

# **Design and Source Synchronization of XML editing in VEX Tool**

Abstract: VEX provides WYSIWYG editing for XML files. As I read about it, in its present form, it can be used for editing XML involved, using CSS stylesheets, while hiding the XML tags from the user. In this proposal, I plan to add on to the functionalities of the VEX editor while adding support for synchronization between the external interface and XML editing. Also, provide the multi-page editing similar to the kind, provided by MS Excel.

## **Personal Details**

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## **You agree with us sharing your project proposal publicly in Eclipse forums:**

I have already started using the mail list and even posted my proposal for review there.

*We may and will discuss your project proposal on the Eclipse SOC mailing lists and bug trackers, as part of a collective evaluation effort. So keep in mind that what you are sharing with us will be reviewed and shared publicly in open Eclipse forums.*

I completely agree with this.

## **Project Proposal:**

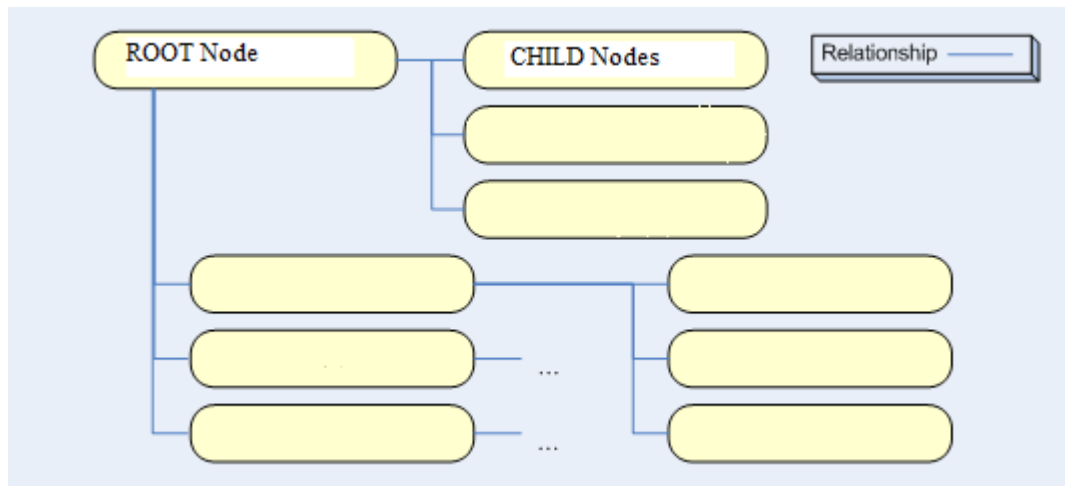
The main aim of the project would be to add to the functionalities of the VEX editor tool available. The current tool does not provide synchronization between the XML editing and the external interface or the design view of the tool.

The project can be formulated in two steps:

**Step 1:** Providing the Multi-tab support: There should support to handle the multiple XML file simultaneously, alongside providing Design view for individual files.

**Step 2:** Providing Synchronization between the design view and the source view: This step is crucial where we need to synchronize between the design view and source view. The design view should present the tree structure / hierarchy, presented in the source of the XML files.

Following presents a crude design view idea



Following presents the XML editing (similar to Excel)

A	B	C	D	E
Name	className	Value	className2	id
MimeType	java.lang.String	text/plain	java.lang.String	
gate.SourceURL	java.lang.String	file:/E:/Impleme	java.lang.String	
docNewLineType	java.lang.String	CRLF	java.lang.String	
				0
				1
				2
				3
				4
				5
				6
				10
				11
				15
				16
				17

To provide the synchronization, I plan to use Java for coding and DOM for parsing XML. I am sure, we can add more functionalities to this project, as we might be able to complete with this functionality ahead of schedule. I have previous experience in doing this when I worked at NIL, UCM University, Madrid and during my project relating to Data Visualization done with IBM IRL, India and IIT Delhi.

