## Proposer Details

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| Group Number | 4 |
| Registration Number of Group Members | 178, 158, 122 |

## Proposal Details

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| ***Project*** |  |
| Proposed Project Title | Digitized Lecture System |
| Executive Summary | Introduction Digitized Lecture System is an innovative and convenient way of recording a lecture. Working Lectures can be recorded and live streamed at up to 100X size efficiency. Live stream can take place on an average internet connection. Lecture Frame is a framework that is sensitive to anything that is residing in its boundary. It includes Touch Frame, a pre-processing phase controller and software.  Using Lecture Frame, an ordinary White Board will be turned into a Touch Surface. Anything written on White Board will be recorded and a Lecture file is generated as well as Live Streamed on Network. Students that are not in the class can attend Live Lecture either on their Laptops or can listen it later using Lecture File. Video output viewed by a student will be same as Real Video Lecture. (E.g. on Khan Academy). Diversity Lecture Frame can Record Lectures at 100X size efficiency. Lecture video can be Live Streamed on an Average Internet Connection. Lecture Frame will be cost efficient as we have two project hardware architectures based on cost. Lecture Frame will have its own Local Network so that Students don’t need any other internet connection. Lecture Frame is ultra-durable as compared to Touchpad. Unlike Touchpad, Lecture Frame is sensitive to our specified Board Marker only. Lecture Frame consists on smaller modules so that it makes transport and installation easier than Touchpads. |
| ***Business Case*** |  |
| Outline the Business need for the project | **Business Model**: B to B and B to C **B to B:** Education Institutions such as Graduate colleges will buy it. VC or Chairperson of department will pay for Hardware. **B to C**: Online Lecturers and Artists will pay as individual customers. |
| Motivation for Project | 94% Students go for online help of recently attended Lectures because they can’t fully grab the concepts. Recorded Lectures as video format require so much internet bandwidth to play. Large sized videos are difficult to handle. |
| Description of the project objective(s) | * Record Lecture with zero constraints on the instructor. * Record Lecture at 100X size efficiency. * Live Stream Lecture on an average internet connection. * Make the player app cross platform (Windows, iOS, Android). |
| State the level of impact expected should the project proceed and implications of not proceeding | **Proceeded**: Every student can easily access the animated video version of the lecture and can make his concepts more clear. He can now raise more logical questions in the class. **Not Proceeded**: Students will not be able to fully grab concepts. It will take roughly twice time as compared to utilizing Digitized Lecture System. |
| Functional Requirements | * Lecture videos are recorded and saved in central server. * Videos are not actually in Video Format. They are animation format with 2d (X, Y) values embedded with voice data. * Lecture can be Live Streamed on an average internet connection. * Teacher can maybe register/login * Admin can add authenticated teachers to a Teacher List * Admin can manipulate/Edit Lectures * Lectures are saved into appropriate database * A live preview of Marker Pointer can be visualized by admin only * Position data of marker can be transmitted to central server * Voice is recorded as well as transmitted to central server * A data file can be generated that contains Voice and Marker Pointer data |
| ***Benefits*** |  |
| What benefits are Expected/Anticipated? | * Lecture videos are recorded at up to 100X size efficiency. * Very low storage and internet bandwidth requirement. * Cross Platform Application will be launched on iOS, Android and MS-Windows Platform So that every single person will have access to Lecture Videos. * Every Instructor will have his own profile depending upon how good he is teaching. |
| ***Technology*** |  |
| Programming Language | C# |
| Platform | Desktop Application |