i Title:

H. Zhong, L. Zhang, T. Xie, and H. Mei. Inferring resource specifications from natural language api documentation. In ASE, pages 307–318, 2009.

ii Keywords

ii1 API Documentation: It's a document through which developers can learn how to use libraries correctly.

ii2 Bugs: Bug is an error, flaw, failure or fault in a computer program that causes it to produce an incorrect or unexpected result.

ii3 Doc2Spec: It's a tool that infers resources specified in the api documentations and helps in detecting real bugs in existing projects.

ii4 Resource Specifications: A specification may refer to a type of technical standard or requirements to be fulfilled for a particular library.

iii Brief Summaries

iii1 Motivation: API Documentation is provided for software libraries so that programmers know how to use them correctly. But developers at times are reluctant to read the documentation properly and hence write code that is inconsistent with the API documentation. To avoid these inconsistencies and help the authors by detecting the inconsistencies, Authors have come up with an approach Doc2Spec to automatically mine specifications from the API documentation.

iii2 Data: For performing evaluations, Authors trained the application Doc2Spec in 10 seconds from the description generated from manually tagging actions and resources for the descriptions of 687 methods in the J2SE Javadoc in one day. They then used this trained Doc2spec to perform evaluations on 5 libraries.

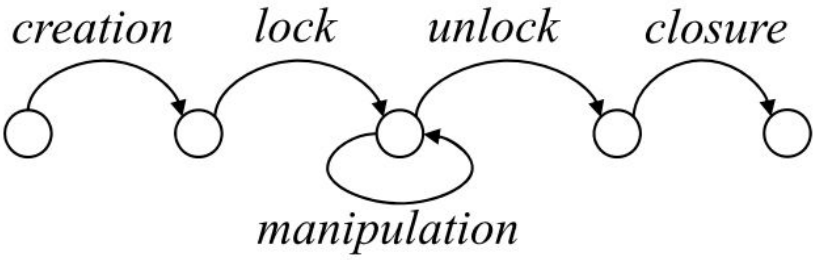
iii3 Related Work: This paper is about mining specifications from the API documentation. Most of the existing approaches rely on mining data from client code, Like Ammons et al. proposed an approach and its supporting tool Strauss that uses an extended k-tails algorithm to mine automata from execution traces that are related by traditional dataflow dependencies.

But the authors are using an approach that infers resource specifications from API documentation in natural languages. There is a lot research where NLP techniques are used to analyze requirement documents.Like Ambriola and Gervasi (1997) implemented a set of tools to

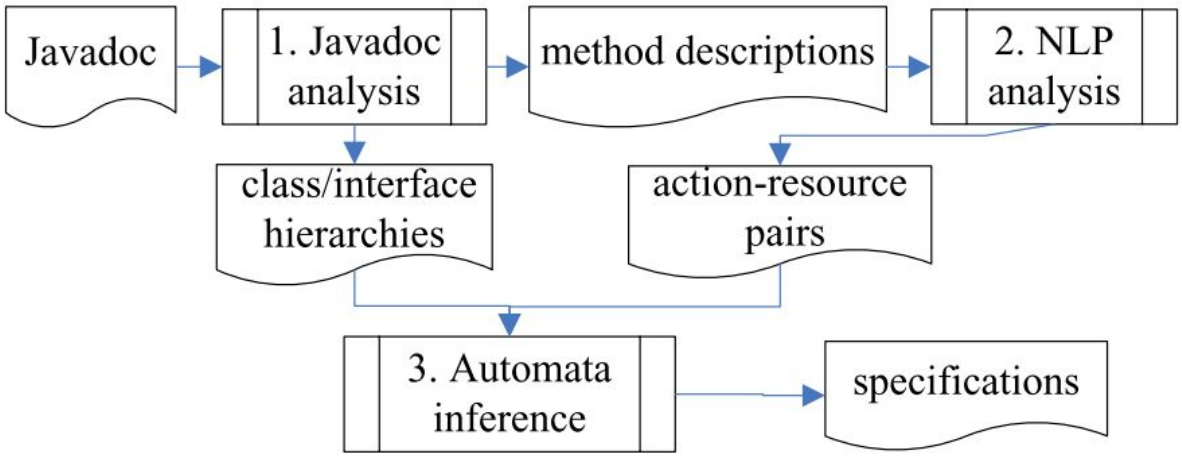
aid gathering, selecting, and validating requirements. These tools use various NLP techniques such as tagging, synonym analysis, and anaphora analysis.

iii4 Informative Visualizations:

- This image describes the template for inferring resource specification defined by author



- This image describes the overview of approach described by the authors:



iv <u>Scope Of Improvement</u>

iv1: Evaluation of the tool could have been more extensive.

iv2: The time used to infer specifications of J2SE can be improved

iv3: Doc2spec was trained on data manually entered by researchers, It could have been trained on the Real Data for the evaluations to be more realistic.