KOSTAL

Your task is to read in the following Excel Document and split up the requirements according to the count of LK_SWC and add a column to with the parent reference ID information.

ID	Requirement Text	LK_Content	LK_Resp	LK_Req	LK_Fun	LK_SWC	LK_Con	LK_Fun	LK_Secu	LK_Brea	LK_Rele	LK_Veri	LK_Revi	Document
SW_1	Illumination Status of the Component:	Title	SW	Accepted										
SW_2	The Illumination shall be implemented according to the dimming curves	Req	SW	Accepted		Illumination Memory								
SW_3	Picture of a example implementation	Annotation	SW	Accepted										
SW_4	Illumination shall be possible to switch off by Variant Coding	Req	SW	Accepted		VariantCoding								
SW_5	During Wakeup and Sleep Illumination shall be switched off	Req	SW	Accepted		SleepWakeup Illumination								
SW_6	At button press, the Function Illumination of that button shall be activated if the Button is in the Variant Coding	Req	SW	Accepted		Illumination Buttondetection VariantCoding								

Example for SW_5:

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
	ID	Requirement Text	LK_Conter	LK_Respor	LK_Requir	LK_Functio	LK_SWC	LK_Comm	LK_Functic	LK_Securit	LK_Breakd	LK_Releas	LK_Verifica	LK_Review	Document	LK_Parent
	SW_1	Illumination Status of the Component:	Title	SW	Accepted											
	SW_2	The Illumination shall be implemented according to the dimming curves	Req	SW	Accepted		Illumination Memory									
	SW_3	Picture of a example implementation	Annotatio	SW	Accepted											
	SW_4	Illumination shall be possible to switch off by Variant Coding	Req	SW	Accepted		VariantCoding									
	SW_5	During Wakeup and Sleep Illumination shall be switched off	Req	SW	Accepted		SleepWakeup Illumination									
		During Wakeup and Sleep Illumination shall be switched off	Req	SW	Accepted		SleepWakeup									SW_5
		During Wakeup and Sleep Illumination shall be switched off	Req	SW	Accepted		Illumination									SW_5
	SW_6	At button press, the Function Illumination of that button shall be activated if the Button is in the Variant Coding	Req	SW	Accepted		Illumination Buttondetection VariantCoding									

AUTOMOBIL ELEKTRIK

Steps to Follow

1. Read the Excel Document: Load the Excel file into a e.g. Pandas DataFrame.
2. Identify the requirements (LK_ContentType = Req)
3. Split Requirements: Split the requirements based on the count of LK_SWC.
4. Add Parent Reference Column: Add a new column to the DataFrame that contains the parent Requirement ID for each requirement.
5. Save the Modified Data: Save the modified DataFrame back to an Excel file.
6. Provide a user friendly HMI by e.g. OpenFile Dialog
7. Make good comments in the code before sending it back to me ☺

Info: Please send the code in an ".txt" file otherwise it could be blocked by the mail program from external.

If you have any questions, please contact me at m.seifert@kostal.com

Deadline: Friday 19.07.2024 12:00 o clock.

Enjoy coding! ☺