Software Engineering

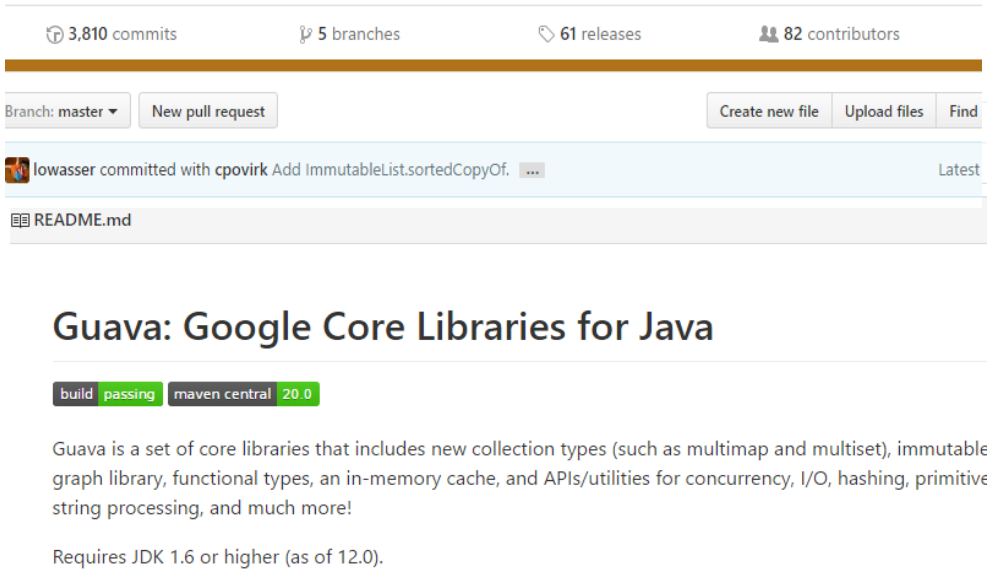
Term Project - Assignment 1

Term Project Overview

- Design and construct a Markdown-to-HTML converter
- Practice Java and Java development tools such as Git, JUnit, FindBugs throughout the project
- 4 to 5 persons per team
- Schedules
  - Assignment 1: by 11 Nov
  - Assignment 2: by 25 Nov
  - Assignment 3: by 2 Dec
  - Wrapping up: by the end of the semester
    - Demo & peer evaluation

Markdown

- A simple markup language for plain text writing
  - Reader-friendly markup language
  - Originated from the e-mail writing conventions
  - Easily converted to a HTML and various formats
  - Used for Wiki, Readme files, statically generated web pages, etc.




```
Guava: Google Core Libraries for Java
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[![Build Status](https://travis-ci.org/google/guava.svg?branch=master)]
(https://travis-ci.org/google/guava)
