
LatexEditor

Release Report

Κατσαλήρος Άγγελος Α.Μ. 2997

Κασσελούρης Απόστολος Α.Μ. 2994

Μπακάλης Δημήτριος Α.Μ. 3033

VERSIONS HISTORY

Date	Version	Description	Author
19/04/19	1 st	First Version	
24/05/19	2 nd	Second Version	

1 Introduction

This document provides information concerning the <2nd> release of the project.

1.1 Purpose

Latex is a well known high quality document preparation markup language. It provides a large variety of styles and commands that enable advanced document formatting. Typically, a Latex document is compiled with a tool like MikTex, Lyx, etc. to produce a respective formatted document in pdf, ps, etc. Formatting documents with Latex is a programming like process as it involves the proper usage of Latex commands which are embedded in the document contents. The objective of this project is to develop a simple Latex editor for inexperienced Latex users. The goal of the editor is to facilitate the usage of Latex commands for the preparation of Latex documents. One of the prominent features that distinguishes the LatexEditor from other similar applications is its multi-strategy version tracking functionalities that enable undo and redo actions.

1.2 Document Structure

The rest of this document is structured as follows. Section 2 specifies the acceptance tests that have been employed for this release of the project. Section 3 specifies the main design concepts for this release of the project.

2 Tests

2.1 Tests for User Story <1>

Test ID	1
User Story	US1
Test Class	CreateCommandTest
Description	<p><i>The purpose of the test is to compare the contents of the newly created document (created by the DocumentManager) with the expected contents of the selected template.</i></p> <p>We create all types of documents and compare them with the expected document types.</p>

2.2 Tests for User Story <2>

Test ID	2
User Story	US2
Test Class	<i>EditCommandTest</i>
Description	<p><i>The purpose of the test is to compare the contents of the newly created document ,with the addition of a string, with the expected contents of the document (document + string).</i></p> <p>We create a document, add a specific string and then compare the new document with the expected document (document + string)</p>

2.3 Tests for User Story <3>

Test ID	3
User Story	US3
Test Class	<i>AddLatexCommandTest</i>
Description	<p><i>The purpose of the test is to compare the contents of the newly created document ,with the addition of a command, with the expected contents of the document (document + command).</i></p> <p>We create a document, add a specific command and then compare the new document with the expected document (document + command [from Table1])</p> <p>We test the 8 different commands</p>

2.4 Test for User Story <4>

Test ID	4
User Story	US4
Test Class	<i>StrategyTest</i>
Description	<p><i>The purpose of the test is to compare the contents of the previous version of the document (created by the DocumentManager) with the contents of the document before the edit action (document + string).</i></p> <p>We create a document, add a specific command, add it to the history and</p>

	then compare the previous version with the expected one.
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2.5 Test for user Story <5>

Test ID	5
User Story	US5
Test Class	<i>ChangeVersionStrategyTest</i>
Description	<i>The purpose of the test is to check whether the strategy can change between the Volatile Strategy and Stable Strategy and vise versa.</i>

2.6 Test for User Story <6>

Test ID	6
User Story	US6
Test Class	<i>DisableVersionManagementTest</i>
Description	<p><i>The purpose of the test is to check if the versions history remains unchanged after we disable the version mechanism button.</i></p> <p>We create a document, add a specific command, add it to the history, disable the versions mechanism button and then compare the previous version with the expected one.</p>

2.7 Test for User Story <7>

Test ID	7
User Story	US7
Test Class	RollBackToPreviousVersionTest
Description	<p><i>The purpose of the test is to check whether the versions history works.</i></p> <p>We create a document, add a specific command, add it to the history and then compare the previous version with the expected one.</p>

