The Chronicles of PyXML

Name: Poonam Yadav

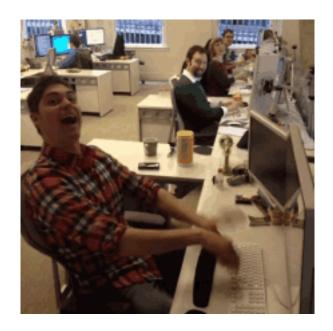
Company: Ansys Software

Contact Details: <u>LinkedIn</u> / writetowriter2@gmail.com

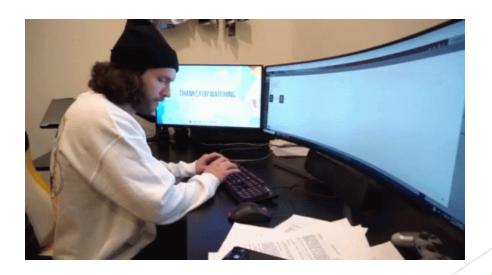
A little bit about me...



Content Writer



Technical Writer



The Requirement



- What?
 - ► A Reference PDF with 140+ topics/chapters
 - ▶ Around 140+ APIs which are available in a python dictionary. These APIs are well structured and have decent content around their usage, arguments, options etc.
- ► Why?
 - ► Improve Customer Experience
 - ► Currently, the help for these APIs are only available through the tool GUI or command prompt. The user does not have an easy-access document.
- Hindrances
 - ▶ Less time, Less resources, Complex input

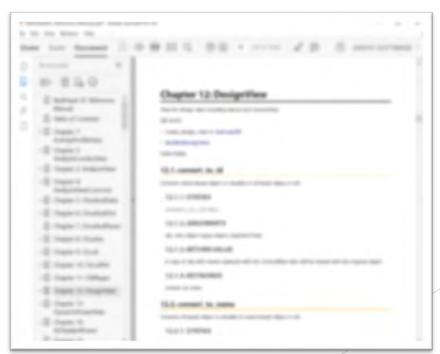


Overview

- What we had?
 - ► Tool help
 - ► GUI and console



- What we wanted?
 - ► Easy access document
 - ▶ PDF or HTML





How did we do it?



Devise a strategy ※



You could use PY source as an input, or segregate and classify the data into a text file and work further on a simple script to write XML counterparts.



Start working on the algorithm. When you have decided to parse one section of the document, it kind of inspires you to write algos for all sections. You would then start improvising with bullets, formats and sub-sections.

Understand the Input

Automation: Extract and segregate the input

Map inputstructure to XML **Automation: Text to XMLs**

Collate all XMLs into Bookmap

Run and Fix **Validation Errors**

Publish PDF/HTML

Input 🧧



Understanding the structure, sub-modules, lists, identifying start and end of a list.



Output

Decide what XML tags would display relevant content. Have a clear idea for all sections.

Input Structure



Automation: Extract and segregate the input

Map inputstructure to XML Automation: Text to XMLs

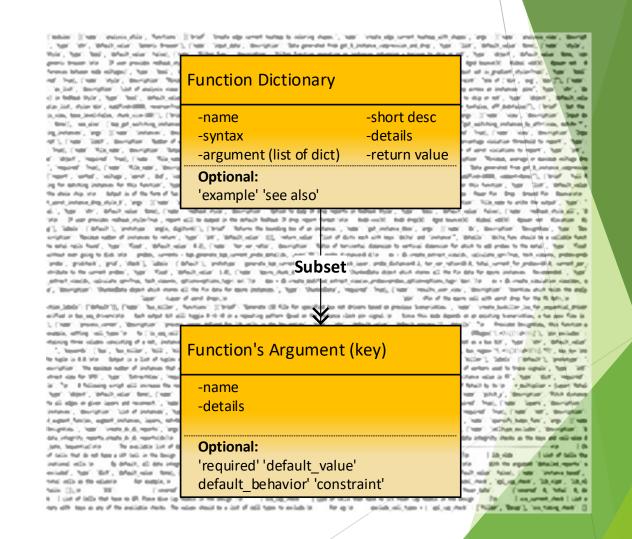
Collate all XMLs Ruinto Bookmap Valid

Run and Fix
Validation Errors

Publish PDF/HTML



Full help dictionaries C_Element (list of dicts) Brief Name See Also **Details** Functions (list of dicts) M_Element (list of dicts) Name **Functions (list of dicts)**



