Personal Details

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ABOUT ME and my Previous EXPERIENCE:

Hi, my name is Alaukik Aggarwal. I am currently pursuing bachelors in Computer Science and Engineering. My studies are largely based on XML and DOM and my strong technical language skill is in Java. My research interest involves Data Visualization and Artificial Intelligence.

To build my understanding in this field, I have done various projects related to this. 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.

TITLE of My Proposal: Design and Source Synchronization in VEX Tool

APPROACH:

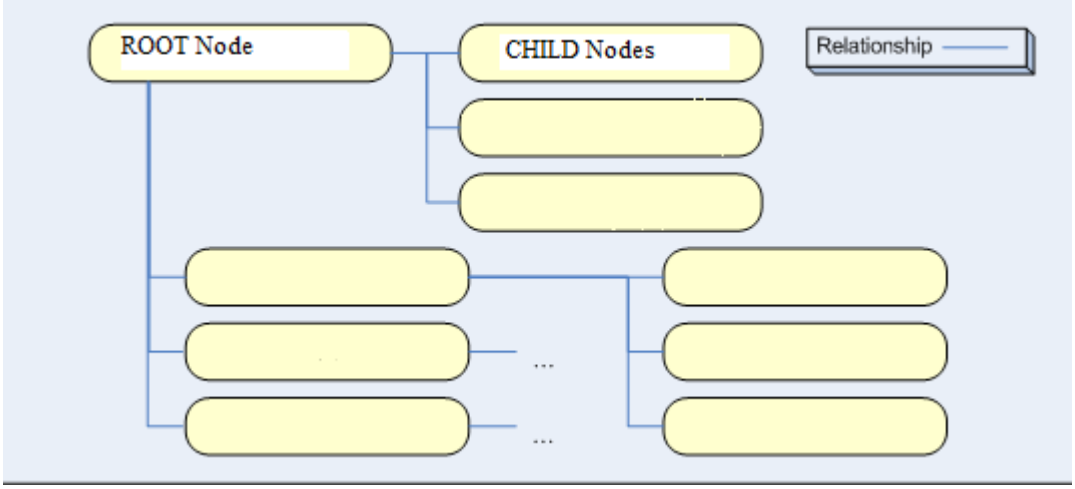
Tha main aim of the project would be to add to the functionalities of the VEX editor tool available. The current tool does not provide synchronization between the XML editing and the external interface or the design view of the tool.

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: Poviding 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 crude Design View Idea



Following presents crude Source Editing Idea (Similar to MS 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.

Development Schedule:

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 teh 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: imrove 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 6th: MILESTONE – VEX with crude implementation of functionality of design and source view switch

July 7 - July 11: Take feedbacks and imrove 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 10th: MILESTONE – Final code & documentation complete & tested

August 11th to August 17th: Overflow period in casse any activities take longer than expected

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.

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).

Why Eclipse? 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 reuired in Eclipse. As I said, I take this task to improve my skills and alongside I would be able to contribute to one of the biggest and most used open source project.