[![Maven Central](https://maven-badges.herokuapp.com/maven-
central/com.google.guava/guava/badge.svg)](https://maven-
badges.herokuapp.com/maven-central/com.google.guava/guava)

Guava is a set of core libraries that includes new collection types (such as
multimap and multiset), immutable collections, a graph library, functional
types, an in-memory cache, and APIs/utilities for concurrency, I/O, hashing,
primitives, reflection, string processing, and much more!

Requires JDK 1.6 or higher (as of 12.0).

Latest release
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The most recent release is [Guava 20.0][], released October 28, 2016.

- 20.0 API Docs: [guava][guava-release-api-docs], [guava-testlib][testlib-
release-api-docs]
- 20.0 API Diffs from 19.0: [guava][guava-release-api-diffs]

To add a dependency on Guava using Maven, use the following:
```
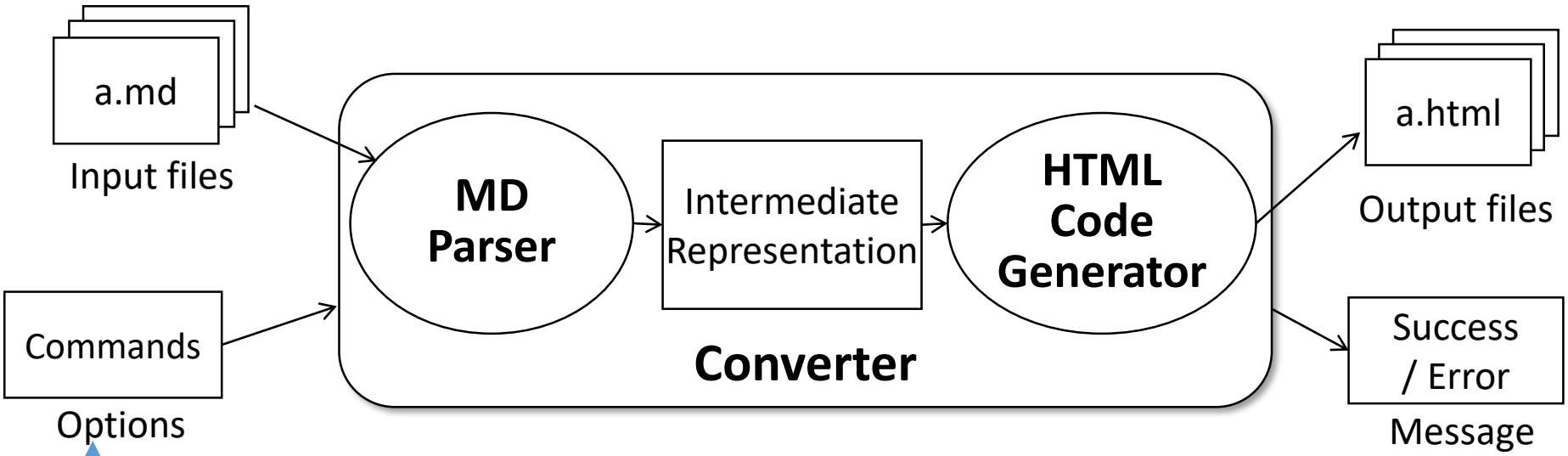