Input Conditioning

A Real Property and in

Understand the Input Automati Extract a segregate input

Map inputstructure to XML Automation: Text to XMLs

Collate all XMLs R into Bookmap Vali

Run and Fix Validation Errors

Publish PDF/HTML



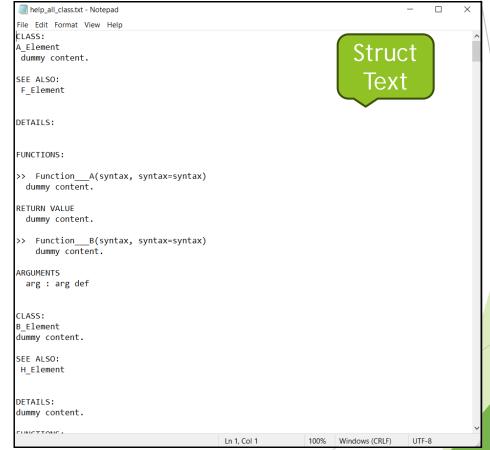
► Here we extract the APIs and segregate the list of C_element and M_element in separate text files.

Script output are text files, later used as the input to the code



in interes" (eas' 17 cm' linteres", description' List of interes, either Referent dant or Affect List of Interess", New York, Version and of L. Chan's State's Secretary. Name of and coloring to record. Name Self., Made with a State of Secretary al, (has' Novas', burgasir baya ko kar', har 'er', ahub,ebr' "qalukasabhar"), (has' bor', burgasir base el ere vicinia hinget', har' 'er' of littlest, trappined that, (from this new, description this new to write the subset, from little, from littlest, description thinks, surround entropy the 'required' front, l'ester' 'Kla seste, 'Bernintien' 'Kla seste transfer de subset', Nort' 'Wir, 'required' front, l'ester' 'Seste dell', 'Bernintien' 'Brit presented front per 8 inches networks room, land, rolling, land, bid, languages, land, (Mark), broken from profile, file on, and studen, stale for, explication, expensions, (but file fall is by the empty persons for this function", "type". "East", default value" band, ("type" "son value", "department." If plan strong the empty value for this function", "type". "East", default value. the date that his of the first of the filling as the specific. The other indices communities. This was it does not be being that they there they because it is the filling that the filling that they because it is the filling that the fill Contribution (fig. state), "age: 3" see: "ar", "berristien". "Seel explain view", "borr: "drive", "required". Prof., "Yest, view", "Berristien". "Schools to write the voted", "boar", "berristien". "Schools to write the voted", "boar", "berristien". of ", here Mr., affait soler best, Flags" haben min', describer follow to be 8 the reports in before this from here', default soler follow, Flags: reduce this off", "8 We If you provide reflect relative a report will be agreed in the orbital below If they report force the intelligence in the breakly displayed the detail of the orbital below out in the contract the contract of the orbital below out in the contract of th 41. Idea (Malif.), printed regio district), (Mrd. More to bendue to district, 1981, pt. indexes ton, 1981, (Mrs. St., Secretar, Secretar, Sec., wrighter. Notice rather of inches to where, "age? "Mr., Medit, solar" \$25, "when yolds" "Sixt of dark each with legs "BON" and "inchese", Brack! "BON, fee should be a solidate food to end rath face", from "Keet", default what it is, "year" for on rather, description. Table of territorial descripts to entried descript for shirt to all probe to the entrie, from "Keet". without our going to dick late - profes, surrouts into general top covered profe professionals, later (NT), professionals differ - on in discrete professionals, collections combine, took visionals, professionals indo , gridnos , grid , libbis , libbis , libbis , gridnos i grando las conet pela priscia, destriare, pela distribued A, for constructivit A, for constructivit A, conet for priscial A, conet for stribute to the current prober", "bod", "black", "black rober" LEE, "basic store, devication". "businesses about about store all the fire above inclusions. Businesses it, "businesses above about store and the fire above inclusions. Businesses it, "businesses above included above ab d', 'Enrighter' 'Outsides dans dus rores di te fo des fo aus jateme.', 'Eger' 'Outsides', 'regard' 'Indi, ('ras' 'results, orr, ras', 'devription' 'Indian dus tion to angle "Min" ofter of the season sall with world drop for the fit balls, in

wite book! Fithold Till, From: The stiller: Benton: If hold: Towards till fille for excelled be an observation beneficials. They were builtier by for excelled by the filler of driven book or produce beneficials. willed in but any discretiffs. But edget bit cill begin 8 to 40 in a regarding pattern Good on the continue client pin regard, in . Some this each depends on an equility beneficial, a ton pass flow in 1. From travers over "Storighter" traves over defeat for 18 orth in the brushler, "box" Mr. Medit solar" (Med.) proces 11. Med.): "In . Provide brushler, this function of ments within the face for the China and the life many will fall what all asserting more, the despite or made within a first which the life of the collection moving three values consisting of a not, between not pir', "tops" libr', "required" "heat, ("host" has, regio", "investion" in regio that identifies a not no a too bit', "tops" libr', "bifust, relate". teach" (fair, builder), falls, biller), falls' (falls), british for supported from the fine of fills), but supported from the supported fills to report of fills to r to bade in 6.6 kind. Should in a list of bade of the following form in . (Denous does four). See ", November" [text, No. Hiller"], No. Hiller 1, No. Hiller consister. We color with a factories that will be broad. Year, "Mar. Mall, when ISS, Cappe," before of deaths, discreption. We notice of orders and to beau signals. Year, "Mill. areas can be \$500. Now "derwriten", "reported from "let car", "derwriters". This of set can and on countries when the call of countries when is \$60, Now "Six", "reported by "to I following entitled in means the recordings of Model to 2 fb, som and the recordings or tide and in I immeas the information and Model to the in publishing a facility to the contract of Model to the contract of Mo tight "dight", "bfailt, alar "bnot, (rapr" johd,ir, "bnington". With distance in elementer a goody", "bgar", "bfailt, alar "bbit, (rapr" johd,ir', "bnington". With distance to all algo or given last national. " has " blatcher for", "op" (I'van" 16", "borration" light delep view", "borr "bregister", "report" freel, ("specifican", "borration" person, durings the discess, for the regard feet, their tarry, durings to discent easily, for the regard feet, regard feet, durings I agent force, agent interes, laws, etities, agent district old, agent district old, r mittalant STL ("blaf", "blats one of the boss", "east "specifs boss for", "one "lives , harri limited A. Armentin, logic (Elean Literaphin), therefore: Streption of the Sough, Nami Streption, Important, Nami Anthropological Streption, Strep the integrity representative in its representative in its region of the contract of the contra late, becarried one. The excludes but of data program about and their defections are in To 128, max I sid of falls that do not have a colorly field in the Bridge. To inclined with to the property death all this over fallers and though animalist to the argument 'exclude animalist' animalist a existed, from "Bill", before how, from "braine reports", description, bedo detailed, per neil reporting to files, from "bods, affects reliant forms and a for eagle, in the discourse describe. ("Selectors," transactions, "Selectors," Selectors, "Selectors, Control 6, Notif 6, Analis (Suin on all tax a as of the activity facts. To what dealt to a list of all taxs to activity. For any a could all taxs of led on deat. [Titler], "Board, 'on take deat."





Mapping Docbook

Understand the Input

Automation: Extract and segregate the input

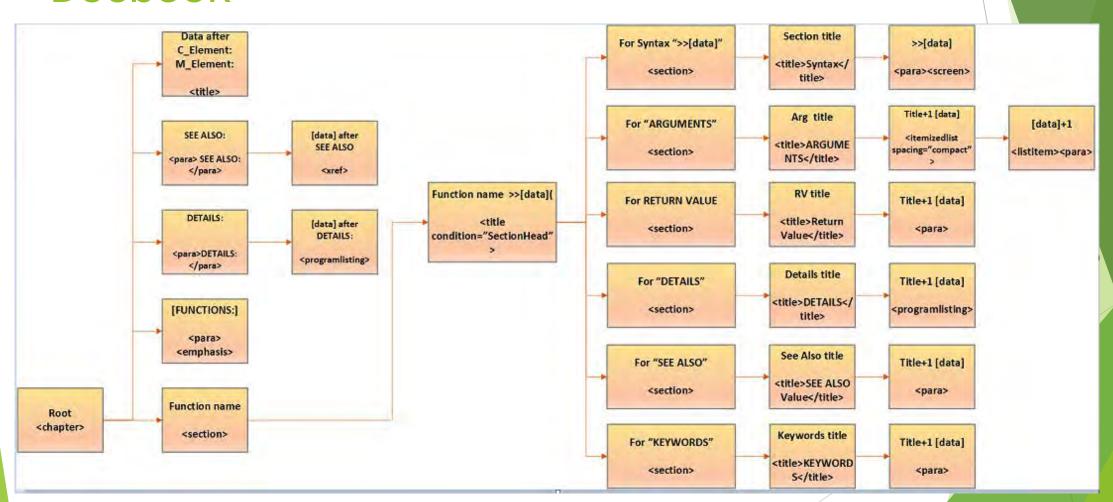
Map inputstructure to XML Automation: Text to XMLs

Collate all XMLs into Bookmap V

Run and Fix Validation Errors

Publish PDF/HTML





Map inputstructure to XMI Automation: Text to XMLs

Collate all XMLs into Bookmap

Run and Fix
Validation Errors

Publish PDF/HTML

- Written in Jupyter Notebook PyAnsys Lab
- Key opensource module used xml.etree.ElementTree
- Learn more about ElementTree on https://docs.python.org/3/
 - Navigate to Global Module Index.
 - Under the 'X' index, click xml.etree.ElementTree

```
x
xdrlib

= xml
    xml.dom
    xml.dom.minidom
    xml.dom.pulldom
    xml.etree.ElementTree
    xml.parsers.expat
```

