PowerPoint Course Creation Process Document

**Overview**

With the *pycourse* script, the process of manually copying all data from an original course PowerPoint can be reduced to a single command! The script extracts PowerPoint slide-text and notes (narration) from each slide of a PowerPoint, which is then used to build XML (used for course configuration), DOCX (used for narration recording), TXT (used for narration), and JSON (used for future h5 course creation) files. For the program to function properly, however, several (easy-to-follow) PowerPoint course standards must be used when initially building a course.

**Methodology**

Most courses I’ve examined already abide by this set of standards (nearly exactly!), but there are some exceptions. The following is a list of rules that must be followed for the program to work properly:

* PowerPoint must be created using standard Microsoft layout scheme (in exact order!) and use layout standard
  1. Title (presentation title slide)
  2. Title and Content
  3. Section Header (sometimes called Segue)
  4. Two Content (side by side bullet textboxes)
  5. Comparison (same but additional title for each side by side content box)
  6. Title Only
  7. Blank
  8. Content with Caption
  9. Picture with Caption

It does not matter whether all the layout options are present when choosing a slide’s layout, only that the following slides correspond to their matching layout index.

* 1. Intro Slide **in** [1]
  2. Menu Slide **in** [6]
  3. New Section Slide **in** [3]
  4. Standard Slide **in** [2, 4, 5, 7, 8, 9]

Essentially, the program uses each slide’s layout index to determine which slides are of which layout type.

Technical Explanation: For whatever reason, PowerPoint only supports slide layout indexing, so a slide’s layout cannot be retrieved through a key. Optimally, it wouldn’t matter the position of the slide’s layout in the layout sequence, but currently that seems to be the only way of determining which layout a slide uses. It would also be elegant to simply use PowerPoint “sections” (ex: Introduction, Main Menu, COPV Basics, etc.) to parse the presentation (as opposed to slide layout types), but the python-pptx library does not yet provide API support for retrieving this data.

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| Example of slide layouts in practice! |  |

* **Course Title condition**: Course Title must -
  1. be the first text item in the first slide of the PowerPoint.
  2. be single, contiguous text string (each word is delimited by a space).

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| **Course Title** =  “Composite Overwrapped Pressure Vessels (COPV) Overview” |  |

Known Issue: Even though items may appear ordered properly, sometimes they aren’t recognized in the same order. To get around this, use a presentation template to create a course.

* **Course ID condition**: Course ID must -
  1. be the second text item in the first slide of the PowerPoint.
  2. be single, contiguous text string.

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| **Course ID** =  “SMA-HQ-WBT-108” |  |

Known Issue: Even though items may appear ordered properly, sometimes they aren’t recognized in the same order. To get around this, use a presentation template to create a course.

* **Section Header Condition**: A section header slide must -
  1. be of type “Section Header” (3)
  2. only contain desired section header text.

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| **Section header text** =  “COPV Basics” |  |

Technical Explanation: Section header slides will be used to begin and end slide sequences. SectionHeader[0] starts sequence\_0 and SectionHeader[1] ends sequence\_0 and starts sequence\_1. Easy!

* **Main Menu Condition**: A main menu slide must –
  1. be of type “Title Only” (6)
  2. contain the string, “Main Menu” in the beginning of the slide

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| **Main Menu** |  |

Technical Explanation: The string, “Main Menu” in the 0 position of the slide text determines whether the course contains a main menu. This then sets the “mainMenu” variable in the course XML

* **Knowledge Check Condition**: A Knowledge Check must-
  1. not be of types “Title” (1), “Section Header” (3), or “Title Only” (6)
  2. begin with a first line identical to: “Knowledge Check”

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| --- | --- |
| **Knowledge Check** |  |

Technical Explanation: Script looks for first text item to be == “Knowledge Check”

* **HTML Video Condition**: