## Revision and Changes

The MLGenerator

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## Changes during the Implementation Phase

The Abstract Factory pattern is not used anymore, since Visitor has the ability to call/visit the elements/classes of the composite pattern it needs and provide the desired compound document by itself.

In the Application class is specified which document format (HTML in our case) the Visitor pattern is going to use (HTML Visitor) as an implementation issue for facilitated and more flexible use/implementation, since this was previously specified in the Document class. The downside is, that the user may try to use a Visitor we have not yet implemented.

The table class"Tablee" is now a composite object of the composite pattern (File Composite) and not an "alone standing" class by itself, since it functions like a folder and consists of other table elements. It is possible to link on elements of the table but not the table itself and the table class can not contain a heading as an element anymore, but which can be created by the user by making the first row and bolding the input. This can be considered a downside.

There is a new Paragraph Composite considered as an implementation solution, consisting of bold, italic, underlined and normal text elements. The Visitor pattern has the additional function ability to save the document at the end of the execution of the library and even choose the name under that the user wants to save it, which was newly implemented to this pattern.

The Anchor link class is implemented in a way that it can link on all document elements separate, besides the Text, Bold, Italics, Underline, Lists, Tables and Paragraph class which couldn't be implemented since there are no suitable"normal" text tags and would not make sense for the other classes. A downside of here is that the ID tag always consists of the input to be linked at and therefore may get lengthy. It also contains whitespaces, which does not hinder the functioning wise but is actually not desired.

There is no Page Title class existing anymore, since Page Title has become a part of the Document class, implemented in a way that it is possible to have at exactly one Page Title. However, the tradeoff here is that we may require some element which may not be needed in others.

## Changes during the Testing Phase

Issue arose when creating anchor links due to not correct syntax, the anchor link id contained not allowed white spaces which was solved by removing the white spaces and replacing them by underscores. However, two headings containing the same input will have the same ids leading to errors.

New line in front of the tag was removed due to it making unwanted new lines created whenever trying to close a sentence.

Preconditions of the form  $x = / is_empty$  were changed to x.count > 0 due to difficulties arising during the testing phase. Eiffel could not recognize properly what was wanted. Exchanging the precondition to an other but still equal form seemed to solve the issue.

Additionally, in the class heading, we inserted a condition saying that the number given must be between 0 and 6. Since a heading larger than 6 does not exist in HTML, however, this may interfere with other Mark-up languages which allow headings larger than six

Lastly, we had to remove the newlines before and after the anchor links and add an additional one in front of alt in the image class for a better looking output.