Framework



- A user may specify the names of generated HTML files
- A user may give an HTML style as one of the following three : `plain` (default), `fancy`, `slide`.
- The converter must print out help message for the help option

Markdown Example

- README.md

```
Term Project
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Markdown
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*Markdown* is a simple mark-up language
for plain text writing.  The following document
well summarizes the markdown syntax

[Markdown:  syntax](http://.../markdown_syntax.pdf)

Markdown has the following properties:
* Reader-friendly
* Easy to be coverted to various formats
* Widely used for Wiki, blogging,
developers' communication.

![Markdown logo](https://.../mark.svg.png)
```

Term Project

Markdown

Markdown is a simple mark-up language for plain text writing.

Markdown: Syntax

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- Reader-friendly
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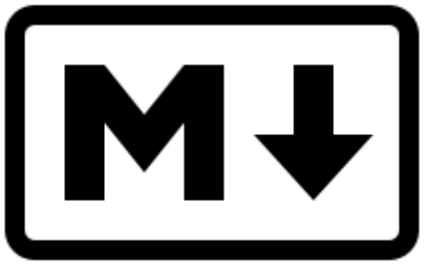


Markdown Syntax

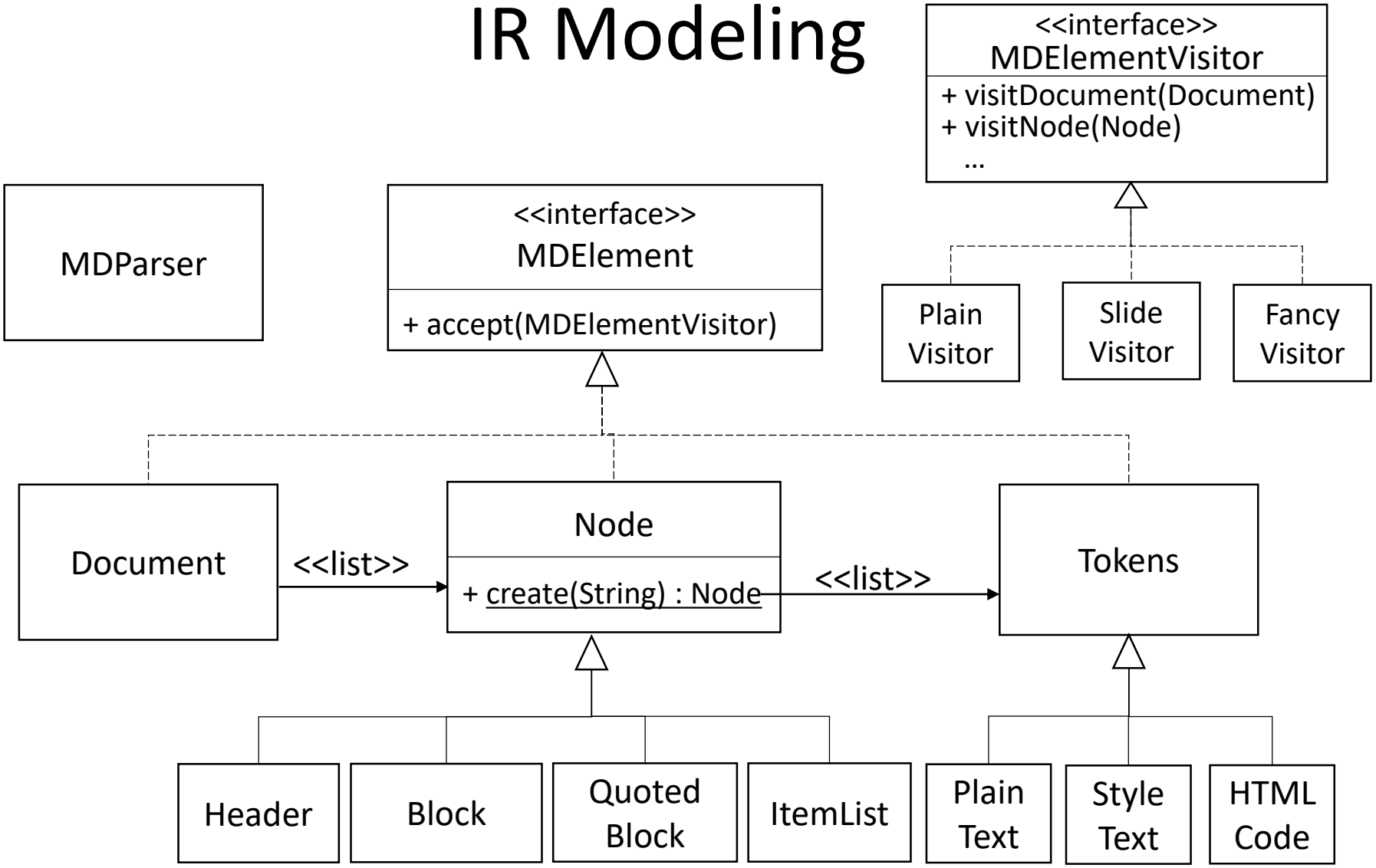
- Reference syntax description
  http://maruku.rubyforge.org/markdown_syntax.pdf

- Reference system: GitHub markdown
  https://guides.github.com/features/mastering-markdown/

