

Final Year Project Proposal

Computer Science

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## Proposal

### Multimedia applications with Audio and Video

Create a Student Virtual Learning application with multimedia audio and video based on HTML5. You will be using the Google Web Toolkit and create the system using the Java programming language. As part of your project, you will evaluate your system in terms of functionality and how it aids students. HTML5 has other new features to investigate, such as drawing canvas and integration with local resources.

## Introduction to topic

This is the type of project I will be doing; I will be creating a system for students that will allow easy communication. It will be including audio and video from HTML5, it will something that will be unique in the way it will interact with the user and also it should be able to solve certain problems, for instance for international teaching and language barriers.

## Need for application

I have a good background in the field and with the software platforms that are required here, I have used them multiple times in the past and now I understand them very well. Also, being a student I understand fully how important this application could be. While being in the student phase I now know that communication and understanding is key for you to achieve a good education and sometimes this doesn’t need to come from another person like a teacher or a lecturer, the computer should be able to help you, so having a application that speak and show you visually what to do would be a huge step up to what we have currently and also big leap in the educational system.

I have seen how much of a impact our very own virtual learning system is, we have blackboard and I have noticed that across the many people I have asked about it, they have said that they only use it for the resources it has and basically the bare essentials like handing in work or just for information, as a learning tool it is very ineffective to the student and it isn’t something people use much for learning. I would like to tackle this and create an application that will allow ease of use and also possibly and another classroom virtual environment where the student can carry the learning on from the lecture theatre to the home from the computer. I have asked students what they think about it and got very good feedback and also requests to complete the idea and for it to be tested on them.

## HTML5 and GWT

I have done Java/JS for a number of years and through trial and error I have found the skill set of using this language the maximum. I understand all of its syntax and am familiar with the libraries. I have also worked with Google Web Toolkit (GWT) this is web toolkit that will allow you to develop complex browser based applications. This is used to make high performance browser based web applications. The toolkit is an amazing piece of software as it will allow the user to create a vast majority of applications without the extensive knowledge of JavaScript, XMLHttpRequests or any other specific web based language. This is already used by google and it has created many great applications already so testing isn’t required.

I have used HTML5 for over a year and found it to be a great tool in the web based development world, the new features that it has are very powerful and will take web based application to the whole another level. It is used to present content on the web, it allows the developer to take full control of the multimedia aspect of the web based development letting them take multimedia to the playing field. It does all of this but allow it to be easily readable for humans and usable still. HTML5 introduces markup and API’s which is ones of the many reason I have chosen to go for it, as it will allow more complex and high performance web applications.

## Summary

In short I will be creating application using GWT for students that will allow virtual learning, this application will include all forms of multimedia, including video, sound and images. It will be targeted at students that require help. I will also delving deep into HTML5 and exploiting its new features getting the maximum out of the of the markup language.