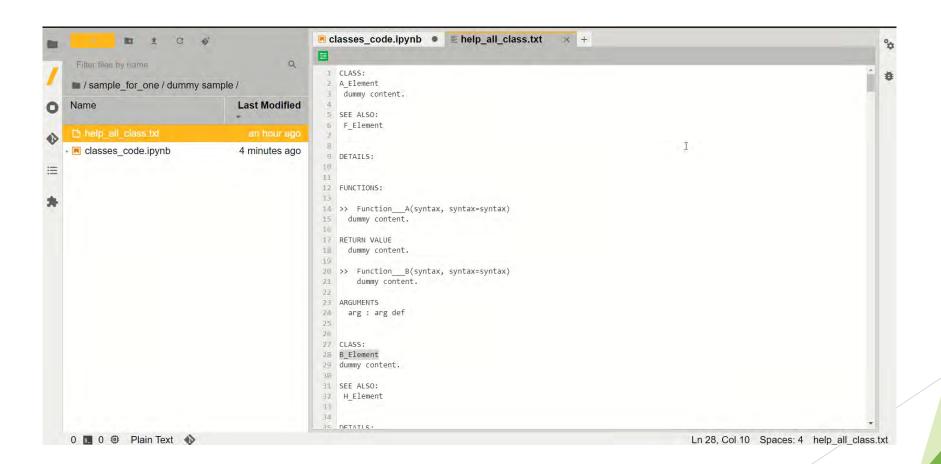
YouTube source: https://youtu.be/j0xr0-lAqyk



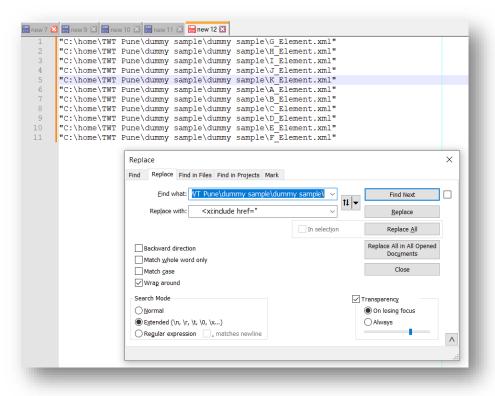


Demo Video





Bookmap (could be automated)



Automation:

Text to XMLs

Collate all XMLs

into Bookmap

Run and Fix

Validation Errors

Publish

PDF/HTML



Map input-

structure to XML

Understand the Input

Automation:
Extract and
segregate the
input

Map inputstructure to XML Automation: Text to XMLs

Collate all XMLs into Bookmap

Run and Fix Validation Errors Publish PDF/HTML



Code running Panik Code successful Kalm **XML** validation errors Panik

Observations:

- MetaData, directory structure should be correct before running validation.
- Common XML validation errors:
 - Broken <xref> links
 - Empty element tags
 - ▶ List having only one item
- Try solving these errors by modifying the code.
- Try manipulating the input or the code as per your requirement.
- Focus on generating a clean book through script. Avoid manual intervention on output.



Publish

Understand the Input

Automation: Extract and segregate the input

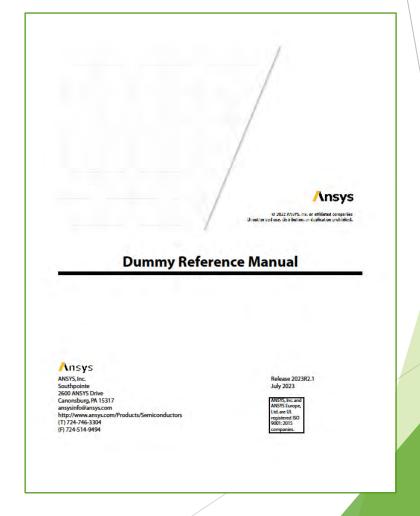
Map inputstructure to XML Automation: Text to XMLs

Collate all XMLs into Bookmap Va

Run and Fix Validation Errors

Publish PDF/HTML

Apply transformation scenarios as applicable.



Future

- Improving current documentation processes with the help of AI
 - Oxygen Al Positron Assistant Add-on
 - ► GPT Plugins Code interpreter
 - ▶ OCR any document in any language and analyze
 - ► Clean data : Examples with csv files
 - Create tested and working python code
 - Generate charts super easy
- Doc-as-Code, DocOps, Minimalism, Content Consumption
- Career Advancements
 - Product
 - Customer Experience
 - Sales
 - And of course; Managerial.



Thank You

Q&A