

Empirical Study of Bug History with JUnit Tests

Siddarth Udayakumar

Keerthi Santhalingam

Ishan Dwivedi

INSTRUCTIONS:

CORPUS ANALYZER

The Corpus Analyzer is just a lexical analyzer that will take in input as any directory containing a project (Obtained from the project sources from Github) and produce an output with the most used lexicon in the project by analyzing all the source files.

- 1) Go into the Corpus Maker directory.
- 2) Make sure all the library jar files are present here.
- 3) You can import the directory through an IDE to make it work properly and ensure all libraries are used.
- 4) CorpusMaker.java is in the src directory.
- 5) In the main method (Line 243), change the hardcoded directory path to the path where the source files for the project are located. For example,
File startingDir = new File ("D:\\workspace\\CorpusMaker\\ant"); // current directory
- 6) In the above line, we will be using the ant directory as a source directory and input for the program.
- 7) Now, run the program on the IDE and the top used lexicon in the project will be displayed.
- 8) This allows us to see if there any mention of the word test in the directory or not

XML PARSER

- 1) To Run the XML Parser, go to the DOMParser Folder,
- 2) Go to Src directory
- 3) I have hardcoded the values of the File path so you have to change the filename.
- 4) Change the name of the file from Cordova.xml to Eclipse.xml (Eclipse.xml is already included in the main folder).
- 5) Run the program using an IDE or compile it from the command line. (javac XMLParser.java).
- 6) If you are using command line to run the program, make sure that the XML file is in the same folder as XMLParser.java
- 7) The output will be displayed in the command line or IDE.
- 8) I recommend using an IDE so that we could print out the results and obtain the entirety of it since bug report outputs are very long.

These were the only software used since our project was more of a survey and research based study rather than an implementation. This code is again available on my Github at

<https://github.com/siddarthudayakumar/Software-Testing.git>

More details on the bugs has been documented in the spreadsheet attached in the final directory labelled **Bug Report (Updated).xlsx**