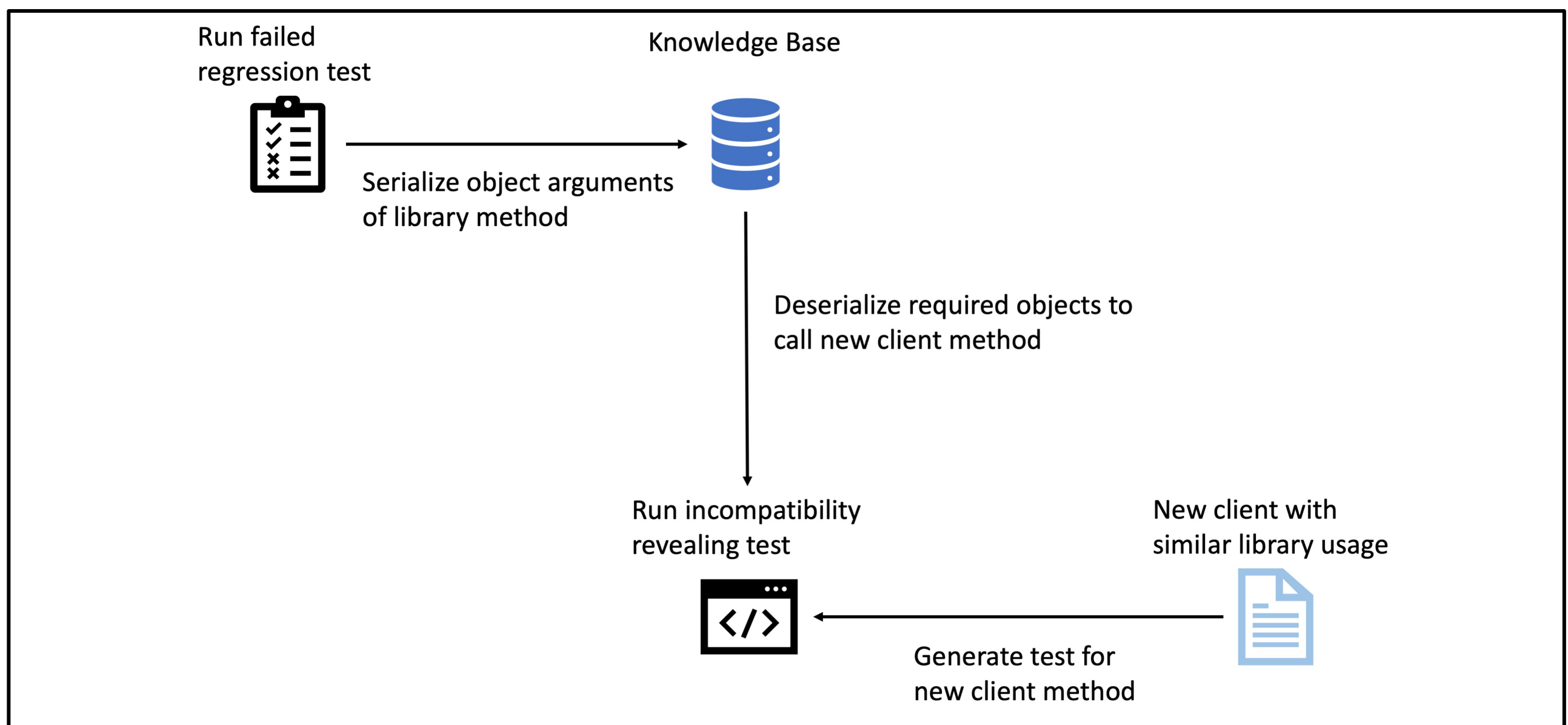


# An In-Depth Study of Software Library Upgrade Dependency Issues

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## Project Objectives:

This project aims to improve the prototype of CompCheck, an automated upgrade compatibility checking framework, by implementing serialization and deserialization of the object arguments of the incompatibility-causing library method using XStream library. After serialization, the object arguments would then be deserialized when running incompatibility-revealing tests generated for new clients with the same library dependency and similar usage context.

### Knowledge Mining:

Serialize object argument(s) of library API with upgrade incompatibility when tracing the failed regression test & save the serialized objects to the incompatible API entry in knowledge base

### Test Generation:

Generate test for new client method with call site matching entry of incompatible library API & reuse serialized objects in knowledge base as arguments to call client method in generated test when applicable