2.8 Test for User Story <8>

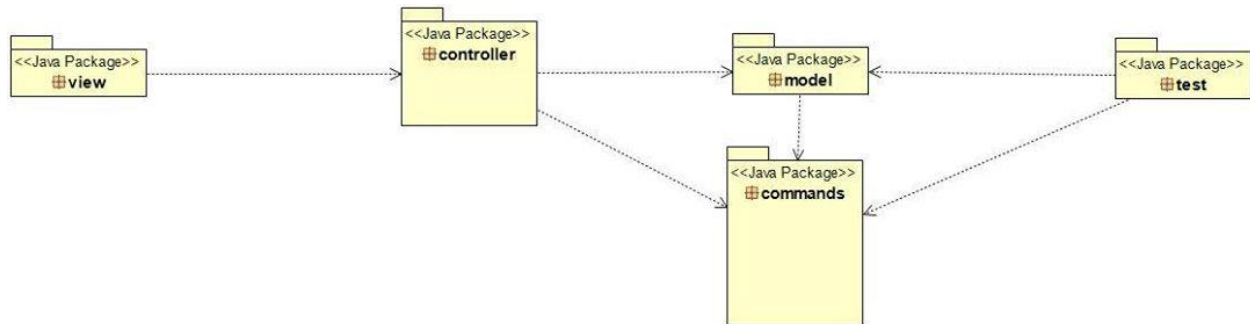
Test ID	8
User Story	US8
Test Class	SaveTest
Description	<p><i>The purpose of the test is to check if the save button works.</i></p> <p>We create a document save it, then load it, and compare it with the expected one.</p>

2.9 Test for User Story <9>

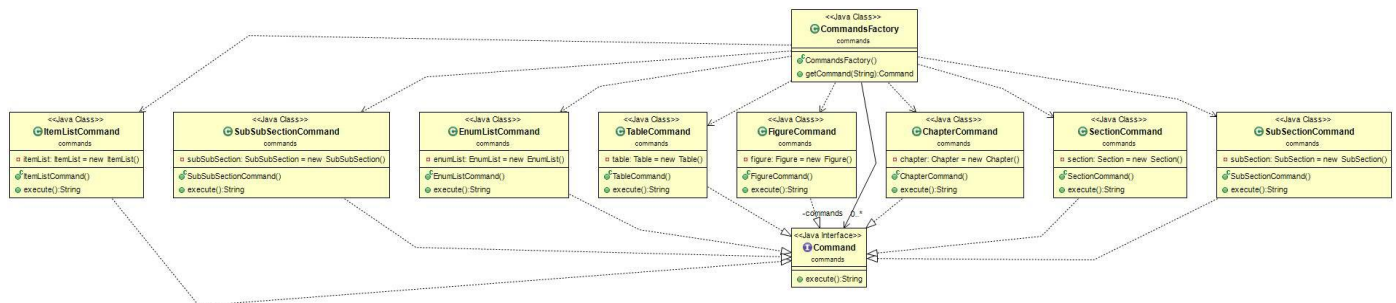
Test ID	9
User Story	US9
Test Class	LoadTest
Description	<p><i>The purpose of the test is to check if the load button works.</i></p> <p>We create a document with a specific string, then load a file with the same string and compare those two.</p>

3 Design

3.1 Architecture



3.2 Design



<Document the classes that are included in this release in terms of CRC cards according to the template that is given below.>

Class Name: CommandsFactory	
Responsibilities: <ul style="list-style-type: none">▪ This class creates commands and stores them into a HashMap▪ Returns the content of the commands	Collaborations: <ul style="list-style-type: none">▪ With LatexEditorController▪ With Command▪ With ChapterCommand▪ With SectionCommand▪ With SubSectionCommand▪ With SubSubSectionCommand▪ With TableCommand▪ With FigureCommand▪ With EnumListCommand▪ With ItemListCommand

Class Name: Command	
Responsibilities: <ul style="list-style-type: none"> ▪ It is an interface that implements the command pattern 	Collaborations: <ul style="list-style-type: none"> ▪ With ChapterCommand ▪ With SectionCommand ▪ With SubSectionCommand ▪ With SubSubSectionCommand ▪ With TableCommand ▪ With FigureCommand ▪ With EnumListCommand ▪ With ItemListCommand ▪ With CommandsFactory

Class Name: ChapterCommand	
Responsibilities: <ul style="list-style-type: none"> ▪ Implements from Command ▪ Returns the content of the specific command 	Collaborations: <ul style="list-style-type: none"> ▪ With Command ▪ With CommandsFactory ▪ With Chapter (in model package)

Class Name: SectionCommand	
Responsibilities: <ul style="list-style-type: none"> ▪ Implements from Command ▪ Returns the content of the specific command 	Collaborations: <ul style="list-style-type: none"> ▪ With Command ▪ With CommandsFactory ▪ With Section (in model package)