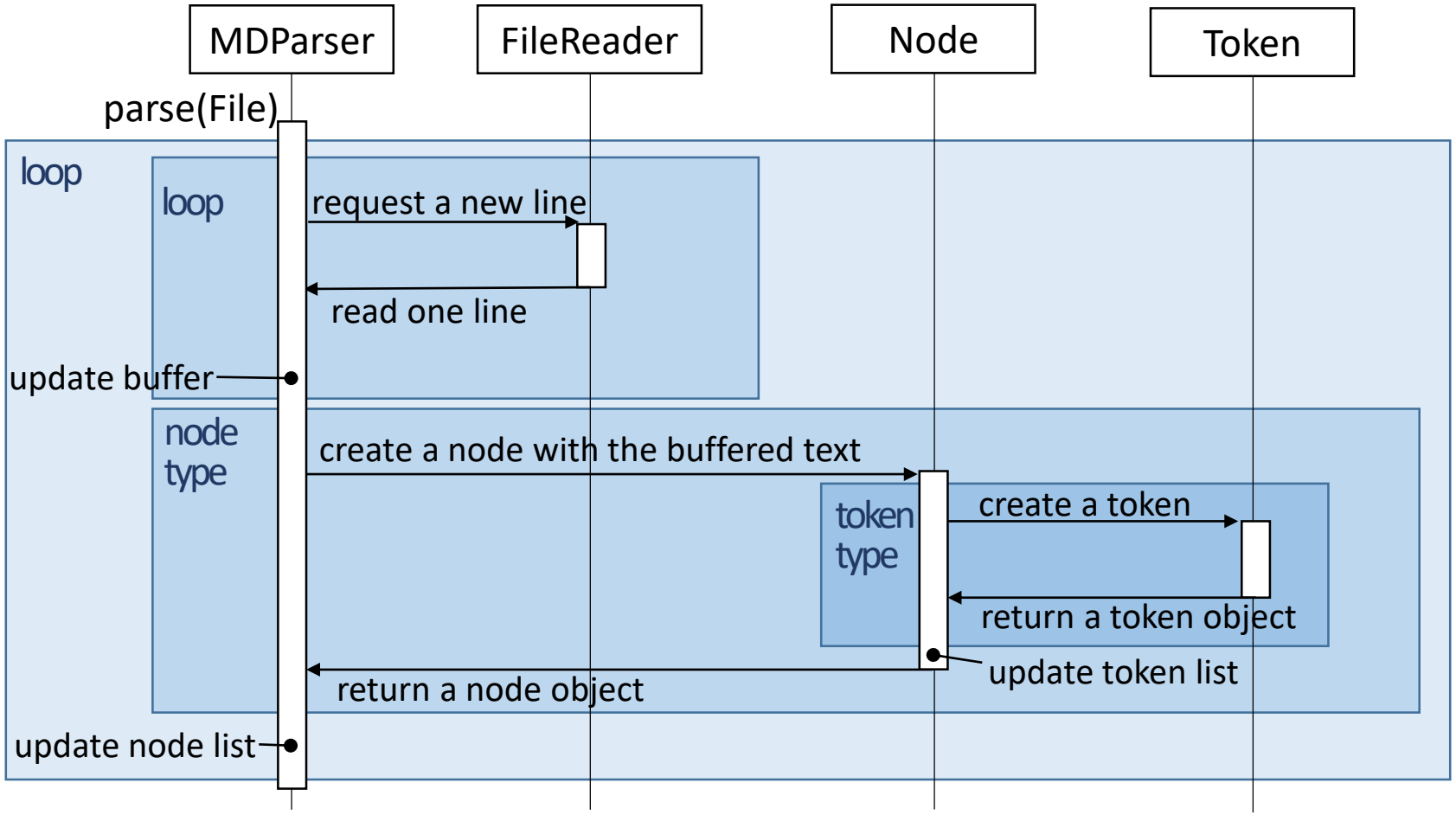
Intermediate Representation

- IR represents a structured document independently of the MD and HTML syntaxes
- The parser transforms a sequence of text lines into IR objects
  - The parser is a collection of text-to-IR transformers
- The HTML code generator receives IR objects and generates a corresponding HTML code file
  - The code generator is a collection of IR-to-HTML transformers

IR Modeling


<<interface>>
MDElementVisitor
+ visitDocument(Document)
+ visitNode(Node)
…
MDParser
<<interface>>
MDElement
+ accept(MDElementVisitor)
Plain Visitor
Slide Visitor
Fancy Visitor
Document
<<list>>
Node
+ create(String) : Node
<<list>>
Tokens
Header
Block
Quoted Block
ItemList
Plain Text
Style Text
HTML Code

Parsing Activity



Assignment 1

- Due: 11:59 PM, 11 Nov (Fri)
  - Late submission is allowed at 20% penalty within 24 hours
- Tasks
  1. Create a git repository for the project on Github
     - Every team member must be a collaborator
     - The repo must include TA 박한울 (Github ID: 21000315) as a collaborator
  2. Write a Java file that receives command line inputs
     - The Java file must deny illegal command line inputs
     - Write README.md to describe command line inputs
  3. Design classes for Markdown IR based on the given skeleton
     - Study the Markdown syntax
     - Clarify ambiguities in the Markdown syntax if you found any
     - Write your class design and design issues in 3 pages (A4 size)

Team

A	곽성은, 김광채, 김현범, 윤아름
B	김현희, 맹승주, 임지윤, 정승연
C	김새나, 이재훈, 정마리아, 최효은, 허수민
D	방새봄, 서예린, 이경엽, 이세계
E	권성안, 김용래, 박성권, 송고은
F	고요한, 김남균, 문세미, 박진열
G	김강산, 김수빈, 박다울, 심시온
H	김하늘, 송경배, 이상준, 이승환, 한고운
I	김도형, 김형주, 이슬, 인무열, 태인호