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Finding mappings between Change Requests and Methods

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Abstract

PROJECT TITLE – Application for finding Mappings between Change Requests and Methods/Functions.

The basic idea of the project is to display all methods/functions of a code which have been added/modified/deleted to various files linked to change requests and providing various filters the data like date/time, projects, solutions linked to these change requests.

Initially a backend was created from the existing database. The existing DB also known as the ATS subsystem contained mappings between change requests with important information such as web links to code bases associated to these change requests (the links would be to Subversion code repositories which is a version control tool like Git).

After the creation of the back end in we use a Python scheduling script which runs once every 24 hours so as to take the updated information for processing the code bases and performing a diff operation to list out the various added/modified/deleted methods filtered by different programming languages like C, C++, Java etc. The output of the scheduling script is stored in a no-SQL MongoDB database which is where the microservices get their input data from.

A microservice in Spring Boot was created for feeding the relevant data from the MongoDB database to the front end. This microservice takes various inputs from the front end and shows the data according to these inputs in a graphical and interactive UI.

React.js is used for displaying the data in an interactive manner at the front end. The information displayed here is filtered by projects and solutions, ordered by change requests and the date when the code was checked into the subversion repositories. The User Interface also contains other components like progress bars, internationalization, loader spinner while waiting for data from micro service etc.

This application will allow the developers in any team to analyze methods which are constantly failing test cases and identify methods which are causing blockers in existing applications hence improving efficiency of code.

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