Class Name: SubSectionCommand	
Responsibilities: <ul style="list-style-type: none"> ▪ Implements from Command ▪ Returns the content of the specific command 	Collaborations: <ul style="list-style-type: none"> ▪ With Command ▪ With CommandsFactory ▪ With SubSubsection (in model package)

that

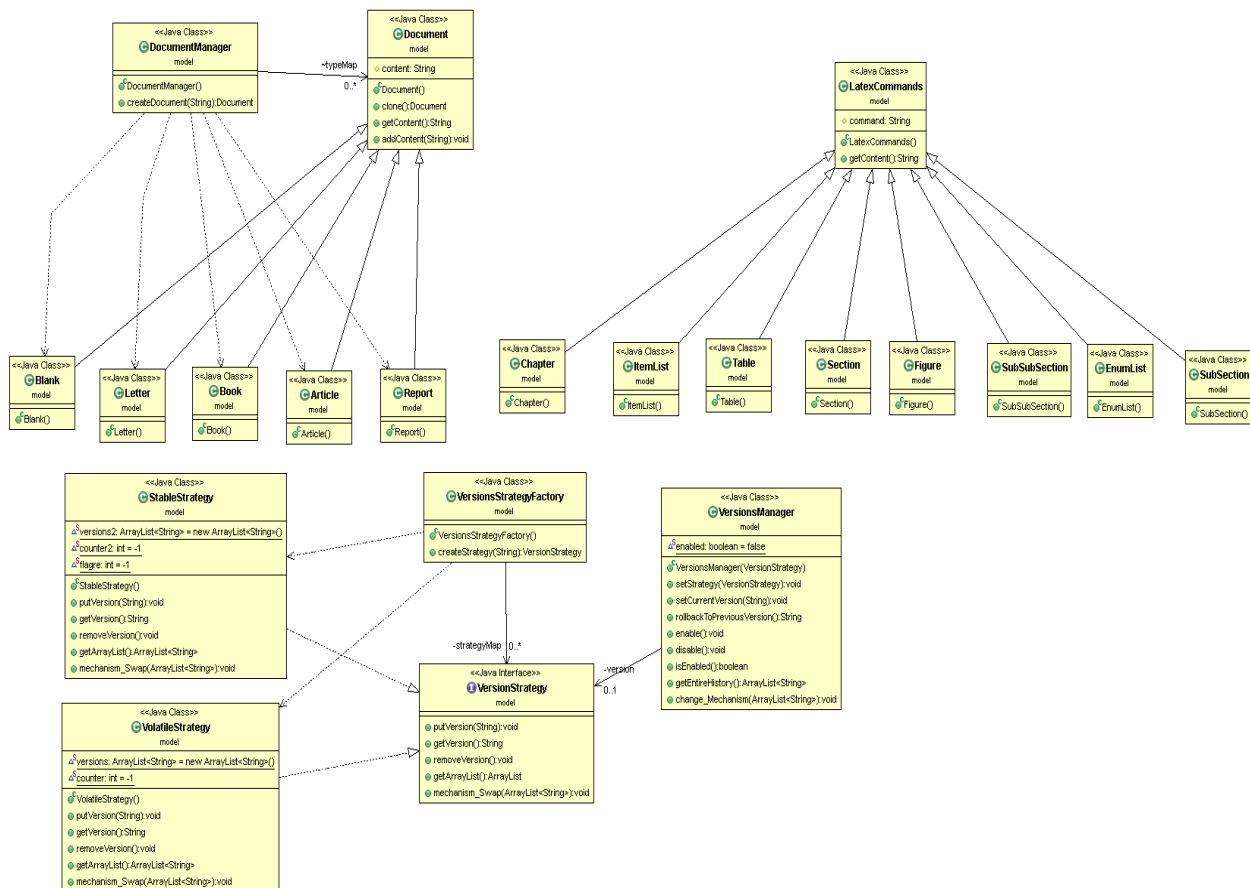
Class Name: SubSubSectionCommand	
Responsibilities: <ul style="list-style-type: none">▪ Implements from Command▪ Returns the content of the specific command	Collaborations: <ul style="list-style-type: none">▪ With Command▪ With CommandsFactory▪ With SubSubSection (in model package)

Class Name: TableCommand	
Responsibilities: <ul style="list-style-type: none">▪ Implements from Command▪ Returns the content of the specific command	Collaborations: <ul style="list-style-type: none">▪ With Command▪ With CommandsFactory▪ With Table (in model package)

