CMPE 202 - Personal Project - UML Parser - 2017

Applying Kanban process model to create a parser that converts Java source code into UML Class diagram.

To Run : The parser should be executable on the command line with the format -

“umlparser <source folder> <output file name>”

where, <source folder> is a folder name where all the .java source files will be and

<output file name> is the name of the output image file that the program will generate

Tools Used:

Graphviz – Open source software that provides graphical visualization. Takes text descriptions to generate the graph. Computation is generally done by an external program

Java Parser – Java Parser is a light weight library that can be used parse, analyse, transform and generate java code. It parses through the java code to generate an AST(abstract Syntax Tree) that makes it easy to process. The parser has no dependencies at all and hence the ABT generation is fast.

Plantuml – plantuml employs graphviz/DOT to figure out node positioning for the UML diagrams that it generates. To use it, it must be installed in the system. Moreover, Graphviz/DOT originally written in C. But plantuml needs only the DOT algorithm, since C syntax is close to Java syntax, conversion of just that would suffice. Drawing code and parsing of DOT is not necessary as it is done in java by plantuml.

Requirements : Java Environment,

Graphviz (to generate class diagrams)

C9 – Cloud9 is an online integrated development environment that enables its users to start coding immediately without the need to set up the environment . it supports several languages like C, C++, PHP, Ruby, Perl, Python, JavaScript with Node.js, and Go. It allows the developers to collaborate and work on workspaces together. The editor component uses Ace. It has many added features that makes it easy to use as an IDE with added Support for the following code repositories [GitHub](https://en.wikipedia.org/wiki/GitHub), [Bitbucket](https://en.wikipedia.org/wiki/Bitbucket), [Mercurial](https://en.wikipedia.org/wiki/Mercurial) repositories, [Git](https://en.wikipedia.org/wiki/Git_(software)) repositories, [FTP](https://en.wikipedia.org/wiki/FTP) servers.

Github – A repository hosting service with many of its own features. Provides a graphical user interface, access control and several collaboration features. It simplifies the task of the developers by enabling them to fork, pull request , merge.

Waffle – Is a free project management tool that enables the developers to keep tracl of their prohect. Right from the start it helps to plan every step along the way. It takes cues from the commits made into github to update the status on the waffle board.

Test Cases as provided:

Test Case :1

References:

<http://javaparser.org/>

<https://en.wikipedia.org/wiki/Cloud9_IDE>

<http://plantuml.com/>

<https://techcrunch.com/2012/07/14/what-exactly-is-github-anyway/>

<https://www.crunchbase.com/organization/waffle-io#/entity>