

Advanced Software Engineering – Task 3, TaskID: XTX

Abstract: This document is used to collect all assumptions/considerations used to develop the necessary artifacts of this task and also acts as the result report.

Assumptions and considerations are used in the following as synonymous, meaning an own interpretation of the actual situation has been applied

a. DSL in XTEXT

1. The implementation of the WIKIML language in XTEXT is based on two source: Wiki Markup Documentation available https://en.wikipedia.org/wiki/Help:Wiki_markup and the EBNF notation of Wiki ML https://www.mediawiki.org/wiki/Markup_spec/EBNF
2. In XTEXT, a flat structure is implemented, all content elements that can be used are available as a list. The page is identified as the name
3. The cascading characteristics of formatting and links (formatted links, alternative text formatting) is available in a hierarchical way
4. The generic terminals of xTEXT are used, but overridden for a) comments, b) STRING and c) ID
5. A new datatype "Text" is constructed that holds plain text, included in formatted and unformatted grammar rules.
6. A new terminal "URL" is added, identifying URLs, found online at <https://xtexterience.wordpress.com/2011/06/08/urls-in-xtext/>
7. Internal links must be valid -> another page MUST exist to setup a link (this is actually a contradiction to Wiki logic)

b. XTEND

1. The transformation iterates through the list of element and uses switch statements for types of elements. Each rendering operation is done for element types
2. XTEND creates the actual WikiPage plus all Category pages, category page content rendering is not implemented
3. CSS styles are copied from Wikimedia and included in the header.

c. EXAMPLE

The abstract 1 content has been used to validate the system. All necessary subpages are created as well, with less/no content, but to have valid links.