The link to some of my previous codes can be found at: <http://code.google.com/p/al-gsoc/source/browse/trunk>

### COMMITMENTS:

I am in my final year of bachelor studies that would complete sometime in the second week of May. After that, I plan to join a company (whose joining letter I have) in the last week of September. So, I would have no commitments apart from this project work. I plan to devote my complete time to this project. Even after the project completes, I can continue to work on the project (beyond the stipend from Google).

### Schedule of Code and Deliverables:

I will contribute to the project on daily basis and post my progress. Also, upload the project progress on a weekly basis on the SVN. I plan to use the two steps as the two milestones (if we do not add on any new functionality)

Before May 23: Participate in mailing list discussions, research, finalize features, become familiar with the code base. Analyze the data coming from the existing VEX tool and its architecture

May 23 - May 29: Design and create necessary interfaces and structures

May 30 - June 15: Build a basic structure, providing complete functionality for Step 1 of my proposal

June 16 - 23: testing and debugging of utility, taking feedbacks from posted utility

June 24 to June 30: improve tool based-on feedbacks, and work to include crude functionality support for Step 2

July 1 to 5: Testing, integrate with VEX (intermediate build), tidying up documentation, bug fixing

**July 6<sup>th</sup>: MILESTONE – VEX with crude implementation of functionality of design and source view switch**

July 7 - July 11: Take feedbacks and improve features of the tool

July 12 - 25: Work on the final code to implement the synchronization (Step 2) and come up with final build of the tool

July 26 to July 31: Submit the project internally for review on progress and getting feedbacks, alongside improving upon the code.

August 1 to August 10: Testing, tidying up documentation, bug fixing

**August 10<sup>th</sup>: MILESTONE – Final code & documentation complete & tested**

August 11<sup>th</sup> to August 17<sup>th</sup>: Overflow period in case any activities take longer than expected

## **Work/ Internship EXPERIENCE:**

I have previously participated in some big projects like, 'Epidemiological Modelor' at **IBM Indian Research Lab** and **IIT Delhi**, where my role was that of data mining and data visualization using a tool that I had constructed; 'Noun Co-reference Resolution' at **Universidad Complutense de Madrid, Spain** that involved implementing a clustering algorithm and provide interface to obtain the results. Both these projects required and used skills similar to the project I am proposing for.

In the project 'Epidemiological Modelor', we are also in **process of writing a research paper**.

Apart from these projects, I also worked continuously so as to enhance my general understanding and computing skills. For this, I did projects like 'Make your wish' at IBM India; 'Interfacing Agilent Multimeter and Power Supply to Cascading Probe Station' at Tessolve Services Ltd, Bangalore; 'Implementation of DO-178B guidelines on intranet' at Processware Systems Ltd, Bangalore; and 'Warehouse Management Systems' at Ducat India, Delhi.

## **Academic Experience:**

I substantiate my application by the fact that I have always been among the **Top 1%** at the college. My superlative performance in the field of academics has fetched me a number of awards at school and national level.

I was awarded certificate of "**EXCELLENCE**" by from **IIT, Kharagpur** for my **outstanding** performance in a course I had participated in. I have **presented research paper** in National Conference on Recent Advancements in Engineering and Technology (**NCRAET 2008**), India.

### **Why Eclipse?**

Eclipse is among the biggest open source organization in the world. Eclipse has great vision of service-oriented architecture and web engineering. Eclipse operates at a very high level and here, I could get to interact and communicate with the best of engineers.

### **What do you hope to gain from your participation?**

As, I plan to go for further studies next year, I look forward to this opportunity as a way to find new challenges and successfully overcome them, alongside improving upon my knowledge and understanding. Also, I would like to continue to be considered for volunteer programs/ contributions required in Eclipse.

### **Community Interaction:**

I have registered on GSoC developer mail list and gotten familiar with the Eclipse Newsgroup and Mailing list. In addition I will report to my mentor directly every other day. Most importantly, of course, I will do my best to evaluate and incorporate any suggestions from the feedback into my project.