Class Name: ItemListCommand	
Responsibilities: <ul style="list-style-type: none">▪ Implements from Command▪ Returns the content of the specific command	Collaborations: <ul style="list-style-type: none">▪ With Command▪ With CommandsFactory▪ With ItemList (in model package)

Class Name: EnumCommand	
Responsibilities: <ul style="list-style-type: none">▪ Implements from Command▪ Returns the content of the specific command	Collaborations: <ul style="list-style-type: none">▪ With Command▪ With CommandsFactory▪ With Enum (in model package)

Class Name: FigureCommand	
Responsibilities: <ul style="list-style-type: none">▪ Implements from Command▪ Returns the content of the specific command	Collaborations: <ul style="list-style-type: none">▪ With Command▪ With CommandsFactory▪ With Figure (in model package)



Class Name: LatexCommands	
Responsibilities: <ul style="list-style-type: none"> It is a parent class to commands 	Collaborations: <ul style="list-style-type: none"> With Chapter With Section With SubSection With SubSubSection With Table With Figure With EnumList

	<ul style="list-style-type: none"> ▪ With ItemList
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Class Name: Chapter	
Responsibilities: <ul style="list-style-type: none"> ▪ Extends LatexCommand ▪ Returns the content of the specific command 	Collaborations: <ul style="list-style-type: none"> ▪ With LatexCommands

Class Name: Section	
Responsibilities: <ul style="list-style-type: none"> ▪ Extends LatexCommand ▪ Returns the content of the specific command 	Collaborations: <ul style="list-style-type: none"> ▪ With LatexCommands

Class Name: SubSection	
Responsibilities: <ul style="list-style-type: none"> ▪ Extends LatexCommand ▪ Returns the content of the specific command 	Collaborations: <ul style="list-style-type: none"> ▪ With LatexCommands

Class Name: SubSubSection	
Responsibilities: <ul style="list-style-type: none"> ▪ Extends LatexCommand ▪ Returns the content of the specific command 	Collaborations: <ul style="list-style-type: none"> ▪ With LatexCommands

that

Class Name: Table	
Responsibilities: <ul style="list-style-type: none"> ▪ Extends LatexCommand ▪ Returns the content of the specific command 	Collaborations: <ul style="list-style-type: none"> ▪ With LatexCommands

Class Name: ItemList	
Responsibilities: <ul style="list-style-type: none"> ▪ Extends LatexCommand ▪ Returns the content of the specific command 	Collaborations: <ul style="list-style-type: none"> ▪ With LatexCommands

Class Name: Enum	
Responsibilities: <ul style="list-style-type: none"> ▪ Extends LatexCommand ▪ Returns the content of the specific command 	Collaborations: <ul style="list-style-type: none"> ▪ With LatexCommands

Class Name: Figure	
Responsibilities: <ul style="list-style-type: none"> ▪ Extends LatexCommand ▪ Returns the content of the specific command 	Collaborations: <ul style="list-style-type: none"> ▪ With LatexCommands

Class Name: Document	
Responsibilities: <ul style="list-style-type: none"> ▪ Parent class, to templates, that implements the prototype pattern ▪ Creates clone objects 	Collaborations: <ul style="list-style-type: none"> ▪ With DocumentManager ▪ With Article ▪ With Book ▪ With Letter ▪ With Report ▪ With Blank

Class Name: DocumentManager

Responsibilities: <ul style="list-style-type: none"> ▪ This class creates documents and stores them into a HashMap ▪ Returns the content of the documents 	Collaborations: <ul style="list-style-type: none"> ▪ With Document ▪ With Article ▪ With Book ▪ With Letter ▪ With Report ▪ With Blank
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Class Name: Article	
Responsibilities: <ul style="list-style-type: none"> ▪ Extends Document ▪ Returns the content of the specific document 	Collaborations: <ul style="list-style-type: none"> ▪ With DocumentManager ▪ With Document

Class Name: Book	
Responsibilities: <ul style="list-style-type: none"> ▪ Extends Document ▪ Returns the content of the specific document 	Collaborations: <ul style="list-style-type: none"> ▪ With DocumentManager ▪ With Document

Class Name: Letter	
Responsibilities: <ul style="list-style-type: none"> ▪ Extends Document ▪ Returns the content of the specific document 	Collaborations: <ul style="list-style-type: none"> ▪ With DocumentManager ▪ With Document

Class Name: Report	
Responsibilities: <ul style="list-style-type: none"> ▪ Extends Document 	Collaborations: <ul style="list-style-type: none"> ▪ With DocumentManager

