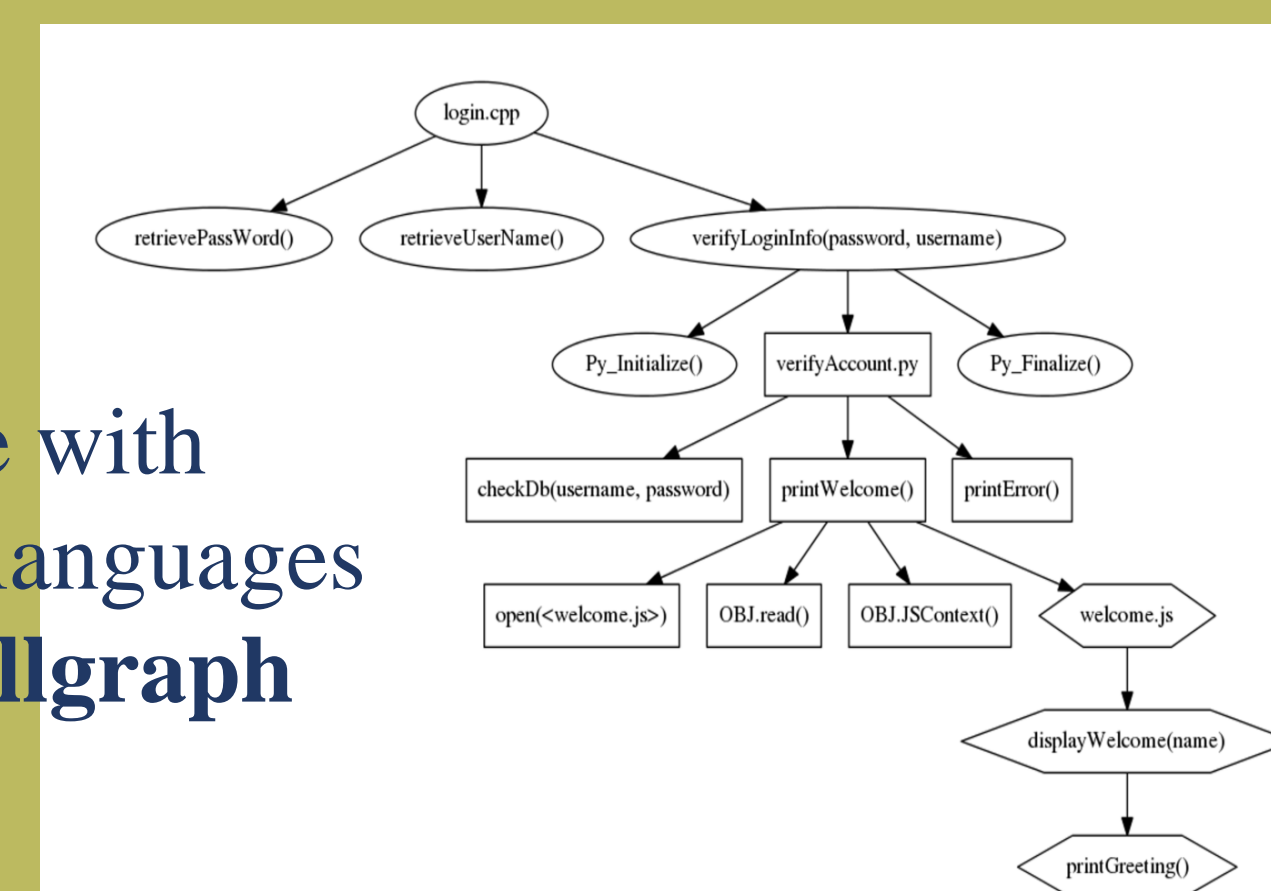


**Open Source, Lightweight Architecture
For Multilingual Software Analysis**

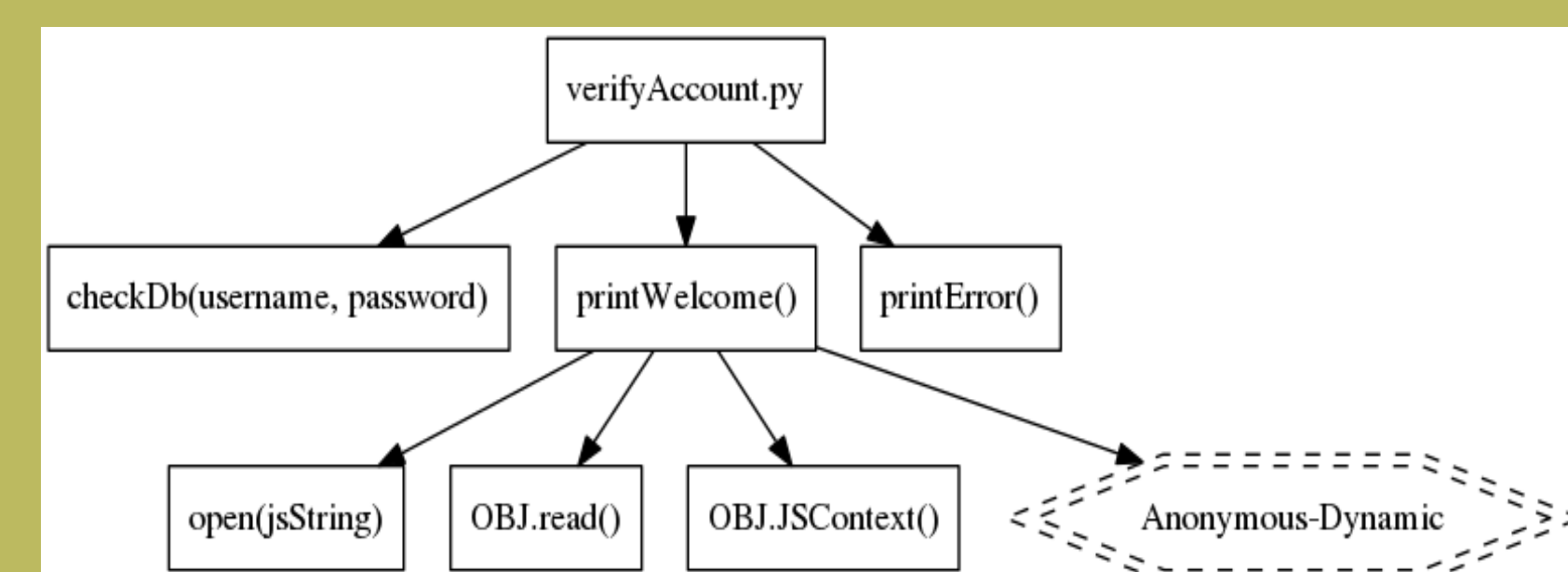
EXAMPLE



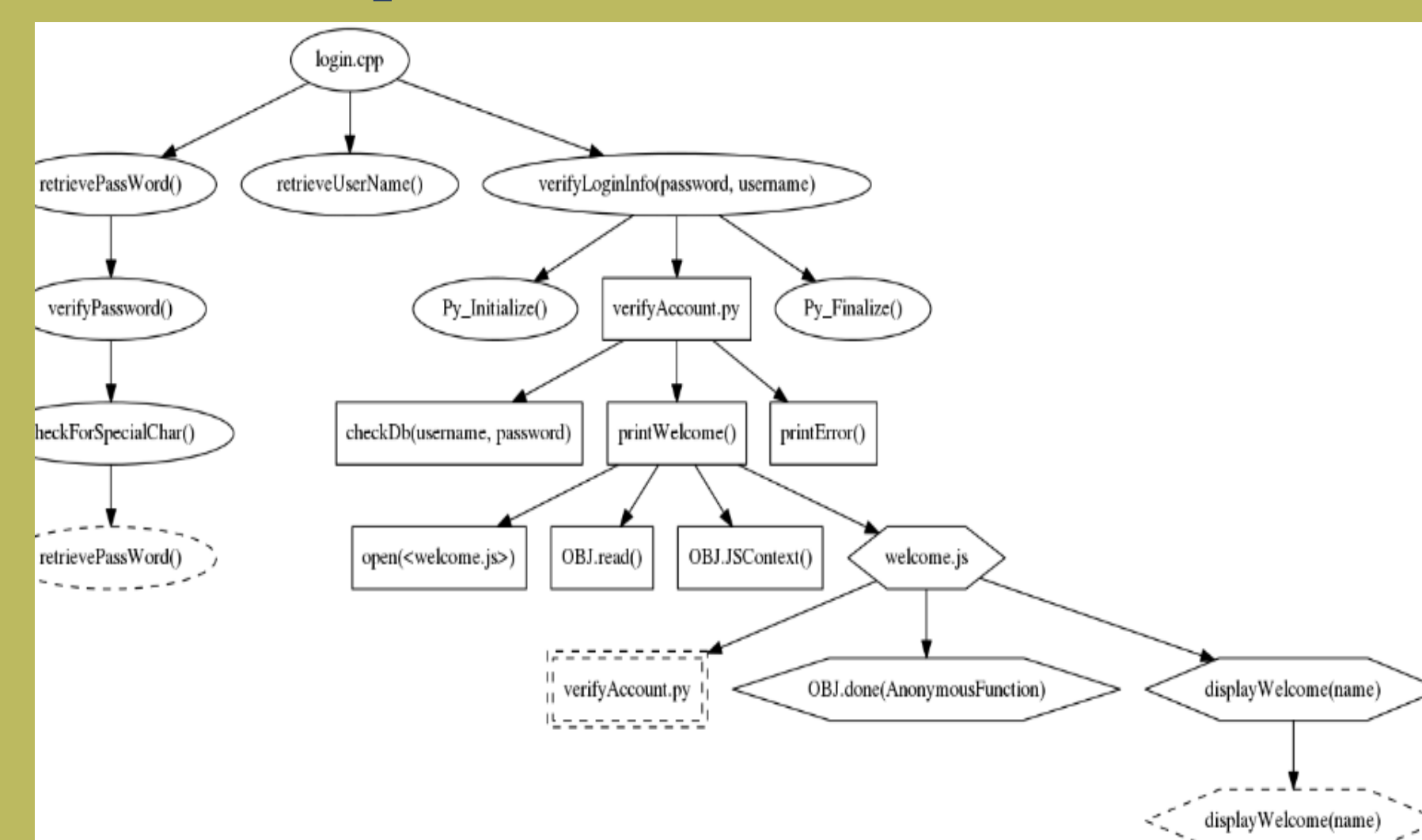
Codebase with
multiple languages
in **one callgraph**



Identifying Security Issues



Statically unresolved call from Python
to Javascript



Multilingual Call Graph with Circularity

CONTACT

Looking for open-source collaboration
To download MLSA:

<ADD GITHUB URL HERE>

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