Supporting Library Evolution with Smart Deprecations that Automatically Fix Client Code

1. Library developers deprecate certain methods. Sometimes they delete methods without deprecation.

   Before

   Library developers can write transformation rules to specify replacements for deprecated methods.

   Now

   Do I know which methods to deprecate and what are the correct replacements?

   Yes

   Write deprecations and transformation rules manually

   @Deprecated
   void method(...)

   @Transform(method -> newMethod)
   void method(...)

   Ask DepMiner tool to propose deprecations and generate the rules

   Data Mining
   Library's Commit History
   Frequent Method Call Replacements
   Recommended Transformation Rules

   No

   What are the replacements for those methods?

   Client developers only have to execute their code or run the tests. When deprecated method is called, the DepRewriter tool will identify the call-site and fix client code automatically using the transformation rule. Execution will not be interrupted.

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   To update their software to the new version of a library, client developers must identify the correct replacements for deleted and deprecated methods.

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