<ul style="list-style-type: none"> ▪ Returns the content of the specific document 	<ul style="list-style-type: none"> ▪ With Document
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Class Name: Blank	
Responsibilities: <ul style="list-style-type: none"> ▪ Extends Document ▪ Returns the content of the specific document 	Collaborations: <ul style="list-style-type: none"> ▪ With DocumentManager ▪ With Document

Class Name: VersionsStrategyFactory	
Responsibilities: <ul style="list-style-type: none"> ▪ This class creates Strategies and stores them into a HashMap ▪ Returns the strategy requested 	Collaborations: <ul style="list-style-type: none"> ▪ With VolatileStrategy ▪ With StableStrategy ▪ With VersionStrategy

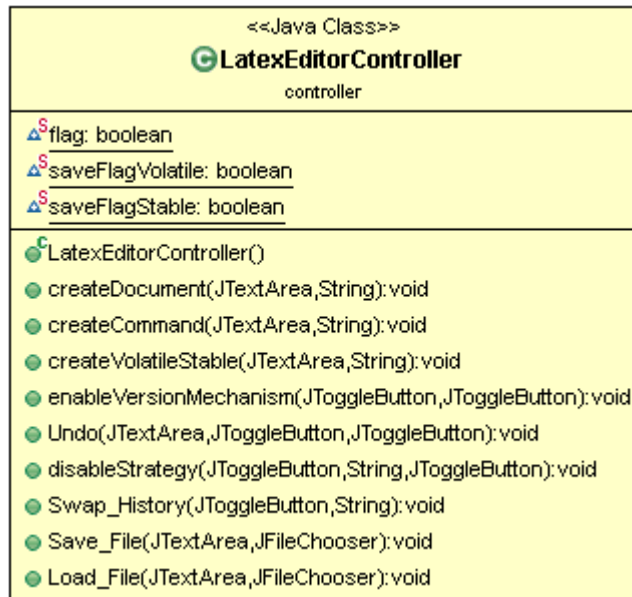
Class Name: VersionsStrategy	
Responsibilities: <ul style="list-style-type: none"> ▪ Interface that implements the strategy pattern 	Collaborations: <ul style="list-style-type: none"> ▪ With VolatileStrategy ▪ With StableStrategy ▪ With VersionStrategy ▪ With VeriosnManager

Class Name: VolatileStrategy	
Responsibilities:	Collaborations:

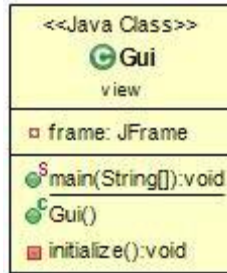
<ul style="list-style-type: none"> ▪ Implements from VersionStrategy ▪ Stores the current version of the document to a history list ▪ Returns the previous version from the history list ▪ Removes the previous version form the history list 	<ul style="list-style-type: none"> ▪ With VersionStrategy ▪ With VersionStrategyFactory
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Class Name: StableStrategy	
Responsibilities: <ul style="list-style-type: none"> ▪ Implements from VersionStrategy ▪ Stores the current version of the document to a history file in the hard drive ▪ Returns the previous version from the history file in the hard drive ▪ Removes the previous version form the history file in the hard drive 	Collaborations: <ul style="list-style-type: none"> ▪ With VersionStrategy ▪ With VersionStrategyFactory

Class Name: VersionsManager	
Responsibilities: <ul style="list-style-type: none"> ▪ Enables a Strategy ▪ Disables a Strategy ▪ Returns a boolean if a specific strategy is enabled ▪ Returns the entire history of versions from a Strategy ▪ Rolls back to the previous document version and removes that version form the history ▪ Puts the current document version to the versions history ▪ Sets the version that we are working with 	Collaborations: <ul style="list-style-type: none"> ▪ With VersionStrategy



Class Name: LatexEditorController	
Responsibilities: <ul style="list-style-type: none"> Connects the document visualisation with a user interaction Controls the data flow between the model(package) and the view(package) 	Collaborations: <ul style="list-style-type: none"> With DocumentManager With VersionManager With CommandsFactory With VersionsStrategyFactory



Class Name: Gui	
Responsibilities: <ul style="list-style-type: none"> Is responsible for the visualisation of the documents and the interaction with the user 	Collaborations: <ul style="list-style-type: none"> With LatexEditorController